

Governance In The Time Of The Technological Singularity, Part II:
Assessing Governance Models, A Highly Speculative Venture

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Before looking at specific governance models, it is perhaps helpful to consider some of the characteristics any such governance system should have:

1. It should be agile, with rapid cycle times that correspond to the important cycle times of the relevant environment. This implies that institutional learning should be essentially real time.
2. The complexity of today's operating environment implies that future governance frameworks should be multidimensional and not siloed by discipline or function. This suggests that private firms are important both as participants, and as models, because unlike current government structures they must operate effectively in a complex environment.
3. Future governance systems should be adaptive, because future paths of virtually all relevant systems, from economic and technological to social and cultural, are at this point entirely unpredictable.
4. To assure stability and legitimacy, future governance systems should enable public input, but not by the usual methods available today, which are increasingly ineffective, contentious, and subject to gaming by domestic and foreign interests. This sounds abstract, but some evolving tools, such as China's social credit system, might perform such a function *if* properly designed and implemented.
5. Reflecting the eclipse of the individual citizen as the operational level of meaningful political participation, governance should operate at a tribal or community, rather than at the individual, level. After all, individual identities are increasingly a design space and battlespace, subject to sophisticated and effective manipulation at scales previously undreamed of; moreover, individuals are no longer able to process sufficient information to understand, much less to contribute rationally, to solutions on a systems scale.
6. Future governance systems should include high technology as an integral part of governance. This doesn't mean simply having good websites, or enabling governmental function on virtual systems; it means that AI/big data/analytics, and other technologies that are capable of managing high levels of complexity, must be a design feature from the beginning.
7. Future governance systems cannot rest on assumptions of a unitary global culture, such as "Western universalism" in ethics, or the state-based Westphalian system. While such Western cultural frameworks were ascendent after WWII, they were never universal and today aren't even dominant in many parts of the globe.

There are also two broader components of future governance that are often overlooked. The first is the role of narrative. Complex dynamic networks that include institutions, laws, cultural and social practices, various tribes, and other entities cannot be held together simply by personal connections, formal

relationships, and established institutions; such tools will no doubt play some role, but standing alone are inadequate. Rather, the primary vehicle for managing complex governance networks must be through narrative (to some extent, this is the role that national exceptionalist narratives play today). Such guiding narratives should be both loose enough to enable agility, flexibility, adaptability, and innovation, and yet provide the coherence necessary for development and deployment of appropriate policies. Developing such narratives as part of deliberate governance decisions is not trivial, but it can be done. At smaller scale, familiar examples include the many successful brand building campaigns developed by marketers for commercial products; a good early case study is the 1963 “Come Alive! You’re the Pepsi Generation!” campaign. At a geopolitical level, President Putin has consciously developed and deployed an exceptionalist narrative of Russia as the guardian of socially conservative Christianity. Such narratives are powerful because they shape and support individual identities as well as create the realities within which their adherents find their meaning. They are an important mechanism by which individuals, social and cultural networks, institutions, and firms can be coordinated without formal processes which stifle adaptability and agility; they are thus an essential component of future governance systems.

The second is the crucial role of data. The logic here is simple. In order to be agile, adaptive, effective, and competitive with peers, future governance systems are going to have to rely on the cognitive ecosystem in general, and AI/big data/analytics in particular.¹ AI capability at the geopolitical level is a winner take all game: as President Putin has famously noted, “[AI is] the future, not only for Russia, but for all humankind. . . . It comes with colossal opportunities, but also threats that are difficult to predict . . . *Whoever becomes the leader in this sphere will become the ruler of the world.*” (emphasis added).² And development of AI at the scale and complexity of governance systems, and the information warfare and weaponized narrative capability to protect one’s own system while effectively attacking adversaries, requires massive amounts of data. That at least some world powers recognize this is demonstrated by China’s efforts to harvest data around the world, from genetic data harvested from allegedly commercial prenatal tests offered by the Chinese firm BGI (developed in collaboration with the People’s Liberation Army), to its investments in Western gaming companies, thereby obtaining access to gamer behavior in an environment where design of games can be used to shape data harvesting in a sort of real time experimental data generation system.

Taken together, these criteria suggest a future where successful governance systems are a highly flexible, informal combination of hierarchical subsystems, technology enabled cognitive functionality of various kinds (sensors, computation, AI/big data/analytics, and so forth), and networked organizations and institutions of many different kinds, from private firms to powerful tribal interests to traditional government institutions. The trick will be to be neither so rigid that change cannot occur in a timely and effective manner, like some theocracies, but not so chaotic that institutional structures can’t maintain system integrity and stability even given rapid and unpredictable change. Moreover, governance competence requires significant scope and scale in many ways, from access to relevant data pools to financial resources to intellectual capital, something that networks can provide. The state will not

¹ For more on the emerging cognitive ecosystem, see B. R. Allenby, 2021, “World wide weird: Rise of the cognitive ecosystem,” *Issues in Science and Technology* Spring 2021, pp. 34 et. seq.

² President Putin, quoted in RT, Sept 1, 2017, <https://www.rt.com/news/401731-ai-rule-world-putin/>, accessed 7/30/2021.

disappear, but it will need to evolve into a node in an ever-changing, highly dynamic network structure; governance will emerge from the network, not explicitly from the state. Firms, communities, tribes, NGOs, educational structures, religious entities . . . all will be as they are now, but also integrated into governance networks. To paraphrase Mr. Putin: whoever gets the network right will become ruler of the world.

Such network structures are not simply a re-branding of traditional Enlightenment pluralism. Traditional pluralism has indeed been a successful governance strategy since the beginning of the Enlightenment: it supported individual liberty and property rights, and capitalistic markets that can manage, without centralized control and intervention, vast amounts of rapidly changing information. By giving voice to many different interests, pluralism achieved stable policies where more authoritarian mechanisms proved too brittle. Inherently decentralized, traditional pluralism proved capable of integrating more information, and successfully operating in more complex environments, than authoritarianism.

But as recent events suggest, pluralism as currently instantiated in governance structures in the West may be increasingly obsolete. Pluralistic processes such as the rule of law and notice and comment rulemaking inherently have a lengthy cycle time, and laws and regulations rapidly become ossified. As technological and social change accelerate, this results in an increasing decoupling of policy and regulation from reality. Indeed, as authoritarian adversaries of pluralism rapidly advance their reflexive control and weaponized narrative capabilities, pluralism becomes a vector of attack rather than a governance strength (tribalism in Western democracies is so contentious and destructive in part because of this trend). Institutions and legal systems that were effective given the conditions of the early Enlightenment 200 years ago have begun to fail.

Given this background, one can begin to evaluate the strengths and weaknesses of some existing models which, in a Westphalian world, primarily involve states. It rapidly becomes clear that some entities are long shots. European nations, and the European Union itself, are clearly laggards given their technophobia and hostility to large industrial concerns in a world increasingly shaped by technology. Moreover, their emphasis on privacy, skittishness over data management, and embrace of anti-modern environmental ideologies ensure that they will not be competitive in high technology generally, or AI/big data/analytics specifically, the latter being one of the most important competencies required for future geopolitical power. India is implausible because its culture and politics are too chaotic; there is not enough infrastructure to capture and integrate innovation. Japan might be competitive, but its domestic political and regulatory institutions have failed to evolve to match its economic and technological prowess. Smaller nations, such as Israel and the smaller Asian tigers such as Taiwan and South Korea, may have the requisite technological competence, and institutional and social stability, but simply lack scale. Many other nations, especially in Africa, the Middle East, and Latin America, are simply too far behind in technology; catching up to competitors such as China and the U.S. is simply infeasible.

Russia offers a different model: the mafia state. It has certain advantages: a mafia structure by its nature can be quite amoral, which is one reason for Russia's demonstrated excellence in information warfare and weaponized narrative. Moreover, the mafia model can be quite agile and adaptive: the integration of the state with criminal enterprises, especially in an era of hacking and cybercrime, has proven effective. Indeed, the potential of a mafia state, with significant diplomatic, geographic, cyber, and traditional military resources, aligned with international criminal networks, has not yet been fully explored. Nonetheless, the power structure of even an augmented mafia state is inherently brittle and

inadequate. Among other things, as the Russian experience suggests, it is very difficult for a mafia state, characterized by personal power relationships and loyalties, to create cultural and economic infrastructures adequate to support a world power. Personal power structures cannot substitute for the global firms, research and development capabilities, institutional ecologies, and social and educational capital of deeper states such as China. Russia as a case study, and mafia states generally, simply don't have the institutions or economy to scale to geopolitical dominance. After all, Russia's economy is smaller than those of New York, California, or Texas, and is heavily dependent on resource exploitation; without nuclear weapons, and a remarkable ability to punch above its weight in cybercrime and information warfare, Russia would be a second rate state even now.

Another plausible core for future governance may well be huge global high technology firms such as Alibaba, Google, Facebook, Amazon, Microsoft, Tencent, Baidu, or Xiaomi. Exactly how they might fulfill this role is still unclear, though, and the two major states supporting such firms, China and the U.S., perhaps perceiving a threat to their Westphalian dominance of global geopolitics, are both seeking in different ways to reassert control. In the short term, this may well work, because few of the companies appear to have positioned themselves to begin exercising their power globally; in the long term, especially as current governance systems begin to stumble towards failure, the ability of states to discipline such firms may erode. Rather than simply trying to humble their high technology firms, a far more adaptive course might be to explore integrating them into governance networks as partners.

World religions, on the other hand, do not appear to be well-positioned to become dominant cores; they tend to be anti-modern or, as in the case of the secular religion of environmentalism popular in Europe, both anti-modern and anti-technology. Islam might become the core of a Middle Eastern regional geopolitical structure, but to the extent that would require at least some stability in the Sunni-Shia relationship, and some sort of power balance among Persian, Turkic, and Arabic cultures, it appears unlikely. Criminal transnational organizations, another alternative, are certainly powerful, but their appeal beyond the reach of their coercive capabilities – physical in the case of traditional criminal institutions, and virtual in the case of software criminal interests - is limited. NGOs are effective partners and tribal cheerleaders, but by design they tend to represent very specific perspectives, and are thus not good candidates to create broad networks. High wealth individuals would seem to be useful contributors to governance networks, but on their own lack legitimacy and broad competency.

As a scenario, then, let us choose to explore the Chinese and American models, remembering that it may be likely that in the future these will not represent Westphalian state models, as they are now, but rather central nodes in dynamic networks – what we might call, in a back to the future nod to Huntington, a clash of civilizations.