Postmodern Openings

The Promise and Pitfalls of Algorithmic Governance for Developing Societies

Rick SEARLE

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Abstract:

Many democracies in an early stage of development, such as Nigeria, experience a period of endemic corruption and difficulty providing needed public services. The careful use of algorithms may be of use in helping new democracies transition to a more objective, equitable, and accountable form of governance, though technology should not be viewed as a panacea for structural problems or without challenges of its own.

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Over the last decade there has been a growing interest among technologists, academics, and policymakers over the use of software to provide government services and facilitate decision making that was formerly the prerogative of human beings alone. As the sophistication of computer programs and the ubiquity and capability of computer hardware has increased so-called algorithms have become an essential component of state bureaucracies and civil services, and, I will argue, pose unique opportunities and challenges for developing countries such as Nigeria and megacities like Lagos in their quest to adopt more effective systems of governance.

What I should be perfectly clear about from the outset if what I *do not* mean by the phrase algorithmic governance. I am not speaking about what at this juncture remains a mere dream of science-fiction; namely *algorithmic rule* where computers, independent of humans make political decisions. Futurists such as Ray Kurzweil may foresee machines possessing human level intelligence that would be capable of such decision making by 2029, but among the majority of artificial intelligence researchers such shortened time horizons are uncommon (Moore et. al., 2016).

The examples of algorithmic governance I have in mind are far more mundane and many examples of it exist *today* rather than decades into the future. An example of algorithmic governance where automated processes replace human beings in providing public services would be the kinds of cameras that in the United States have been installed in recent decades as part of stop lights. Armed with sensors these cameras will photograph cars that violate traffic rules such as running red lights. Based on a car's license plate a driver who has committed such a violation might be sent an automatically generated ticket in the mail.

In this example it is not only that an automated system is doing the job of traffic policemen, it is that the automated system provides many more "virtual policemen" to enforce traffic rules to the extent that a policeman can be placed at every stoplight and present twenty-four hours a day, seven days a week.

In developed societies the benefits of algorithmic governance largely revolve around questions of greater cost and efficiency, along with suggestions that the use of algorithms may be a way to avoid subjective human judgment and bias. Sticking with the example of the traffic camera, it is not only that the a camera will tend to be cheaper and

more reliable than a human charged with the same task, it is that an algorithm, unless it is programmed to do so, is much less likely to make mistakes of perception and memory or base its decisions on subjective characteristics of which a human might not even be aware.

Developing countries, however, might turn to algorithmic governance as one way of dealing with endemic corruption. Newly democratic countries face problems with corruption and state capacity that were common in Western democratic countries during the 19th century, but are less prevalent in most developed countries today.

The political scientist Francis Fukuyama has detailed how Western countries such as the United States transitioned from having often ineffective and corrupt bureaucracies to professional civil services relatively insulated from both rent seeking, nepotism, or what Richard A. Joseph in the context of Nigeria labeled "prebendalism", the use of public office to gain material gain for oneself and especially one's kin or ethnic group (Fukuyama, 2014).

The regime of political corruption in the United States during the 19th century was known as the "spoils system" and under this regime jobs in government bureaucracies were distributed based on what political party was in power. When Republicans were in office government agencies were staffed largely by Republicans, often regardless of professional qualifications with the same system of political patronage holding for Democrats.

In the late 19th and early 20th centuries the US largely did away with this spoils system by adopting a system of exams and educational qualifications for civil servants resembling those that had been adopted in Europe, especially in countries such as France and Prussia decades earlier, and that had existed in China for centuries. Professionalization and the adoption of standardized and strict bureaucratic procedures which no doubt helped decrease the amount of corruption at least at the lower end of the political scale.

In countries like the United States the adoption of civil service exams and development of bureaucracies staffed by educated professionals and experts who were relatively free of overt corruption did not happen overnight and came only after an extended period of political struggle (Fukuyama, 2014). One must expect a similar long and painful process in the developing world as well, yet the hope is that algorithmic governance might provide some shortcuts.

How might these shortcuts work? Well, take the case of how civil servants are hired. Where it is the case that government jobs are filled based on who one knows rather than relevant knowledge or experience, or have been gained as a consequence of political networks, algorithms may provide a shortcut to more rationalized public administration.

Rather than be forced to construct a system that de-politicizes government hiring though civil service exams and the like, developing countries, such as Nigeria, may be able to adopt and tweak for their own purposes the kinds of algorithmic hiring developed by private sector companies in developed countries (Lamb, 2015). Essentially these types of hiring algorithms used by private companies choose, or at least significantly winnow, the number of candidates for a job who are eligible. In a public sector context they should be capable of depersonalizing and depolitizing hiring decisions.

Yet another area where developing countries might be able to benefit from embracing algorithmic governance deals with the issue of property rights.

Over a decade ago the Peruvian economist Hernando De Soto made the case that the area that most distinguished those countries that made the transition from developing to developed societies compared to those that failed to do so was that those that succeeded in developing had established a firm system of property rights and one especially that extended downward to the middle and lower classes (Soto, 2000).

Returning to Nigeria as an example, Fukuyama has pointed out how the country's problem with so-called 419 scams where fake deeds are used to sell property unbeknownst to the actual owners, has led desperate Nigerians to paint "Not for sale!" on their homes should they need to be absent for an extended period (Fukuyama, 2015: 221-222). What I have been calling algorithmic governance again seems to provide a possible solution to this problem.

This at least is the conclusion one could draw from looking at Bitcoin. Bitcoin is a so-called crypto - currency, but its attraction for technologists has less to do with it offering some futuristic version of money than the fact that the technology behind it allows the currency to operate without the need for banks or other centralized institutions. That technology is called the block- chain which in essence is a secure electronic ledger that allows parties to mutually verify information (Dahnaher, 2015).

It is quite easy to imagine the block-chain or similar technologies being applied to the problem of weak property rights in developing countries. Rather than require government agencies to hold the deeds to property a system built around the block-chain would allow a potential buyer to verify who owned a property and whether or not it was legitimately for sale.

Other areas where what I am calling algorithmic governance might prove helpful for developing societies would be in the use of the mobile technology used by many of their citizens to perform the role of distributed sensors. The fact that mobile phones and especially smart phones are becoming so ubiquitous even in the poorest countries means that the capabilities of these technologies can now be leveraged by policy makers.

Citizens armed with smart phones can inform public officials in everything from traffic accidents, to crumbling infrastructure, to disease outbreaks (Greuber, 2015). Information like this should allow governments to respond in a timely and appreciate fashion to the needs of their citizens insofar as they remain aware that the information they receive is unlikely to be completely representative due to the failure of mobile technology to be universal (Townsend, 2013).

Yet for all the promise algorithmic governance offers developing countries public official and citizens in those countries will still need to exercise caution when applying it, and restrain their hopes that it will allow them to completely address their problems with governance. The belief that technology alone can solve social problems is what the critic Evgeny Morozov calls "technological solutionism", and while Morozov is no doubt too pessimistic regarding the potential of technology to address social ills, he is certainly right in reminding us that most real problems require sustained efforts to be truly resolved (Mozorov, 2013).

Rather than algorithmic governance being seen as an alternative to strong states committed to the rule of law and human rights, it should be viewed as a kind of middle way that can be used to give developing countries the space and time to develop the sorts of lasting institutions (Burke, 1955) that will better serve the human beings who made them and for which they have been made[2].

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[2] Burke argued that human societies weren't objects that could be built but grew up organically and for that reason should only be changed carefully and with the recognition of how intricate and fragile societies ultimately are.

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Biodata

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