Overcoming the Challenges of Governance

A New Way of Monitoring and Predicting Organisational Capacity

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This paper proposes a new way of monitoring and forecasting performance in public and private organisations. Drawing on Weber's definition of an organisation and F.W Taylor's notion of efficiency, we propose that the temporal regime of an organisation is an excellent proxy for efficiency and capacity. In addition, we are persuaded by Achille Mbembe's concept of postcolonial societies as differing from others in terms of their aleatory, disruptive modes of time. We integrate this idea as a methodological intervention to focus on disruptions in the temporal regime of organisations as markers of changes in efficiency and capacity. We argue that by measuring an organisation's temporal regime we have developed a scalable and fast way of monitoring and forecasting organisational performance. We apply this approach to a brief study of the state electricity company, Eskom, to argue that corruption and state capture were not chiefly responsible for its acute decline in performance after 2010.

Keywords: organisational performance, forecasting risk, temporal regime, postcolonial societies

Introduction

The Covid-19 epidemic hit South Africa badly. Infection rates are amongst the highest in the world, despite the fact that in March 2020 the South African government imposed a stringent lockdown. The economic consequences, like elsewhere in the world, have been disastrous, with the economy expected to contract between 8% and 10%. Unlike most other places, however, the economy was already in crisis so that the epidemic has potentially tipped a country on the brink of disaster over the edge. In this context there are a flurry of proposals of how to survive the fall and even of how to bounce back.

Much of the economic debate focuses on whether the size of the government's emergency intervention is enough to moderate the effects of the current crisis and whether it is correctly targeted. When the lockdown was announced in March 2020, to 'flatten the curve' of new infections, 75 (later 100) mainly economists wrote to President Ramaphosa to complain that the economic measures announced were "not comprehensive enough, and are not being implemented sufficiently rapidly or on a large enough scale to prevent real hardship for millions of South Africans" (Institute for Economic Justice, 30 March 2020). The National Treasury shot back that the proposals were realistic in terms of the fiscal space that existed and especially in terms of the capacity of government departments to spend more money effectively. As one of South Africa's leading business journalists put it, "the real problem lies with the ANC's patronage arrangements with the political class, which soaks up revenue, and the countless concessions it makes to its political allies and interest groups to keep its support base intact. […]" (Paton, Business Day, 27/07/2020). Mark Heywood put it more crudely. He criticised Ramaphosa for leaving the response to the Covid-19 epidemic in the hands of a "broken and bastardised state" (Heywood, Daily Maverick, 29/07/2020). If the social justice economists called the South African government heartless, Paton and Heywood, in effect, called them naïve.

What is absent from the current debate in South Africa is substantive deliberation about the state of institutions in South Africa, whether they are those of government or of business. This paper will argue that the shallowness of these debates reflects a much wider problem. We will see in the next section that the rise of 'governance' thinking in political science and in public administration has called into question the prospect of building organisations that can work purposefully to implement policies. Public administration scholarship has responded by insisting on the importance of 'managers' under these conditions while political scientists and sociologists have fallen back Weber's concept of bureaucracy. The problem, we will see, with such fall-back positions is that the increase the risk of isomorphic mimicry in estimating the capability of an organisation in any particular situation.

This paper suggests a solution to this problem. It takes the governance critique of public administration as a starting point, acknowledging the provisional, aleatory and frequently violent character of social relations. It also accepts that the reproduction of what has worked elsewhere (be it a management structure or administrative form) does not tell us much about its capacity of an organisation in the here in now.

Drawing on Weber's definition of an organisation and F.W Taylor's notion of efficiency, we propose that the temporal regime of an organisation is an excellent proxy for efficiency and capacity. In addition, we are persuaded by Achille Mbembe's concept of postcolonial societies as differing from others in terms of their aleatory, disruptive modes of time. We integrate this idea as a *methodological* intervention to focus on disruptions in the temporal regime of organisations as markers of changes in performance. We propose that this constitutes an important methodological (and technological) innovation towards a predictive model of organisational capacity and efficiency. In other words, we propose here a diagnostic and predictive methodology for determining the preparedness of an organisation to overcome the challenges of governance, without falling into the trap of mimicry.

Returning to South Africa, all economic plans emphasise the importance of stabilising the electricity grid and, in particular, on returning the State electricity company, Eskom, to working order. From 2010 Eskom suffered a dramatic decline in performance. This is widely attributed to corruption and what has been called in South Africa 'state capture' (see Betrayal of the Promise, 2017 and Chipkin and Swilling, 2018). We showcase the new methodology in a case-study of Eskom, to argue that cleaning up corruption in Eskom is not enough to save the power utility.

1. Defining Risk: Towards a synthesis

Since at least the 1980s, development and policy research has sought to understand the relationship between policy intention and outcome as an organisational effect; as a consequence, that is, of the ability of organisations to plan effectively, marshal the requisite resources and deploy them effectively to the challenge at hand. In South Africa from the 1990's much emphasis was placed on leadership in management as the key ingredient of success (Chipkin, 2011; Chipkin & Lipietz, 2012; Schwella, 2013). A similar development took place in the business environment where business strategy combined with effective leadership was often regarded as the royal road to success. This marked a shift from the approach coming from political economy that stressed, not so much organisations and how they were managed or led, but the relative power of social forces, usually class forces, whose interests were either aligned or not with specific interventions or policy goals.

Policy studies, at least since the pioneering studies by Jeffrey Pressman and Aaron Wildavsky has been preoccupied with 'implementation'. In their authoritative study of the Economic Development Agency in the US, a project of Lyndon Johnson's administration to promote economic development in deprived rural and later, urban areas, Pressman and Wildavsky sought to explain the gap between the project's ambitious goals, originally promising results and the finally disappointing outcomes (Pressman & Wildavsky, 1984).

Implementation studies has a distinctly Northern pedigree as a field that emerged in and is largely focused on organisations with already established and stable administrations. The implementation gap, that is, arises from tacit and competing imperatives and from a loss of focus arising from the introduction of multiple parties with different and competing interests. It does not arise from the instability and the weakness of administrations themselves[1].

[1] A similar critique can be made of the business strategy literature. Michael Porter's field defining study of Competitive Strategy (1980), hardly focuses on the capacity of businesses to implement the strategy selected.

Public Administration scholars tended to argue that the 'solution' to the implementation gap was leadership or management. There is a large scholarship today dedicated to determining how management models and styles shape performance. The task, however, is intrinsically difficult for conceptual reasons. In the first place, different organisations have different responsibilities: generating electricity, for example, or managing housing, or ensuring the delivery of school textbooks, or administering social grants. "It goes without saying", note O'Toole and Meier, that no common measure(s) can directly tap outputs or outcomes across such diverse objectives" (O'Toole & Meier, 2011: 11). What is more, organisational goals are frequently ambiguous and vague. There is a further methodological difficulty. 'Management' is not a discrete activity but is a compound name for a range of actions, including scheduling, budgeting, motivating, and so on, whose definition is not fixed or given. Unsurprisingly, there is no consensus in the literature on how to theorise the relationship between management and performance (Ibid., 9).

The focus on management or leadership was, nonetheless, the optimistic end of a new scepticism about the effectiveness of organisations in the context of 'globalisation'. The huge literature that emerged on 'globalisation' was accompanied by a new interest in 'governance', defined as the general process of establishing norms, rules and laws, of exercising power, where governments where only one element in the mix[2]. The 'governance' literature has sought to overcome some of the limits of the earlier approaches by stressing that 'implementation gaps', for example, are not simply the effects of weaknesses in the policy process. In an urban context, for example, many studies focus on the complex architecture of coalitions, networks and institutions (Gbaffou, 2018: 4). It is not uncommon for them to insist on the 'ungovernability' of situations arising from this complexity. The ability of municipalities, for example, to plan and govern cities is said to be overwhelmed by the unprecedented scale and speed of urbanization (Gbaffou, 2018: 3). Others point to the extent of urban poverty that is incommensurate with public resources (Davis, 2007) and that leads to the persistence informality and "informal people" (Chatterjee, 2004), the proliferation of "grey spaces" waiting for legalization or destruction (Yiftachel, 2009). Frequently, researchers emphasise the fluidity and instability of individual and group affiliations and belonging (Simone, 2004; Lindell, 2008), making stable urban regimes unlikely (Lipietz, 2008; Weinstein, 2008). In a related manner, various scholars focus on the recent and heterogeneous character of developing states (Bierschenck & Olivier de Sardan, 2007; Gupta, 2012), where the

Analysis is directed to the company environment, what Porter defined as the 'industry' in which the company operated (Porter, 3). He later defended this focus and warned critics that emphasised internal company dynamics over strategy of "becoming inward looking" (Ibid, xvi). Peter Drucker's famous retort "culture eats strategy for breakfast', even if apocryphal, served to shift the emphasis away from the external environment and back on to the role and competency of managers (see Drucker, 2001). The attention on managers, however, often obscures that organisational strength/ weakness has diverse origins in the entity and that what is needed.

[2] The term 'governance' owes its recent use from UN, World Bank and IMF documents from the 1990s, seeking to stress the importance of non-government agents in the role of governing. For the etymology of the term see the short discussion document prepared for the European Union (Hunh Quan Suu).

absence of consistent and capacitated bureaucratic organ is further undermined by rival and multiple layers of legitimacy, rights and authority (Lund, 2006). To this, authors increasingly add the recurrence of violence and the risk of political instability, and their effect on states' ability to govern democratically (Holston, 2009; Von Holdt, 2013).

The governance literature, in emphasising the political, aleatory, fragmented and frequently violent character of decision-making (see Gbaffou, 2018, Davis, 2007, Chatterjee, 2004, Yiftachel, 2009, Lipietz, 2008, Bierschenck & Olivier de Sardan, 2007, Gupta, 2012, Holston, 2009 and Von Holdt, 2013) and social action often dissolves organisations as organised, purposeful entities. What is lost, in other words, is attention to policy intention and implementation. The 'implementation' literature explained policy failure in terms immanent to policymaking itself, while simultaneously simply assuming the administrative integrity of the organisations concerned. The governance literature often goes too far in the other direction. If the social is ungovernable then public policy's focus on "giving a direction" (Peters, 1997) and on steering seems trite.

For the moment, let us note that in the aftermath of the Cold War, organisations like the World bank began stressing the relationship between 'good governance' and economic growth. This was an attempt to 'bring the state back in' (Scokpol, 1985). The concept was taken up and further developed by the international donor community and became an integral part of their engagement with transitional countries of Eastern Europe and Latin America as well as the developing countries in Africa. 'Good governance' became one of the key *buzzwords* in the development aid discourse.

"There is now widespread agreement among economists studying economic growth" wrote Rodrik, *"that institutional quality holds the key to prevailing patterns of prosperity around the world" (Rodrik, 2004).*

The most comprehensive indicator so far for measuring 'good governance' was developed by the World Bank: *The Worldwide Governance Indicator Project* (https://info.worldbank.org/governance/wgi/). The project does not present one aggregated indicator of governance but covers six distinct and complex dimensions, including 'voice and accountability', 'political stability', 'government effectiveness', 'regulatory policies', 'rule of law' and 'control of corruption' (Ibid).

Peter Evans and James Rauch have nuanced this World Bank approach by arguing that the measurement of 'government effectiveness' should actually be a measure of what they call the 'Weberianess' of institutions. Evans and Rauch (1999) empirically tested the relationship between bureaucratic structure and economic growth in 35 countries. They focused on two

Weberian features, meritocratic recruitment and a predictable career ladder, as measures of an organisation's ability to deliver services (Evans & Rauch, 1999: 751). Their results suggested a very strong correlation between growth and bureaucracy.

If we read these literatures (implementation, management, governance and development economics) as *in debate*, then it is possible to find a synthesis in their respective arguments as follows: Implementation gaps are not simply the result of weaknesses in the policy-making processes. They reflect serious challenges of governance, where organisational capabilities to control or direct action are overwhelmed by external factors. To the extent that networks, violence and other aleatory processes can be overcome in favour of organisational objectives, organisations require capable leaders and managers, together with Weberian-like administrations[3].

The governance literature has or should have introduced a healthy scepticism amongst policymakers regarding the ability of organisations *intentionally* to produce an outcome. We do not have to believe the most extreme version of this argument - that everything is essentially ungovernable - to accept that policies rest on assumptions about implementing bodies that cannot be taken for granted. Over and above their desirability (which is a political issue), policies are *reasonable* to the extent that they make good or informed decisions about the organisations that must 'do the work'[4].

We might say that in South Africa after 1994, the ANC government introduced many policies that were desirable but that were not reasonable. Policymaking in South Africa is frequently done without paying due attention to the organisations that must do the work. The Reconstruction and Development Programme (RDP), for example, was jettisoned soon after its launch in favour of the Growth, Employment and Redistribution (GEAR) strategy, ostensibly on ideological grounds (see Bond, 2000; Marais, 2001), but also because the kind of coordination that the programme implied between national, provincial and local governments was unreasonable (Chipkin, 2011). There have been many other such policies. More recently in 2016, the Gauteng Department of Health cancelled a long-term contract with Life Esidimeni, a private company offering care for mentally ill patients, with a view to save money and to 'deinstitutionalize' psychiatric patients, in line with a new policy approach. As a result, 1 300 patients were transferred to the care of their families, non-governmental organisations (NGOs), and other hospitals, yet without adequate consideration of the NGOs in question to treat the patients that they received. 143 people died

[3] Brian Levy *et al* nuance this further by suggesting that bureaucratic organisation is a condition of intentionality in government, though it often needs to be supplemented by horizontal initiatives to be generate results (Levy et al., 2016).

[4] Advocates of 'evidence-based policy making' argue that a further measure of reasonableness is the degree to which policymakers have taken seriously or have even generated 'scientific' research about what works and what doesn't. The approach became especially popular under the New Labour government of Tony Blair.

(see the arbitration report of Justice Dikgang Moseneke, 2018). In South Africa and elsewhere this failure sometimes reflects a failure to take organisations seriously, that is, to pay attention to their capabilities in the development of policies or strategies.

It also reflects a **missing piece** in the policy toolkit. Is it possible to know, in advance, if the organisations in question have the necessary capacities? Policymaking and planning is dependent on such knowledge. Who will design the reform of the electricity sector, for example, or an educational environment or make changes to a business practice without first estimating the capability of those charged with the task of implementation? If we return to our earlier synthesis of the literature, it is difficult to know in advance, for example, if the leadership of an organisation is sufficiently capable (qualifications and experience will only tell you so much) and/or the administration is sufficiently Weberian.

This is why the temptation to mimicry is so high. Most existing government evaluation tools end up encouraging what Matt Andrews, Lant Pritchett and Michael Woolcrock call ‘isomorphic mimicry’; the copying of the form of an organisation on the basis that is has worked elsewhere, leading to a situation where “looks like” substitutes for “does” (Andrews et al, 2017)[5]. Kate Bridges and Michael Woolcock noted, for example, that in 2011 half of all World Bank projects, featuring more than $50 billion, focused on institutional reform. So did those of the United Kingdom’s Department for International Development (DfID) and the Asian and African Development Banks’ portfolios (Bridges and Woolcock, p. 4). Yet in all cases the results were poor, even harmful. Why? Most of these initiatives were based on merely incorporating ‘best practice’ models and designs from around the world into local environments, but usually ignoring the particular context. Organisations and projects were regarded as successful to the extent that they conformed with ‘best practice’ models and designs that were deemed to have worked elsewhere.

The New Public Management, with its ‘management matters’ approach has been criticised for overestimating the capacity of managers to deal with governance challenges and for obscuring broader considerations of organizational capacity (Christensen & Gazley, p. 265). It also underestimated the tendency towards mimicry, conflating form for real capacity.

In summary, the tendency towards mimicry has left the fields of public policy and public administration largely without effective tools for measuring and forecasting *efficiency* and *capacity*. How can such an instrument be fashioned?

5 These are some of the problems with the ‘assessment’ tools developed by various international bodies like the United Nations and the World Bank and/or various governments (see Cox, Jolly, Van Der Staaij & Van Stolk, 2018).

2. The Time of Organisations

Let us return briefly to the work of O'Toole and Meier, mentioned above. They define the role of managers as follows: "managers use structures, systematic processes, and procedures to regularize organizational actions. Put succinctly, organizations and their managers organize. They set up stabilizing routines that embed knowledge and experience so that cases can be handled quickly and consistently" (O'Toole & Meier, Op Cit, p. xiii). What is important about this definition of management is that it stresses the importance of *regularity* and *stability* on organisational performance. In other words, they stress the *temporal dimension* of capability.

This is essentially a Weberian perspective on management. Weber defined an organisation in terms of the likelihood of certain kinds of social actions being repeated over time - those approximate to an organisational role (manager, worker and so on). On his terms, organisations are a form of corporate group. They have a continuous purpose. They operate by way of applying given rules and orders, which are enforced by an administration especially established for this purpose (Weber, 1947:146).

"Corporate groups," Weber explains, "only exist to the extent that there is a *probability* that certain persons will act in such a way as to tend to carry out the order governing the group" (our emphasis) (Ibid., p. 146). If there is no probability of this type of action on the part of a particular group of persons, that is, the actions to enforce the rules or orders given by a chief or leader or manager, there is only a social relationship but no corporate group (Ibid., p.147). Weber emphasises this **relational** and **probabilistic** character of organisations over and over again. A 'state', for example, ceases to exist in a sociologically relevant sense whenever there is no longer a probability that certain kinds of meaningfully oriented social action will take place (Ibid, p.118). That is, 'Kings', 'bureaucrats', 'subjects', 'citizens', 'presidents' do not come into meaningful existence unless the social actors occupying those positions act in ways approximate to the roles of 'Kings' etc[6]. We could add, 'directors', 'managers', 'workers' and so on.

The relationship or distance between social action and formal, organisational roles is an area ripe for study, though it does not always receive the treatment it deserves in the field of public administration. One of the important exceptions, in this regard, is Michael Lipsky's 'Street-level

6 Corruption as 'abuse of public office for private gain' is a problem not simply because money and resources are diverted, wasted and/or stolen. It marks a departure of an official from their formal role and, in this regard, represents a negation of the organisation itself.

bureaucracy'. There Lipsky considered the difficulty for frontline service providers of performing their roles in the absence of the time, information and resources needed to do so optimally (Lipsky, 2010).When an official deviates from a rule or a norm political scientists and sociologists frequently explain such behaviour in terms of neopatrimonialism (Crawford Young, 1994), self-interest and corruption, including 'state capture' (Hellman *et al*, 2000), political interference (Chipkin, 2012; Chipkin & Swilling et al, 2018). In anthropology, Trouillot notes that sociocultural anthropologists have not given these questions the attention they deserve (Trouillot, 2001: 126). This is beginning to change, albeit slowly. The important exception to this rule is in the field of what has come to be known as behavioural economics, where researchers consider ways of helping to 'nudge' consumers and citizens to behave 'reasonably' (see Kahneman, 2011; Thaler, 2015). Behavioural economics has started to influence the policy space in some countries. How to close the gap between an actor's formal role and designation in an organisation and their actual conduct remains one of the key theoretical challenges for research and the foremost practical challenge for organisations.

Probability is the likelihood of an event or action taking place in the future. It is in other words, a temporal relation. Hence, closing the gap between an individual's formal designation in an organisation and what they actually do in the workplace is about reconciling over time their de facto conduct and their necessary conduct. Strangely, this key dimension of performance is often overlooked, especially in corporations where the tendency amongst Human Resources officers is to consider the gap as a function of skill and personality (hence the strange appeal today Enneagrams). Christen and Gazley note in their extensive review of the public administration and policy literature, however, that 'time' as a variable in the study of performance has hardly been considered. They write: "the dimension of time is the principal element missing from current frameworks in public and non-profit management" (Christensen & Gazley, Op Cit., p. 276).

3. The Temporal Regime

F.W. Taylor's 'scientific revolution' in the management of organisations marked nothing less than a temporal revolution in the running of companies. The move to greater efficiency, in individual businesses and in the national economy, would be achieved through a double movement. In the first place, it required overcoming (old) systems of management where the "imperative [is] that each workman shall be left with the final responsibility for doing his job practically as he thinks best" (Taylor, p. 25). In the second, the remedy for inefficiency lay in "systematic management", a "true science", resting on the application of "clearly defined laws, rules and principles (Ibid, p.7).

"The enormous *saving of time*," Taylor enthused, "and, therefore, increase in the output which it is possible to effect through *eliminating unnecessary motions* and *substituting fast for slow* and inefficient motions for the men working in any of our trades can be fully realized only after one has personally seen the improvement which results from a thorough *motion and time study*" (Ibid., p.24) (emphasis added). In any work routine, Taylor continued, where there are potentially dozens and dozens of ways of working, "there is always one method and one implement which is quicker and better than the rest".

"And this one best method and best implement can only be discovered or developed through a scientific study and analysis of all the methods and implements in use, together with accurate, minute, motion and time study" (Ibid., p. 25).

Efficiency, that is, was to be achieved by finding the best way of performing specific tasks as quickly as possible according to the careful study of how best to move the worker's body, place their arms, their legs, their head and so on in relation to the machine, tools and/or instruments designed for the task at hand.

So far-reaching was the impact of Taylorist conceptions that his work is widely deemed responsible for the lineaments of the modern factory system in the US, in Britain and in France (Littler, 1978: 200), for the organisation of Soviet industry from the 1920s (Sochor, 1981) and as the basis of Japanese industrial production after the Second World War (Tsutsui, 1998). Even the movement that developed in the 1930s in opposition to Taylorist practices – Human Resources Management, for example - was not so much an anti-Taylorist movement as a form of Neo-Taylorism (de Montmollin & Tombelaine, 1975: 13). It rejected Taylor's particular view on workers autonomy, tendency towards laziness and so on, but retained the rationalist sensibility that the work process should be subjected to a strict discipline of time and motion.

Taylor's focus was on improving efficiency by modelling human actions and crafting instruments/ tools to best achieve specific tasks. In the 1930s, concern to increase productivity in American firms saw experimental research done on motivation. Studies by Elton Mayo, for example, found that output improved in situations where workers experienced recognition in the workplace (Grey, 2009: 45). Efficiency was not simply a technical relation between the body, the tool and the task, that is. It was also a social relation, determined by the quality of teamwork, by the level of cooperation between managers and workers, by the extent and type of internal communications and, generally, on the quality of work-based relationships. Drucker famously insisted that management was about making human beings "capable of joint performance" and was, therefore, "deeply embedded in culture" (Drucker, 2001) - the basis of the famous, probably apocryphal rejoinder to Porter that 'culture eats strategy for breakfast'. Today Human Resource Management (HRM) is said to operate through a system that includes HR philosophies, strategies, policies, processes, practices and programmes (Armstrong, 2006: 4). The purpose of HRM is always, nonetheless, "the close integration of human resources policies with business strategy" so that "employees as a resource [are] managed in the same rational way as any other resource being exploited for maximum return" (Legge cited in Armstrong, 2006: 12).

Like Taylorism, Human Resource Management is a way of disciplining staff according to time. Whereas Taylor emphasised the individual worker in relation to a task, Human Resources Management scholars emphasise the team in relation to projects. Central to the definition of a project, however, is a measure of time. James and Albert (1994), for example, define a project as an item of work requiring planning, organizing and resources and funds. Harold (2003) makes the temporal dimension of planning more explicit by defining a project as any series of activities and tasks that have a specific objective to be completed within a certain timeframe. Dhillon, (2002), does similarly when he calls project management the art of directing and coordinating material and human resources through the project life span to achieve predetermined goals.

We can summarise the discussion so far as follows:

From the perspective of 'efficiency', the temporal structure of an organisation is the aggregate time that it takes to perform specific tasks or clusters of tasks in relation to organisational outputs.

From the perspective of 'capacity', the temporal structure of an organisation is a measure of the likelihood or probability that an individual will conduct themselves according to what is needed to be a 'manager', 'HR officer', 'worker' and so on. It is what the philosophers (following Foucault) might call a relation of subjection. Corruption as the 'abuse of public office for private gain' is a term that describes the misalignment between the formal role and what the person occupying it actually does with their time. Taken together, capacity and efficiency are both *relations in time* that can be measured by modelling an organisation's temporal structure. We believe that this insight constitutes a contribution both to the theoretical and practical knowledge of modelling and forecasting risk in organisations. The second theoretical contribution that this paper makes is how to measure such a temporal regime. Let us return to the idea of postcoloniality, which we left hanging earlier.

Achille Mbembe, the South African based philosopher has proposed that postcolonial societies have a temporality peculiar to them. Mbembe defines the structure of the postcolonial condition in terms of the contingent, the ephemeral, the fugitive and fortuitous, as a condition of "radical uncertainty and social volatility". This is what he defines as a state of *temporariness.* Temporariness is characterised by "life changing rapidly". It also describes a domain of life that is "hardly the object of documentation, archiving, or empirical description" (Ibid., p.661). Temporariness is not simply a social condition. It is an organisational one too.

Temporal structures – speed, acceleration, form – provide a privileged perspective from which to observe and analyse social and organisation life in postcolonial conditions. Yet the postcolonial is also a description of a state of change or transition from the colonial into what we do not yet know, or we know only in the softest of shadows. As such, it marks a period of transition. Theoretically, the study of temporal structures, is a preeminent methodology for the analysis of transitional societies and/or organisations in transition.

Postcolonial organisations are not able to impose either the time of the task or the time of the project on staff members. Put differently, organisations in transitional societies tend towards inefficiency and incapacity depending on the degree to which staff (managers, workers and so on) perform their jobs according to the temporal structure of the task or the project or whether they are motivated by other commitments; to family and kin (neopatrimonialism), to religious bodies (theological time), friendships (affect) and so on.

From this perspective, the temporal structure of organisations in postcolonial or transitional environments is likely to be marked by discontinuities in the time series or disruptions. Disruptions in the organisation are likely to reduce efficiency because the tendency of social actors:

- to comply with their organisational roles will be affected, as either the people change and/or the roles are redefined and renamed, sometimes capriciously.
- to work timeously and correctly will compromised for the same reasons.

Organisational efficiency and capacity, that is, can be measured negatively by modelling the number and duration of disruptions. To the best of our knowledge we are the first to propose evaluating the efficiency of organisations in this way.

In summary we argue that organisations as such are measures of *probability* that staff will perform their tasks as 'workers', 'managers', 'engineers', 'support staff' and so on. This is a relation of subjection, of, that is, being subjected to a role. Secondly, Subjection to a role can best be analysed through a study of the *temporal structures* of a task or a project team. Efficiency in an organisation occurs when tasks are completed in the most regular and speedy fashion. In transitional societies, however, temporal structure in organisations are usually given by their 'temporariness', defined as a condition of uncertainty and volatility. This explains why tasks in organisations in such environments frequently fail to perform adequately.

Measuring Temporariness

In this last section we discuss how to measure the temporal regime in an organisation, focusing specifically on its temporariness. We will do this by way of a case-study drawn from recent work in South Africa on the State-Owned Electricity company, Eskom. The authors have developed a technology, using data modelling techniques, time-series equations and Artificial Intelligence to calculate temporality from organisational data, ranging from HR data, to machine output information. For the purpose of this essay, however, we have focused on a very simple measure: turnover-over rates in key management and operational echelons. Applying such modelling to Eskom, we call into question the dominant explanation for Eskom's decline in performance over the last decade and we propose a new one.

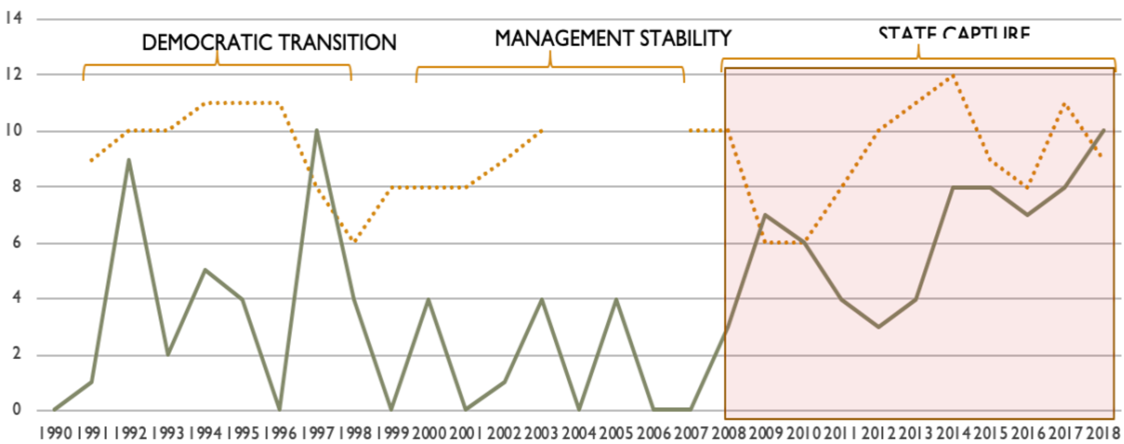
Eskom is a State-Owned Company in South Africa that has a monopoly in electricity generation and transmission in South Africa. Distribution is largely conducted by municipalities though even here Eskom is a very important player. Historically, one of South Africa's economic advantages came from the fact that Eskom produced a reliable supply of electricity for consumers and for the mines and for industry at globally competitive prices. During the Apartheid period, the electricity network largely excluded Black households. In 1987 less than 40% of households has access to electricity. Soweto, the largest Black African settlement was only fully electrified in the 1980s. Soweto roads were only tarred in the 1990s, after the ANC took power in Johannesburg.

There were concerns about Eskom even earlier, however. In the 1970s company planners had massively over-estimated electricity demand in the following decade, blind to growing political opposition to Apartheid and indifferent to the prospect of economic sanctions. In 1983 the National Party started preparing Eskom for privatisation, by corporatizing the former state entity. When it came to power in 1994 the African National Congress looked to restructure the energy sector by unbundling Eskom into three companies (Generation, Transmission and Distribution) and allowing competition in these three areas, starting with distribution. Yet these plans were halted in the face of political opposition, especially from the Unions and the South African Communist Party. It left the company with a corporatized structure comprising of a senior management appointed by a board, over whom the government had a wide influence (GSDPP, 2013). The corporatised structure of Eskom allowed government, as the majority shareholder, to select the board of directors. From 2010 this structure was used by senior ANC politicians to parachute friends and associates into key positions in management, with a view to extract massive rents from the organisation. This made many politically-connected people very rich (those associated with the notorious Gupta brothers in particular) and some of this money may have flowed back into the ANC itself. In South Africa this phenomena came to be known as 'state capture' (Betrayal of the Promise, 2017, Chipkin and Swilling, 2018).

For the purposes of this essay we have generated a basic time-series plot of turnover data in the company's board and in the senior management.

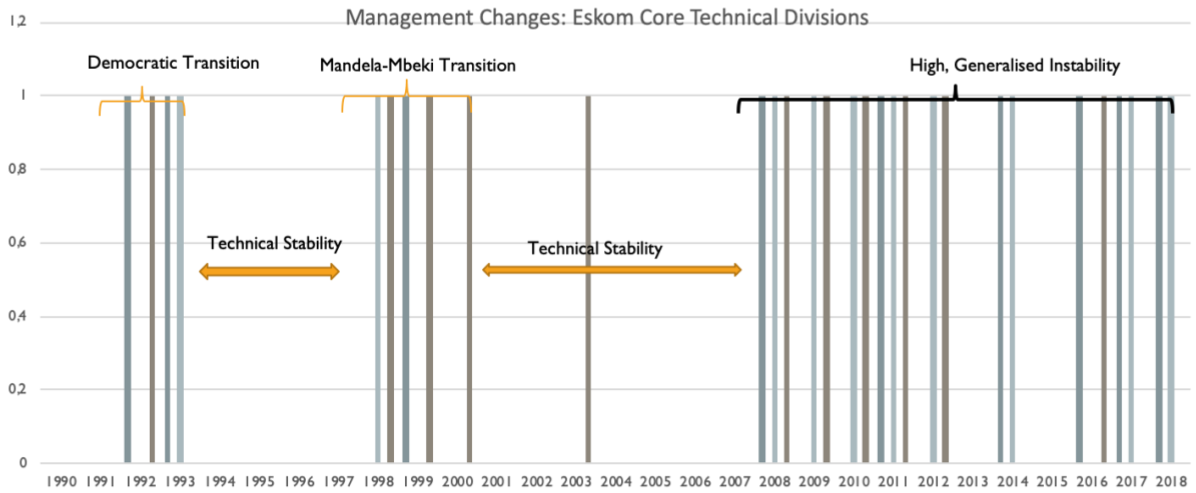
Figure 1 reflects the time series with three stages (disturbance), the mean for each stage and lines for one standard deviation above (upper limit) and below (lower limit) the mean. What we see in the first period (1990-1998) is a period of controlled disturbance to the senior executive as new Black executives are brought into the management team. The Y-index is a measure of disturbance or of turnover. There are sharp disturbances of limited duration, followed by periods of relative stability. The period from 1999 to 2006 is largely stable. There are breaks in the data record in 2004 and 2006. From around 2007, however, the pattern of the data changes dramatically. Whereas before it had a certain regularity given by peaks in turnover followed by periods of stability, from 2007 the series becomes irregular, corresponding to an accelerating rate and frequency of turnover. In other words, more people are joining and leaving the senior management more and more often. From 2012, the series reflects ever increasing disturbance in the organisation with no periods of settling down.

Figure 1: Time-Series Data of Management Turnover 1990- 2018.



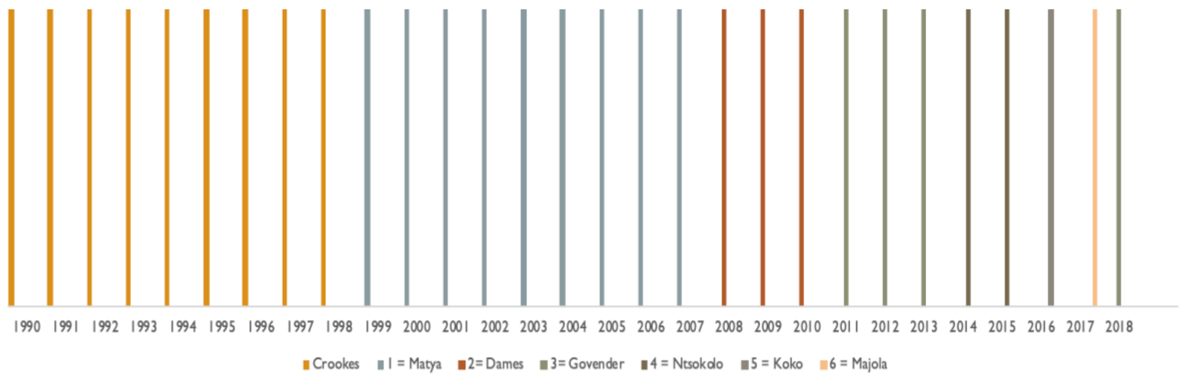
We see this clearly in a modelling of the technical divisions of the company. In the diagram below, each bar represents a change in the leadership of Eskom's technical divisions (generation, transmission, distribution). It shows a period of change during the early 1990s, followed by a period of stability, then more changes in the late 1990s, followed by a relatively long period of stability. This is what is expected from a stationary series, which undergoes limited turbulence. From 2008, however, the rate of change accelerates and never settles down. The series *becomes non-stationary.*

Figure 2: Management Changes in Technical Divisions



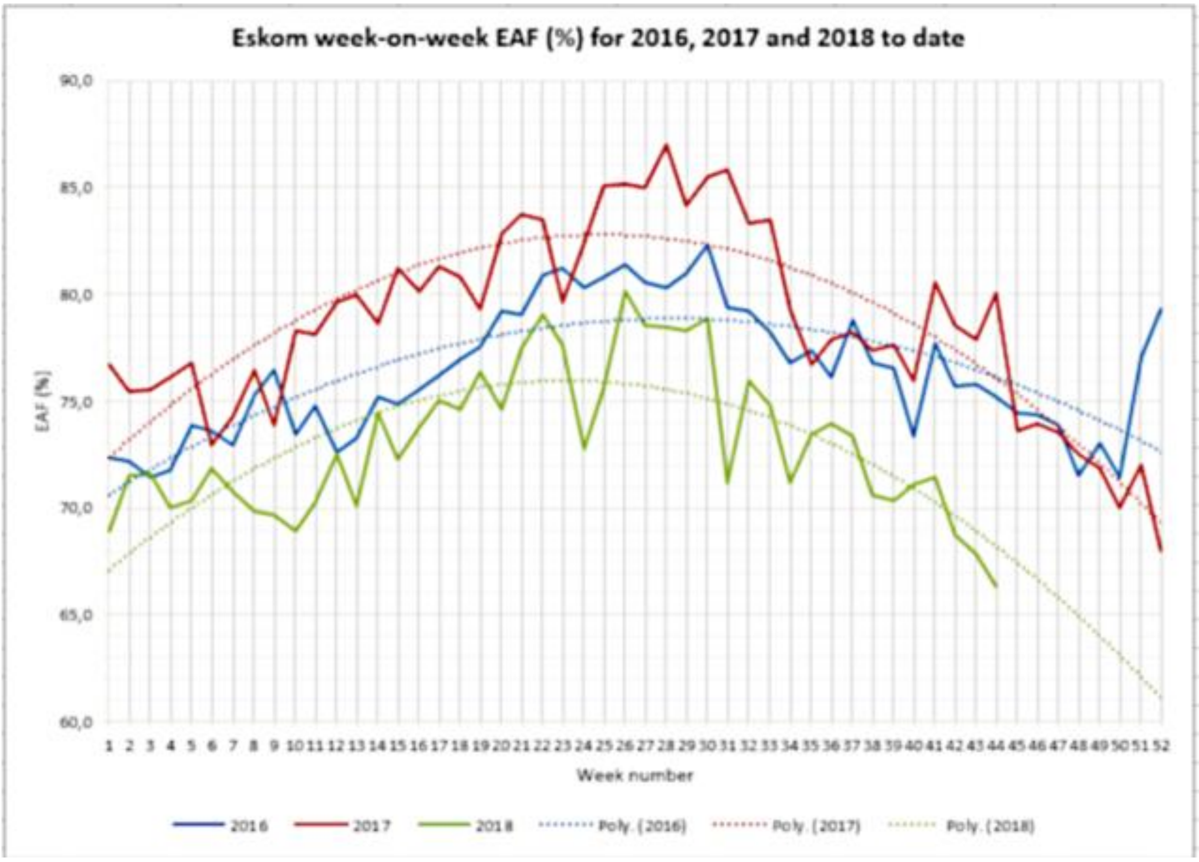
Operationally, periods of instability are associated with high rates of turnover in the Generation division, coupled with shorter and shorter periods of incumbency. In the diagram below, each coloured bar represents the tenure of a head of the Generation division. What it shows is that from 1990 to 2018 the tenure of the person in charge of this technical area declined rapidly, from on average, 9/10 years to between 3 years and eventually 1 year.

Figure 3: Length of Tenure of Head of Generation



Overall, Eskom generates less electricity each year. This is not a function of declining demand. It is a symptom of deteriorating efficiency.

Figure 4: Eskom Electricity Generation 2016 – 2018.



Source: Eskom, EE Publishers

The correlation, however, between turnover rates in the senior management and the deteriorating performance of power plants is *surprising*, when considered historically. Prior to 2010, real power at Eskom lay in the power station managers, who were highly experienced engineers that could make key operational decisions on the run (adjust the temperature of boilers on the basis of the sulphur content of the coal and so on). In other words, changes amongst senior executives should not have had an immediate impact on electricity generation, if at all. Yet from 2010 they a) started removing power station managers and b) centralising major operational decisions at Megawatt Park. In other words they shifted key decision-making to the very senior executive cohort that was so unstable.

Corruption at Eskom was associated with severe disturbances to the company's operating model, especially regarding the hollowing out of capacity at the power stations themselves and the centralisation of decision-making to an unstable board. There was, however, no necessary relationship between these events. The manipulation of coal contracts, for example, did not necessitate the destabilisation of the power plant operations, nor did it follow that senior managers were changed as frequently as they were. That is, corruption and rent-seeking may have ultimately weakened the financial position of the company in the long run but it did not necessarily lead to immediate and chronic drops in performance . Rather, these are the result of acute instability in operations, whose origin likely lie in ham-fisted attempts at affirmative action.

Based on the modelling discussed above, it is likely that the decline in performance at Eskom is the result not so much of corruption and state capture as it is the consequence of poorly executed affirmative action policies that resulted in high rates of turnover in key staff cohorts.

Conclusion

This paper has contributed both to theoretical and practical debates in the field of policymaking. Since the 1990s scholars working from the perspective of 'governance' or the related field of postcolonial studies have raised important theoretical objections to policy studies, even if only implicitly. That is, they have cast doubts on the possibility of organisations working purposefully in the context of fluid and elusive social networks, violence, poverty and so on. To the extent that public administration scholars have addressed this critique they have stressed the importance of management in overcoming these challenges. Development Economists have further stressed the importance of 'good governance' generally and the importance of rule-bound and meritocratic administrations. In other words, public administration and management scholars as well as development scholars have suggested that there are ways of overcoming the general tendency towards ungovernability. We have shown how both of these 'solutions' are prone to the error of mimicry. Hence, policymaking largely operates in the dark. This raises the risk of policy failure in the public space and strategy mistakes in the corporate environment.

This paper has proposed a solution to this problem. We have argued that the likelihood that an organisation is positioned to overcome the challenges of governance can be determined by a proxy: the temporal regime.

We have seen that terms like 'efficiency' and 'capacity' are temporal concepts that either measure certain actions over time or that measure the probability of actions happening in time. We have drawn from postcolonial theory, moreover, to suggest that a good way of determining such a temporal regime is by modelling disruptions. This approach lends itself to mathematical modelling, using time-series equations.

We have applied this concept to a brief case-study of the state electricity company in South Africa, Eskom. We have focused on a very simple data series (turnover rates in key management cohorts) to show that the fantastic drops in organisational performance after 2010 are probably not the result of corruption and state capture but the consequence of poorly executed affirmative action policies.

We believe that the approach developed here is a first for accurately modelling the efficiency or capacity of an organisation using Big Data and AI techniques, instead of traditional qualitative methodologies. The methodology (and associated technology) outlined in this paper will allow policymakers, corporate heads and managers to test the reasonableness of their policies and strategies quickly and at scale. In this way, we have proposed a technique to bring greater light to the policy-making process.

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