

AI- and Data-Augmented Governance in a Post-Corona World: Cultural Perspectives.¹

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The outbreak of the corona pandemic has perhaps not brought brand new political ideas to societies, but the crisis has certainly boosted pre-existing notions and currents of thought that had been resting on the back burner. Among these, the usage of technology and data to solve society's problems are the most obvious and grave. The behaviour of citizens was being analysed and predicted by tech giants long before Corona, but merely in order to sell products and services. The centralized recording of human movements, their contacts and health status marks a decisive stroke in the development of achieving unprecedented levels of transparency across societies. This development is familiar and was long foreseen by observers creating visions of the future. Among them, futurists and science fiction writers have put forth multifaceted ideas of these comprehensive registries and analytical tools and then dealt with their effects and issues in their story plots. In this essay, the ideas and conclusions of three remarkable writers of the future – Cixin Liu, Frank Herbert and Ursula K. Le Guin – will be discussed to derive solutions for the most pressing issues of highly transparent societies: how to maintain prosperity, creativity, solidarity and individuality in the age of transparent and data-driven societies.

Transparency: A global issue

Citizen registries in fiction and reality are by no means new topics. After WWII, South Africa was one of the first nations to attempt such an endeavour to categorize (along racial lines) and electronically record all its citizens on room-sized IBM computers. In addition, the plan was to also capture relevant data attributes (education, employment, vaccination, ...) linked to individuals. This "Book of Life" project accomplished the former but failed with the later, due to rudimentary technology available in the 1950s.³ In recent years, China has been prominent in exploring digitally augmented governance with its "Social Credit Scoring". This project has been criticized by the West as an element of authoritarian rule. In the West, companies like Amazon and Google are also collecting and analysing data, albeit with a focus on marketing and advertising and less on political governance – although they do share their data with the state, too, as the Snowden files revealed.⁴ With the corona pandemic, two intertwined developments have manifested: Data necessary to fight infection chains is being added to existing governance systems (i.e. China's Alibaba Health App) and – more generally – central registries are deemed necessary to better predict possible renewed outbreaks of covid-19

¹ A shorter version of this paper was published in the "New Media"-Magazin 4/2021, pp. 71-72, edited by the Institute of International Governance, Chinese Academy of Cyberspace Studies.

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³ The Apartheid regime procured the same IBM computers the Nazis used to register Europe's Jews: Beckenridge, Keith. *The Book of Life: The South African Population Register and the Invention of Racial Descent, 1950-198*, *Kronos* 40, pp. 225-240.

⁴ For a Western analysis of the Social Credit Systems see: Meissner, Mirjam: *China's Social Credit System. A Big-Data Enabled Approach to Market Regulation with Broad Implications for Doing Business*, Berlin 2017. For an overview of digital political and economic solutions see: Mirowski, Philip: *Machine Dreams. Economics Becomes a Cyborg Science*, Cambridge 2002.

and manage health resources more efficiently. Even in decentralized and federal nations like Germany, there is a – albeit toned-down – discussion on how to consolidate health and movement data centrally and to assign “task forces” with the development of policies based on this data.⁵ At this point, it is perhaps not overstated to say that – while considering all the political differences – a global policy is conceivable: In order to save the world’s populations from pandemic effects and re-start economic activity, there is tendency to collect, store and use data to nudge citizens in certain directions or even intervene directly in their behaviour and actions.

It becomes observable that artificial intelligence or rather machine learning will be used in this context as a kind of “time machine”: algorithms and data allow for moving back in time to unravel infection histories and chains but also to fast forward in the form of models predicting certain situations that will see an increased likelihood of another outbreak.⁶ This time travel machinery will also trigger the rise of new institutions, tools (task forces and data cockpits) and roles, e.g. “contact tracers”.⁷

This development will come at a price, however. And while even scientific observers who see themselves hardwired to democratic principles have at this point often nothing more to claim than their desire to avoid dire consequences, culture has been familiar with this situation for quite some time.⁸ The stories discussed here show that literature in the West and in China is already well aware of the upcoming dilemma between transparency, prosperity and individual wellbeing and positions this conflict at the centre of its plots.

Interlude: The value of literature for predicting and discussing the future

The increase of transparency and AI-augmented governance is a feature that has been a common thread in science fiction literature. The question therefore is: Does considering insights from these fictions have any scientific value or at least relevance? In this regard, it may be argued that the borderline between sciences and the arts is not as clear cut as one might assume. Science, for its part seems to be quite open to the arts when it comes to new and disruptive innovations.⁹ And this is in no way surprising: In order to construct or design something, it must be imagined first. And the spark of imagination is often provided by art and literature. For instance, most of the current (super) weapons and the conflicts for which they were used in the 20th century had been predicted and

⁵ See for these recommendations in the realm of data collection the respective German working papers and reports: Leopoldina Akademie: *Dritte ad-hoc-Stellungnahme: Coronavirus-Pandemie – Die Krise nachhaltig überwinden*, 13. April 2020, 5ff.; Expertenrat Corona der Landesregierung Nordrhein-Westfalen: *Weg in eine verantwortungsvolle Normalität*, 11. April 2020 Düsseldorf., 5ff. In UK and US the US company Palantir with ties to the intelligence complex has been chosen to manage medical services: The Guardian: *UK Government Using Confidential Patient Data in Coronavirus Response*, Online available: <https://www.theguardian.com/world/2020/apr/12/uk-government-using-confidential-patient-data-in-coronavirus-response> (retrieved: 26.04.2020).

⁶ With certain similarities to predictive policing and conflict prediction: Al-Ani, Ayad/Petrtsch, Wolfgang: Open Source Conflict Prevention. *Administratio Publica*, Vol 25, Issue 3. September 2017, 9-33.

⁷ Politico: *Tracking the Virus May Require 300,000 Workers. We're Nowhere Close*. Online available: <https://www.politico.com/news/2020/04/21/tracking-coronavirus-workforce-does-not-exist-197622> (26.04.2020)

⁸ The influential German Leopoldina scientific commission recommends collecting data “donated” by citizens instead of retrieving it without consent (op. cit, 7pp.). Others insist that democracy must not be played out against prevention strategies and assume that authoritarian systems success at fighting the pandemic is artificial, unsubstantiated and propagated by controlled media: Pfaff, Holger/Glaske, Gerd et al.: *Datenbasis verbessern Prävention gezielt weiterentwickeln*. Thesen zur Pandemie durch SARS-CoV-2/Covid-19. April 2020.

⁹ Feyerabend, Paul: *Wissenschaft als Kunst*. Frankfurt/Main 1984, 8.

described by authors of the 19th century (H.G. Wells, Jack London, et al.).¹⁰ Moreover, once this imagined state is set in place, it also provides a strong frame of reference that helps to understand developments towards these futuristic depictions. On the topic of transparency, for instance, one could generate data and conduct elaborate calculations that would, however, have a very different resonance in society without George Orwell having introduced us to “Big Brother” first.¹¹

So, in addition to the scientific methods of futurism (the historical process method devised by Hegel and the systematic approach of futurology), discussing the future using arts and culture is valid, as long as it is recognized that there is no “precise” picture under consideration here but rather “a feeling”.¹² It is, however, a feeling that lets one understand what one could become in the future. And the fact that literature recognized the features of transparent societies decades ago should be tempting enough to at least consider these insights for understanding the consequences and dilemmas of such a civilization.

Cixin Liu and the problem of transparent societies

Cixin is one of the most prolific Chinese SF writers. Of his many novels and short stories, “Mirror” is less well known than his “Three-Body Problem” trilogy, but it is perhaps the most interesting when it comes to the phenomenon of transparency.¹³ In this novel, a young scientist working for the Chinese anti-corruption authorities becomes aware of a cosmological simulation software. This software and the supercomputer it requires allow for the simulation of the “big bang” and all events that followed until the present moment (could there be a stronger analogy to the time travel effect of AI?). Thus, nothing remains a secret any longer, all actions of all individuals and all words spoken by them can be retrieved. It is fascinating to see how the policemen involved react to this software, from an initial positive conception to deep despair:

‘As a matter of fact: It (the Mirror) will destroy all evil. And after that, it will destroy everything that maybe isn’t quite evil but is still dirty and improper.’ Again, the commander nodded. ‘And in the end, it will destroy all of human civilization.’ The others hesitated at these words. ‘Human civilisation has never seen such an amazing opportunity’, countered Song. ‘All of humanity will see itself in a mirror that reveals even the most insignificant deed in all its clarity. Not even the smallest impropriety will remain hidden....’ ‘In other words: a dead society,’ said the commander, staring down his interlocutor. ‘Imagine if in DNA errors never occurred – how would life on Earth look then? Then there would be no life. Because evolution is based on mutations created by imperfect DNA. Society is exactly the same. Its development and its vitality are based on the impulse to stray from conventional morals. In water that is too clear, too pure, no fish can live. A society that knows no moral missteps is dead.’¹⁴

It is also intriguing to see, how this problem is solved by the policemen: They decide to destroy the Mirror and stop this development. Of course, this cannot inhibit the quest or possibility for

¹⁰ Franklin, Bruce H.: *War Stars. The Superweapon and the American Imagination: The Superweapon in the American Culture*. Oxford, 1988.

¹¹ Mamczack, Sasha; *Die Zukunft. Eine Einführung*. Munich 2014, 49.

¹² Ibid.

¹³ *The Mirror (镜子)* was published in China 2004. References and translations cited are from the German edition (Munich 2017)

¹⁴ Op. cit, pp. 84, own translation

transparency, and the reader learns on the final pages that, independently, a similar invention has been achieved in the West. Knowingly or not, the pointless reflex of hiding or destroying a far-reaching invention in this context is configured after a real event: In 1948, the father of cybernetics, Norbert Wiener, saw himself in a similar situation: In a letter to the head of the US transportation union he outlined with clarity and horror the disastrous effects of his invention – automation – for the working class and offered to keep his findings in the drawer. This offer was maybe not to be taken too seriously, as he was quick to remark that these ideas “are very much in the air”.¹⁵ This then, it may be concluded, is also the situation in our case: If data and algorithms are available, they will be used.¹⁶ If this deployment cannot be avoided, how much is too much? Where do we draw the line?

It is remarkable that Cixin does not follow the argument that a transparent society and governance is acceptable as long as it is trusted by the citizens (the “Swedish model”), instead he draws the line somewhere else: Transparency must not inhibit unprecedented, surprising action that breaks rules and mores or at least does away with how things have been done before. Here we find a strong link and similarity to the provocative entrepreneur as cast by Austrian economist Joseph Schumpeter back in 1911, who considered this figure as a sort of villain or antithesis to the market system, with its mainstream proclaimed tendencies towards static equilibrium. This was a perhaps a familiar experience that Cixin may have observed during the successful Chinese reforms where “(n)ewly incentivized, local leaders dove headlong into promoting industrialization and growth.”¹⁷ Along the way, they devised innovative strategies and solutions that central planning had not conceived. If transparency and prediction cannot be avoided, this then is at least what it must cater for: surprising and unconventional actions by individuals.

Frank Herbert and the sabotage of transparency

The question of hindering the progress of civilization that unfolds by shining a light into every corner of society and using AI to generate solutions to each and every problem of governance has been vividly described by the US writer Frank Herbert in his novel “Whipping Star”. Published back in the 1960s, this story presumably plays out further in the future than Cixin’s “The Mirror”, and hence the society it depicts is more advanced but also more plagued by transparency and rational, data-based governance. Under the auspices of a caste of “consentients”, government resembles some kind of machine that is seemingly void of any human leadership and empathy:

Once, long centuries past, consentients with a psychological compulsion to ‘do good’ had captured the government. Unaware of the writhing complexities, the mingled guilts and self-punishments, beneath their compulsion, they had eliminated virtually all delays and red tape from government. The great machine with its blundering power over sentient life had slipped into high gear, had moved faster and faster. Laws had been conceived and passed in the same hour. Appropriations had flashed into being and were spent in a fortnight. New bureaus for the most improbable purposes had leaped into existence and proliferated like

¹⁵ For this letter see: <https://libcom.org/history/father-cybernetics-norbert-wieners-letter-uaw-president-walter-reuther> (retrieved: 28.04.2020).

¹⁶ The example of automation is intriguing. For the unsuccessful resistance of unions towards automation see: Nobel, David F.: Progress Without People. *New Technology, Unemployment, and The Message of Resistance*. Toronto 1997.

¹⁷ Yuen Yuen Ang: Autocracy with Chinese Characteristics Beijing’s Behind-the-Scenes Reforms. *Foreign Affairs*, May/June 2018, 39-46, 42.

*some insane fungus. Government had become a great destructive wheel without a governor, whirling with such frantic speed that it spread chaos wherever it touched.*¹⁸

This short introduction offers perhaps some similarities to the present situation: The intentions for conceiving the system are good ones (saving lives, overcoming lockdown, prevention and so on). This, probably, is always the case, but as Herbert quickly points out: Even good intentions can lead to dire consequences. Not only is the road to hell paved with good intentions, once set in motion, transparency and data-based governance is a vehicle without brakes of its own. The inner logic of data-driven decision making, of predicting events and outcomes will always strive for more, better data, more precise forecasts and more robust decision making. In this situation, it is fascinating to see the counterstrategy derived by the government in Herbert's plot:

*In desperation, a handful of sentients had conceived the Sabotage Corps to slow that wheel. There had been bloodshed and other degrees of violence, but the wheel had been slowed. In time, the Corps had become a Bureau, and the Bureau was whatever it was today—an organization headed into its own corridors of entropy, a group of sentients who preferred subtle diversion to violence ... but were prepared for violence when the need arose.*¹⁹

The reasoning here might be that governments need to deploy or tolerate strong and powerful enough counter-organisations to limit the self-destructive process set into motion with data transparency and AI-augmented governance. This is not a particularly new view on authority. The Nobel laureate Kenneth Arrow, while observing power processes in organisation, came to similar albeit more diplomatic conclusions: "Authority is undoubtedly a necessity for successful achievement of an organization's goals, but it will have to be responsible either to some form of constitutionally planned review and exposure or to irregular and fluctuating tides of disobedience."²⁰ It is remarkable that Herbert concedes almost limitless power to this Sabotage Corps, even licence to kill, if necessary. This can be interpreted in way that this organisation must do what is necessary and, if blocked by the transparency wheel from rational and official means of doing what is necessary, drastic and irregular actions can be taken. Perhaps these actions even need to be taken, as the machine would otherwise also predict the actions of the Corps.²¹ The normality or inevitability of such a countervailing force is signified by an apparent official status it has obtained, similar perhaps to official intelligence organisations but with a twist to hack the system's own system, for the sake of society.²²

Governments and societies that are embarking down the road to transparency and doing so in an accelerated mode driven by the pandemic might need to consider upgrading, developing and supporting equally strong counter-forces. These could be derived from organisations that already try to inhibit the unrestricted usage and miss-usage of data, e.g. legal affairs, ethical committees, data-protection agents, data trustees, anti-graft entities, etc. As transparency grows, we can assume, that

¹⁸ Herbert, Frank: *Whipping Star*. New York 1968, 23.

¹⁹ Ibid.

²⁰ Arrow, Kenneth J.: *The Limits of Organization*. New York 1974, 79.

²¹ A fascinating historical blue print for these sabotage activities is to be found in a manual developed by the US intelligence during WWII which addressed the enemy workers and managers to make things more difficult for their governments: Office of Strategic Services: *Simple Sabotage Field Manual No 3. Unclassified*. Washington DC 1944.

²² The more irregular and spectacular the actions, the more "professional" the members of this "counter organisation". This seems to be the conclusion of European environmental organisations like Greenpeace, which obtained this professionalization and did not set out to be mass mobilizing forces: *New Participatory Dimensions in Civil Society: Professionalization and Individualized Collective Action*, London 2012.

the avenues and strategies of these entities would need to outgrow predictive paths and lean towards potentially unpredictable, irregular and unconventional actions.

Ursula K. Le Guin: Social Conscience in the Age of Transparency

Transparent systems that are based on movement and health data are particularly dependent on data donations from citizens. For the greater acceptance of the overall system, it can be assumed that a deliberate and informed citizen decision would be preferable for the usage of those citizen's data. As the "Swedish model" would advise, the more the governance system is trusted and itself adheres to the principles of transparency and fairness, the more data will be donated. Developing trust, of course, is not an easy task, and the Swedish model shows this can be quite a lengthy process: the original Swedish Freedom of Press act is from 1766!²³ Assuming, however, that the pandemic will create an extreme situation, where it becomes very convincing and rational to wittingly submit or at least passively accept the usage and storage of data, the predicament seems to focus on how to avoid the undesirable effects for society discussed above: the limitation of innovative, unorthodox, divergent actions and opinions.

Ursula Le Guin's novel "The Dispossessed", published during the Vietnam War, is one of the rare political utopias that deals with this question. The story takes place mainly on a planet inhabited by a society that adheres to kind of non-authoritative, syndicate form of government. Yet, despite or rather because of this non-authoritative approach, another form of governance becomes very prominent: social conscience. Although citizens can always turn down an "offer" by the authorities – i.e. rejecting jobs and still not lose their allowances – very few seem to opt out. In a central dialogue of the text, this paradox is explained:

[W]e're ashamed to say we've refused a posting. That the social conscience completely dominates the individual conscience, instead of striking a balance with it. We don't cooperate—we obey. We fear being outcast, being called lazy, dysfunctional, egoizing. We fear our neighbor's opinion more than we respect our own freedom of choice.²⁴

Despite Le Guin's usage of an environmental crisis for explaining the system's attributes, one can easily translate the plot into the current attempts by governments and health authorities to use social conscience as an "easy" way to reconcile participation and individual rights on one side and the needs of the health authorities on the other. Surprisingly, Le Guin is clear on the consequences but is not able (or willing) to resolve the dilemma – her utopia, after all, in the subtitle is "ambiguous". In her description of the utopian society she often uses negative attributes that are similar to the ones used by Cixin and Herbert: Institutions become stifling; individuals step back from their own ambitions; the civilization seems to be idling along. Although her protagonists are quite outspoken about this, her utopian society seems to be unable to find a way out of this dilemma. Despite its evasion, the story delivers an important analysis of the dilemma of the transparent society: If societies embark on transparency and AI-augmented governance, this process will be difficult to overcome or even to develop alternative, reformist routes. If society is to accept these data

²³ For data on the acceptance of transparency in Sweden see the regular surveys by SOM-Institutet, i.e.: Oscarson, Henrik Ekengren/Bergström, Annika (eds.): *Svenska Tender*. 1986-2016. Gothenburg 2017.

²⁴ Ursula K. Le Guin: *The Dispossessed: An Ambiguous Utopia, Hainish Novels & Stories Vol. 1*, New York 2017, 613-922, 875.

strategies and “time travel machines”, *social conscience* must increase accordingly – and this in turn could further enhance conservative, single-minded/unidimensional behaviour. Moreover, this kind of intervention is quite subtle, perhaps even unrecognizable for the individual, making it difficult to counteract.

Although Le Guin seemingly offers no solution, some features of the depicted society suggest ways this dilemma might be overcome: The world in her story is completely isolated (“For seven generations there had been nothing more important than that wall ... the whole planet was inside it, ... cut off from other worlds and men, in quarantine”).²⁵ Only at the end does the protagonist move to another world to collaborate with other scientists on his innovation. This plot twist is often overlooked: Societies during crisis seem to isolate and quarantine themselves.²⁶ This is explained in our case by the need to disrupt global infection chains and this notion of isolation builds upon pre-existing ideas of questioning globalisation trends and supply chains. But this very globalisation also seems to be a powerful way to balance the pressure of social conscience built up by individual societies (and would it not be more prudent to develop corona countermeasures and vaccines through global cooperation?²⁷). Conscience must always verify itself relative to other facts, experiences and opinions. In open and reflective systems, ideas and experiences will spill over, some are blocked; detested by existing social conscience, others might become part of a constructive debate... Thus, the more social conscience becomes effective, the more possibilities to question and review traits of this pressure by comparing experiences of other societies becomes desirable or even necessary.

Summary

The collection of data and the usage of this data in algorithms to govern societies in the midst of a pandemic crisis seem reasonable and prudent. It is helpful and at the same time potentially dangerous. The euphoria to resolve the issues of tracking and predicting the virus is not yet accompanied by a debate and equally strong “solutionist” drive to limit the negative effects of this approach: *sterile societies and individuals that self-inhibit their ambitions and capacities*. The fictions discussed here to reflect on these issues revolve around the question of a missing “controlling agent” or function, to relieve and shield societies from the speed and power of these governance systems, but also to encourage societies and nations – despite their reflex to isolate and quarantine themselves – to remain open for collaboration and ideas exchange. Building AI systems and data registries to fight an invisible, devastating virus is no simple task, but it seems in fact easier than finding balancing forces to these more insidious long-term societal developments.

²⁵ Op. Cit., 619.

²⁶ A recent analysis of the effects of the “Spanish Flu” on the rise of extremism in Germany after WW1 concludes, that this pandemic “(...) may altered preferences in communities. It may have also spurred resentments of foreigners among survivors (as has happened in past pandemics), driving voters towards parties whose platforms matched such sentiments.” Blicke, Kristian: *Pandemics Change Cities: Municipal Spending and Voter Extremism in Germany, 1918-1933. Federal Reserve Bank of New York Staff Reports No. 921*, May 2020, 17f.

²⁷ In this context see another curious fiction: In 2011 the European Union published a comic, “Infected” by Morvah, JD and Huang Jia Wei dealing with the outbreak of a virus in China which is brought under control once national authorities hand over the job to the EU and other international authorities: <https://op.europa.eu/en/publication-detail/-/publication/4cc2ea93-d003-417e-9294-1103a6ee877d> (retrieved 19.05.2020)