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Abstract

There is a rich literature on the emergence of new public management in the 1980s yet surprisingly little about the historical and social lineages of this movement. The scholarship on public management generally suggests that it was born out of the neoliberal critique of the state. The public sector would have thus borrowed corporate practices concerned with performance in order to instil market-like competition and make efficiency gains. This article challenges this reading by showing that concerns with performance management emerged instead from new planning technologies developed in the US military sector. I argue that these planning practices, initially developed at the RAND corporation, would radically transform governance by changing the way in which decision makers consider data about performance and use it to develop strategies or policies. I then explore the impact of this new approach on both corporate and public governance. I show how these ideas were translated for business studies and public administration in order to radically transform both fields and 'make them more scientific'. As I show, this process contributed directly to the rise of what became called public management and provided new planning tools that radically transformed how we think about governance.

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Introduction

Over the past decades, we have witnessed a growing concern of governance with performance. This has translated in the multiplication of audits (Power 1997), policy evaluations, standards of good governance (Broome, Homolar and Kranke, 2017) and performance management (Best 2014), which all seek to track and assess performance as a means to support the practice of governance. The literature on neoliberalism has broadly interpreted this development as part of a neoliberal project to increase the efficiency of governance in response to accusations that the state was a cumbersome regulatory agent and an inefficient provider of services (Gamble 2006). The focus on performance would then be part of an attempt to renovate governance by engineering market-like dynamics through administrative means (Peck 2010; Harvey 2005). By systematically assessing how subjects and agents of governance are performing and rewarding/punishing them accordingly, neoliberal governance would thus be creating quasi markets with a competitive logic akin to that of markets (Miller and Rose, 2008). This new mode of governance is often said to come from the corporate sector with the borrowing of managerial techniques from the private sector (Hanlon 2018; Hughes, 2003). Governance would thus be in the midst of a 'managerial turn' to make it more efficient and accountable as it seek to 'get value for money'.

In this article, I challenge the idea that the managerial turn and the growing emphasis on performance represent extensions of neoliberal thinking. I argue that references to the borrowing of business practices have too often served to normalise this focus on performance as an example for the 'market solutions' privileged by neoliberals. It is useful here to remember that the idea that public administrations can be improved by turning to the private sector is a recurrent theme in the US that long preceded neoliberalism. As Ingraham and Ban already pointed out back in 1986, declaring the 'superiority of private sector practices over those of the public sector' and borrowing from the former has been 'part of every presidential strategy for dealing with the bureaucracy for the past 30 years' (1986: 153). Since the beginning of the 20th century, in fact, there have been numerous attempts to implement business methods throughout the public administration. Scientific management, for example, was an integral component of administrative reforms in the early 20th century, notably the renovation of municipal administrations (Schacter 2002). Similarly, the 1950s saw management consultants such as

McKinsey exert an influential role in reorganising various public agencies and organisations so as to implement business administrative structures (McKenna 2010). Even the *Planning and Programming Budgeting System* (PPBS), often seen to be the epitome of post war interventionism in the US, was promoted to Congress in 1967 by Lyndon B. Johnson as a means to "bring to each department and agency [of the federal government] the most advanced techniques of modern business management' (cited in Peterson 1971).

In calling for some historical perspective on this question, I do not wish to deny the fact that corporate practices are involved in the managerial turn. Rather, I criticise the tendency to treat these practices as instances of 'neoliberal thinking'. References to the 'borrowing of corporate practices' offer a poor basis to distinguish what marks out public management and its focus on tracking performance. Not only is it a long-standing feature of American administration, but corporate practices themselves have also greatly evolved over time. For example, one of the intriguing features of the new focus on performance is that it differs from scientific management in important ways. We often forget that scientific management was initially developed in the early 20th century *as a professional expertise that was meant to be close to the ground and distinct from the practice of decision making at the top of an organization or a corporation.* It was conceived as a technical expertise specialised in implementing policies developed by administrators and policy makers. This separation between management and policy making came to be seen as a condition for objective management and the key for efficiency gains. It was entrenched in the 1920s with the rise of the M-form, an organisational model famously implemented at General Motors which was predicated on the separation of operations, left to managers, from strategy and policy-making, here seen as the purview of administration or top decision makers (Chandler, 1962). This conception was later brought to the public sector in the US and Europe by management consultants who promoted the importance of freeing top executives from the task of having to worry about operational matters so as to focus on the big picture.

By contrast, public management and the growing focus on performance seeks to systematically reconnect what scientific management had initially separated. As I show, public management has turned management into a tool for policy-making, a means to systematically support decision-making at the top levels of governance by tracking performance *in order to give perspective on what is being governed*. In other words, operations and management have thus become an integral component of determining the objectives and policies of governance rather than simply a means for implementing them.

This article seeks to unpack the nature of this transformation and track where it comes from. I argue that the explanation for this new paradigm of governance must be found in profound changes that took place in the US defense sector long before the rise of neoliberalism (Knafo, Dutta, Lane, Wyn-Jones, 2018). Developed initially at the RAND Corporation in the early post war era, this new paradigm profoundly transformed the way we conceive, measure and use information about performance. In this article, I show how it turned what had been a tool of control under scientific management, into a means to support decision making by top officials, or more specifically strategy/policy making. In doing so, I highlight how many of the features we now associate with managerialism, notably its focus on output and commitment to performance management, were born out of the distinct nature of this framework as performance became a central concern for governance.

This article is divided into four sections. I begin by showing how the changes in public management cannot be easily reconciled with neoliberal theory contrary to what is often argued in the literature. To do so, I focus specifically on the relationship of public choice theory to public management because this approach has articulated the most comprehensive neoliberal perspective on bureaucracy and public management. This allows me to follow the neoliberal reasoning of this approach to its logical conclusions in order to illustrate the tensions that exist between managerialism and neoliberal theory. As I show, public choice theorists have traditionally been suspicious of public management and keen to limit the autonomy of managers and their ability to dictate the priorities of governance. In section two, I turn to the history of performance management and focus on the United States because this is where many of the key features we now associated with performance management initially emerged (Gruening, 2001; Lynn 2006). This focus on the origins and early lineages of this approach is meant to bring precision to our conceptualisations of public management which are too often clouded by the complex and diverse array of practices that later emerged from it. I argue that this approach to performance finds its roots in a new paradigm of governance that emerged with the rise of systems analysis in the defense sector. The last two sections explore two channels by which these ideas travelled to reshape practices of management. Section three examines the private side by looking at the renovation of business schools in the late 1950s and the impact of systems analysis on conceptions of corporate governance. Finally, in section four, I trace the way in which the attempt to implement systems analysis in the US Federal State in the 1960s profoundly transformed public administration and gave birth in the process to public management as a new approach to the civil service.

1. Public Choice and the Managerial Turn of Governance

The managerial turn under neoliberalism has traditionally been addressed in the literature as the rise of new public management (NPM) (Hood 1991), or simply public management (Hughes, 2003),[1] a term associated with a broad set of administrative reforms that have taken place since the 1980s and which include the rise of audits, standards of governance, and practices of performance management (Pollit and Bouckaert 2001). NPM is usually interpreted as the promotion of new forms of entrepreneurial management geared towards performance and which are often opposed to older bureaucratic practices based on due process (Osborne & McLaughlin, 2002: 9). In this respect, public management is often likened to a market approach that focuses on efficiency gains through the use of performance management and increased competition.

The origins of these practices have often been traced back to the influence of neoliberal ideas in particular that of public choice theory which is commonly identified as a key pillar of this approach (Hughes, 2003; Boston 1990). Referring to public choice, Boynes contends that '... seldom has the major practical implication of an abstract model of bureaucracy been so widely implemented' (1998a: 474). Christopher Hood, who is often credited with having put forward the term NPM, presented the latter as a 'mix of public choice and updated scientific management' (1991: 5). Similarly, Aucoin (1990), in another foundational article on NPM, identified public choice theory as one of the two pillars of the new managerial practices that were spreading in Western countries. From these perspectives, performance management fulfils two functions dear to public choice theorists. It ensures that citizens get value for their taxes and helps create market like incentives. In that respect, performance management is perceived as an integral part of the attempt of NPM to reshape the public sector in the image of the market by creating, through administrative means, quasi markets.

Despite the evidence pointing to the prominence of public choice under neoliberalism, rare have been the actual attempts to trace the concrete processes by which these ideas were translated into the practices of public management. The absence of a historical account of the

[1] In this paper I use public management to refer to a distinctive approach to governance/management which took shape in the late 1970s and NPM to refer to the constellation of administrative practices that were implemented starting in the 1980s largely as a product of the rise of public management.

origins of public management is significant, I argue, because the relationship between public choice theory and public management is not as obvious as sometimes believed (c.f. Amadae, 2016; McLean, 2017).

Public choice is a neoliberal approach that emerged in the late 1950s. It articulated a critique of the public sector and more generally the state that inverted the classic narrative about government intervention and market failure (Amadae, 2003). Previously welfare economists had called upon the state to intervene when self-interested market actors would not be ready to offer certain services or goods (at least at decent price). This became a significant discourse in the growth of the welfare state in the early 20th century and a target for public choice theorists who sought to roll back social provisions. They countered welfare economics by turning the spotlight back onto the state. Public choice theorists argued that even when the market fails to achieve the desired outcome, it is doubtful the state can do any better (Medema 2009). According to James Buchanan and Gordon Tullock, we too often rely on a misleading ideal of benevolent public servants succeeding in dealing with social issues that self-interested market actors fail to address. Yet, they point out, bureaucrats and policy makers are themselves self-interested (Buchanan and Tullock, 1962). For this reasons, it is important to be ‘realistic’ when comparing markets and bureaucracies. For these public choice theorists, the issue was not which of the market or the state can provide public services, but rather what mechanism can best deal with the fact that people always try to serve their own interest when producing such services. Once framed in this way, it becomes clear to public choice theorists why the private sector remains superior to the public sector. For it is governed by an impersonal mechanism, the market, that can rein in self-interest or at least channel it in productive ways. In a market, providers are forced to remain competitive/efficient in what they do, and attentive to the needs of consumers to keep their clientele. The public sector, by contrast provides services often in the absence of proper competition, meaning that there are limited incentives for civil servants to be efficient and attentive to actual needs. Without these pressures, public servants often end up chasing bigger budgets and greater status at the expense of service delivery (Niskanen 1971). This, public choice theorists argued, explains why governments should be limited in what they do, or at least, subjected to the same logic as the private sector by introducing market competition.

Scholars of neoliberalism now often assume that public choice theorists were driving what became the new focus on performance, seen here as a means to produce market-like forms of competition. Yet this forgets that public choice theorists have long been wary of performance management because it requires generating data processed by a bureaucracy. Performance management produces information asymmetries that public bureaus and public decision-makers can manipulate to serve their own interest.[2] On the one hand, lower levels of a bureaucracy have to produce numbers which they know will impact upon them, thus creating strong incentives to dress up performance data so as to flatter those producing the services being evaluated, a problem that has crept up time and time again under NPM. On the other hand, it also makes it easier for those at the top, who collect and use this data, to manipulate these numbers so as to use them for political purposes (e.g. to lobby for further resources or exaggerate their accomplishments). In that respect, performance management does not limit the freedom and power of bureaucrats and politicians. From a public choice approach, it often creates opportunities to enhance their power.

This critique highlights why we should be careful not to equate the development of quasi markets, in which competition is systematically administered by managers who determine winners and losers, with actual markets. From a public choice perspective, speaking of performance solves nothing if it is determined by bureaucratic and managerial processes. For this keeps the determining agency in the hands of civil servants. And indeed, the idea that managers could substitute themselves to market processes in order to carry out the work of optimisation, compiling data on performance and making decisions on the basis of this data, is precisely what neoliberals such as Friedrich von Hayek, James Buchanan, Gordon Tullock or William Niskanen systematically criticised.

This explains why one will find very little about management in public choice theories, and more generally neoliberal theories. As Terry Moe notes, public choice theorists were mostly preoccupied with voting and had written relatively little about bureaucracy before the 1980s (Moe, 1997: 464).[3] Part of the reason for this silence must be found in the very framework of this approach. In attempting to ground scientific principles in the manner of economics, which can be valid across time and space, public choice did not provide the tools or the perspective to deal with managerial concerns that involve concrete decision-making (Metcalfe and Richards, 1993: 115). There was no theory or conception of control (Moe 1997)

[2] It is interesting that another strand of neoliberal theory, agency theory, also articulated critiques of performance management in corporate governance for creating problematic incentives on workers (Lynn 1996).

[3] The few writings on this subject that existed then sought to show the inherent limitations of the bureaucracy (Tullock 1965).

developed here for managerial purposes. Instead public choice theorists were interested in determining what bureaucrats were trying to maximise in order to build production function for the civil service (Niskanen, 1971; see Wintrobe, 1997). Being poorly equipped to think through the practical issues of management, they counted instead on markets to solve problems. The focus was thus set on creating markets hoping that markets would then take care of the rest. This concretely meant putting the onus on consumers rather than managers. For if the point was to counter the power of bureaucrats, the best strategy was to look for decentralised mechanisms of decision-making based on the choices of dispersed customers (Ostrom 1973). As a result, public choices scholars looked for ways to facilitate people's ability to change providers, for example by distributing vouchers for public services or by making it easier to constitute new providers (e.g. charter schools) so that one could put the power in the hands of customers.

While these ideas have certainly been significant, they do not account for the features of NPM which involve managing competition and which are meant, as many have noted, to empower policy makers (Gamble, 2006). Interestingly, the early literature on NPM was aware that public choice was somewhat of an awkward fit with the managerial underpinnings of NPM. Hood, for example, characterised in 1991 the fusion of managerialism and neoliberal theory in NPM as a marriage of opposites precisely to capture the tension between these two elements (Hood, 1991: 5). Similarly, Peter Aucoin's influential article pointed to the fact that the rhetoric about entrepreneurial public servants, calling for greater autonomy to public servants, was at odds with the pro-market approach of public choice (Aucoin, 1990). These observations, however, were mostly lost on the scholarship about neoliberalism that emerged later in the 1990s. This was partly the result of the new 'social constructivist' orientation of this literature that emphasised the vital role of the neoliberal state in implementing and consolidating market-rule (Vogel 1996; Gamble, 2006; Peck 2010). The latter had the unfortunate effect of normalising managerialism as a natural fit for the politics of neoliberals. From this point onwards, there no longer seemed to be a contradiction in believing that the promotion of market-based principles was fully compatible with the empowerment of public managers. As a result, few scholars of neoliberalism now seem troubled by the fact that NPM clearly empowered the very people that neoliberals, and certainly public choice theorists, did not trust. Nor does it seem anymore to be an issue that whilst neoliberal theorists present the market as the solution to economic and social problems, the managerial turn is often justified instead *as a response to market failures*. For as long as NPM justifies its practices in the name of the

Market, it no longer matters whether the aim is to resort to the market or to intervene in order to correct something the market cannot fix on its own.

Faced with this curious entanglement, it is important to take some historical perspective. For the confusion here partly stems from a lack of clarity regarding what we take the term 'public choice' to refer to. When referring to public choice, we often conflate a methodological revolution, which encompassed much more than public choice, with the distinct normative outlook of authors such as James Buchanan and Gordon Tullock who were directly influenced by neoliberal theory (Dunleavy, 1991: 5). This is because public choice theory was rooted in a methodological revolution that took place in the early post war era with the rise of game theory and rational choice (Amadae, 2003). The embrace of methodological individualism with its focus on self-interested actors was part of a broader movement to disaggregate the way we think about institutions in order to study their complex processes of decision-making (Heyck 2014). As I will argue, this methodological approach revolved around a new concept of performance that profoundly impacted the thinking about public policy and public administration. It promoted an approach to governance based on microeconomics, dense analytics and data about performance. It was not, however, inspired initially by a neoliberal view on policy and governance. On the contrary, many of its founders were planners keen to develop tools of decision making to support state intervention and planning (Mirowski and Nik-Khah 2017). Innovators such as Charles Hitch, David Novick, Alain Enthoven or Manfred Olson were key actors in the US federal administration during the 1960s at the height of its most interventionist period. Their work was driven by a pragmatic intent to shore up concrete decision-making and provide a set of techniques to consolidate state planning, not to dismiss it. Yet authors and ideas from this tradition are now often assimilated to a public choice persuasion because of certain shared methodological assumptions.

While the founders of public choice borrowed from the methodological innovations of game theory and rational choice theory, they used these templates for a different purpose. Their aim was decisively political and normative in seeking to dismiss 'scientifically' the claims of state planners. To do so, they often used key insights borrowed from state planners, and turned these against state planning. Game theory and rational choice, for example, had helped planners specify decision-making problems that they wished to address through mathematical techniques and institutional changes. By contrast, public choice theorists turned the problems highlighted by planners into theorems or proofs showing that state planning was inherently inefficient. If the planners highlighted problems with the pragmatic intent of mitigating them through institutional design, public choice theorists turned these into axiomatic claims about the inherent failings of bureaucracies.[4]

As I argue below, there is little in the history of public management that suggests that it was built on foundations provided by public choice theory, at least in its neoliberal and original form. The axiomatic critique of government articulated by James Buchanan and Gordon Tullock was meant to limit the state as much as possible. These two classic representatives of public choice theory were mostly concerned with the threat of mass democracy placing growing demands on the state and fuelling the hypertrophy of the public sector, rather than with insuring that the state would efficiently serve the population. In their eyes, mass democracy was easily exploited by self-serving bureaucrats for their own interests. This is why much of the early writings of public choice targeted collective decision making procedures and advocated for constitutional limitations rather than managerial problem-solving. The limits they sought to place on the discretion of public officials were precisely the kind of constraints that public managers wanted to avoid for fear of being paralysed.

2. Systems Analysis and the Rise of a Performance-Driven Paradigm of Governance

In the previous section, I have challenged the way in which the literature on neoliberalism often casts the managerial turn as an attempt to recreate market-like conditions through managerial means. Particularly important is the emphasis given to performance as a means to recreate the efficiency gains that a market would produce. However, such an interpretation of the rise of performance as a central concern for governance rests on a narrow reading of these developments. As I show, it is important here to take a historical perspective to trace the lineages of managerial thinking. Instead of falling back on neoliberal theory, I show that these practices have a long history that precedes neoliberalism. They find their roots in a radically new conception of governance that was born in the early post war era with the rise of systems analysis. More specifically, this paradigmatic change was tied to a specific social network of researchers that developed in the defense sector and which revolved around the RAND corporation (Amadae, 2003: Mirowski, 2002).

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[4] A good example of this was Arrow's impossibility theorem. See Amadae 2003.

The RAND corporation was created as a think tank in 1948 to build upon the planning and logistical innovations made during the Second World War. Its big innovation was systems analysis; a new approach to decision-making which was meant to become a science of war-making (Abella, 2008). The basic idea of systems analysis was to use optimisation techniques to help make decisions about what strategy to follow. This meant turning the very process of allocating resources into a means to think about the broad strategic dilemmas faced by the army.[5]

To unpack the novelty of systems analysis, it is useful to look at two new aspects of the way in which this paradigm framed the question of performance and which later came to define performance management. The first had to do with the purpose we assign to assessing performance, or why we should measure it, while the second was tied to the tool we use to assess it. I take each of these point in turn

The ambition of the new paradigm of governance was to use data about performance as a means to analytically determine what strategy, or policy, one should pursue. This conception was initially inherited from the development of operations research (OR) during the Second World war. Scientists had then been mobilised in large numbers to generate, and work with, data on operations. Their aim usually was to assess how different tactics performed in a given context in order to determine what was the best way to achieve a specified goal (Thomas, 2015). At what height should a bomber fly to maximise the effects of its bombing while minimising losses? How to maximise the chances of locating enemy submarines through preconceived flight patterns? In the process, OR yielded various mathematical techniques that fuelled the broader ambitions of a group of US researchers who hoped to turn optimisation into something more ambitious: a means to think not only about the more efficient way to carry out a goal, but to reflect on which objective to pursue in the first place. Instead of simply finding the most efficient way to pursue a specific goal or implement a given policy, their hope was that optimisation could help them think about what objectives or policies to adopt in the first place. In the words of Charles Hitch, a prominent RAND economist: ‘learning about objectives is one of the chief objects of this kind of analysis’ (cited in Wildavsky 1966: 299).

[5] There is no place here to get into more details about the nature of systems analysis and how it built upon game theory, computing/programming and budgeting (linked notably to cost-effectiveness analysis). This has been covered extensively elsewhere (Knafo, Dutta, Lane and Wyn-Jones, 2018).

The idea of using effectiveness to determine strategy seems straightforward to us, but it profoundly shocked the military establishment when it was first articulated by systems analysts (Kaplan 1991). For it shifted the baseline away from the usual concern with finding the most efficient strategy based on military considerations to put forward a new *economic* concern with balancing efficiency with costs. This offended the military brass which resented the fact that this approach privileged costs as a consideration over, for example, the lost lives of pilots (Amadae 2003). This approach also proved unpopular when justifying less advanced technologies or weapon systems on the grounds that their lower costs would make up for their lower efficiency, in what became a classic reasoning of those using systems analysis (Kaplan 1991).

The prominence given to data about performance in this framework was a direct function of conceiving governance as a practice of optimisation. OR had shown that data accumulated from past operations could provide a productive perspective to make decisions about what to do. Seeing, for example, how certain bombers had performed with a given task could help adjust the tactics to make them more effective. The problem, however, was that this data could not easily be used to project oneself into an uncertain future. During the war, OR had been relatively confined as a practice. Performance was often considered to be closely connected to context because there are limits to how far findings can travel and be applied to something else. Insights from operations were bound to become irrelevant as weapons evolved, contexts varied and enemy tactics/strategies changed. There seemed to be too much complexity and uncertainty for the data about operations to carry over into the future.[6]

This leads us to the second novel feature of systems analysis that shaped performance management: the importance of mathematical modelling to lend greater significance to data that would be otherwise too context dependent to be of any use for the making or strategy. Indeed, the gambit of systems analysis was to compensate for this problem by modelling social systems so that data on operations (or about performance) could be adjusted according to various vectors that might affect performance. The more insight one could accumulate on the way in which different variables affect performance, the more one could make hypotheses

[6] This very problem would fuel sharp critiques of systems analysis by early pioneers of OR, in particular Paul Blackett, who railed against using optimisation as a means to reflect on strategy (Thomas, 2015). Similarly, managerial techniques based on optimisation in the private sector had previously been considered inadequate for strategy and thus limited to managers at lower levels of an organisation who worked closer to the ground and who would be implementing the strategies handed down to them by top decision makers.

about the future and adjust the numbers accordingly. Modelling thus made it possible to experiment with various parameters in order to explore the potential outcomes of a given course of action and the further issues it may raise.

Modelling social systems in this way (i.e. systems analysis) proved a vital bridge to connect issues of management to those of governance, linking the micro to the macro, in a completely new way. Traditionally, moving to the macro level in order to think about broad governance issues had required the use of broad aggregates, as reflected in the rise of macroeconomics which focused on causal relationship between such aggregates. Systems analysis used instead a focus on performance to disaggregate strategy/policy into its various components. This provided a granular perspective on strategy that opened the door for thinking about the macro consequences of micro managerial decisions. One could assess various components individually and determine their respective role and potential contribution to a much broader system or organisation. In this way, one could experiment with various options for deploying these components to find an optimal use of these resources**.** For example, one could then model the implication of using a specific jet engine on bombers for the conduct of a nuclear conflict with the Soviet Union. In this way, micro managerial decisions about efficiency were imbued in this framework with new macro or strategic significance.

To measure the radical novelty of this approach, it is useful to compare it with the more traditional practices of scientific management most famously associated with Taylorism. The latter used data about performance as a means to gain control through measurements, standardisation and benchmarking. By monitoring performance, it sought to take uncertainty out of the equation. For example, knowing the average performance of workers at a work station could provide a standard that would be imposed on other workers. By contrast, system analysis relied on performance as a means to improve decision making. It sought to determine which strategies would perform better under given circumstances. Instead of being past-oriented, basically using past measures to set a benchmark, it was oriented towards the future. The goal was to use data about performance in order to project into the future and explore how different options may play out. In doing so, the objective was not to deal with uncertainty per se, as if it was something that one could tackle through standardisation. Instead, systems analysis embraced uncertainty as the very reason for its existence. It was precisely because uncertainty could not be tamed that this approach was needed. In other words, the point was not to develop actuarial tables to determine probabilities in rigorous ways so as to turn uncertainty into Knightian risk. Rather systems analysis was needed to deal with a future *that* *could not be properly predicted* (Rindzeviciute, 2016). In that respect, systems analysis was a means to simulate through modelling the potential ramifications of different courses of actions and a framework to articulate *hypothetical* possibilities in a rigorous manner. In what became a common rhetorical line of defense, systems analysis was presented as a means to clarify one's own assumptions and specify in precise ways our expectations. By definition these valuations were assumed to be approximate, if not subjective. But this was deemed legitimate because everyone struggles to project themselves into an uncertain future. It was argued that formalising our ideas about the future through modelling social systems to determine how a strategy would perform could help to think more rigorously about alternatives instead of simply relying on intuition.

The problem, however, is that modelling future performance too often gave systems analysts a false sense of confidence about the future. As decision makers would project themselves into the future, their calculations easily veered far off the mark as they conveniently forgot about the tentative nature of the exercise. Jacqueline Best has shown that a growing concern with failure became a key theme of governance in the 1990s (2014). But, arguably, this problem had longer antecedents with failure being already a constant theme in the development of systems analysis. The saliency of failure grew out of the very exercise of systematically quantifying expected performances as a foundation for policy making and projecting oneself into an uncertain future. As Best points out, this made failures more visible and traumatic.

This very problem would have a part in fuelling further developments of systems analysis, in particular the sustained attempts to correct the aim of this approach by finding more and more data. Early on, systems analysts relied heavily on numbers derived from theoretical, if not speculative, guesses (Kaplan, 1991: 87). However, it quickly became clear that in order to support the gigantic effort of quantification that systems analysis required, one would have to mobilise administrative and managerial processes at lower levels of the military. The failure of two big early studies compelled systems analysts to look for more 'realistic' values to plug into their equations (Amadae, 2003: 40-44). As a result, the focus on optimisation pushed systems analysts to challenge the separation between operations and strategy that had been consecrated by scientific management. To cover all the aspects they wished to take into consideration systems analysts had to restructure the administrative structure of the military so as to reorient it towards the demands of their approach. In particular, much effort was placed on aligning budgeting and decision-making. In this way, it was hoped that one could impose various costing practices to shape decisions at lower order of the military and more importantly use subordinates to provide the necessary, and properly formatted, information that could support strategic decision-making at the top.

Translating the activities of government into data about performance, or what was presented then already as a growing emphasis on output, thus became a central motif with systems analysis. The objective was not so much to increase productivity but to gain perspective in order to facilitate decision-making at the top. As Mancur Olsen then pointed out, the problem was that 'the art of measuring the output of public programs [was] in its infancy' (Olson, 1969: 93). This became a particularly salient problem when this approach was applied in the 1960s to social policies which had aims that were usually difficult to measure. How to determine the quality of health or education services? This concern fuelled an enormous effort to find various proxies for effectiveness in these fields (Flood, 2010). At the time, most of the data about these services did not fit the requirements of systems analysis because it accounted for the activities of government rather than their outcomes. The available data could inform policy makers, for example, about the number of service providers, of professionals or about the money spent, but not the actual effectiveness of these services. To address this problem, systems analysts launched social reporting, an extensive initiative to craft social indicators that would capture performance on a varieties of issues that concerned public policy. The late 1960s also witnessed the beginning of systematic policy evaluations which are commonly traced back, in line with my argument, to the attempt to implement systems analysis in the US Federal government in the 1960s (Dahler-Larsen, 2005: 618).

More generally, the requirements of systems analysis launched a whole movement of performance management with the Urban Institute, one of the prototypical think tanks born out of the attempts to extend systems analysis to social policy, serving as leader in the field in the 1970s (Talbot, 2005: 492). Struggling to find ways to measure all sorts of concerns that did not easily lend themselves to quantification, those involved had to be creative, often recognising the truncated nature of the numbers they would use. The social indicators that were developed often proved to be highly problematic when treated as proxy for productivity. The Vietnam War became infamous for the way in which some measures, such as the use of body counts, profoundly distorted the nature of what was going on in the field, as it often became the case later on with NPM. Yet once more, the reliance on problematic indicators was less of a concern for systems analysis looking for some level of perspective, than it would have been for a NeoTaylorist concern with improving efficiency on the ground. For the goal was to align operations with the demands of strategy/policy *making*. From this perspective, giving some indications about performance to decision makers was better than having none at all, even if it would distort the work of carrying out services efficiently. For this reason, systems analysis ended up systematically breaking down the boundary between policy and management by highlighting the political implications of management in a radically new way, and lending new significance to performance as a concern of strategic importance to the practice of governance (Hughes, 2003).

3. Management Science and the Strategic Turn in Corporate Governance

As I have pointed out, one of the enduring beliefs framing analyses of NPM and the broader managerial turn is that it reflects the import of corporate ways of doing things in the public sector. From this perspective, neoliberal governance has seen the growth of ‘market oriented’ practices, with performance management being read as a form of neo-taylorism (Pollitt 1990; Hood, 1991). By contrast, I have suggested a different lineage of social practices focused on performance which had little to do initially with management. It is worth pointing out that the architects of systems analysis were scientists mobilised during the Second World war who had limited or no experience in management. Many of them were mathematicians appalled by the lack of rigour and scientific thinking that existed in administrations and management. Coming out of the defense sector, their intention was to support decision-making at the top rather than discipline at the bottom.

This being said, NPM today does involve both a component of control (i.e. seeking to increase productivity) and a dimension of decision making (i.e. seeking to help the making of policy). As a result, disentangling the two aspects of performance management can be a tricky task. This is where a more systematic tracking of the history of these ideas can help us better assess conceptually the nature of the change. Indeed, looking at the concrete connections between key developments can help us gain perspective on practices of performance management which, at face value, can be interpreted in two different ways. For this reason, I now turn in the last two sections of this article to the fields of corporate and public management. I show first that while scientific management was important to the emergence of both fields of management, it quickly confronted limitations. By the 1950s, it was seen as stunting the development of both fields and it was precisely these limitations which led both fields to turn to systems analysis.

I begin here with corporate management and more specifically the renovation of business studies in the 1950s that fuelled the rise to prominence of business schools in the US (Locke and Spender, 2011). It is a great case to emphasise the paradigmatic shift that resulted from the rise of systems analysis. Business schools had initially borrowed heavily from scientific management because the scientific orientation of Taylorism seem to best embody the claim of the new business school to deliver a new form of expertise (Nelson, 1992). Yet scientific management yielded relatively little. Up until the late 1950s, business schools were characterised by their vocational nature. They provided detailed information about business methods, such as accounting, or practical knowledge, for example about the workings of the stock market. But their model of education increasingly came under attack in the late 1940s and early 1950s for lacking scientific rigour (Augier and March 2011). With very few graduate studies programs (Sedlak, piece on Bach) they were seen to perpetuate a poor academic culture that yielded little in the way of research. Critiques then dismissed business schools as ‘a wasteland of vocationalism (Simon cited in Khurana, 2007: 236). Their curriculum was perceived as descriptive and pedestrian (MacKenzie, 200: 72). Their staff was seen to be poorly qualified and relying on experience and accepted wisdom rather than rigorous and evidence-based thinking. Business education was thus commonly seen to be inadequate by university standards and better suited for college education because it produced knowledge that was industry specific, unscientific and ungeneralizable (Schlossman, Sedlak and Wechsler, 1998: 10).

This critique illustrates how an approach to performance oriented towards control and focused on operations could not yield the managerial tools that became the hallmark of managerial science. Not only did business school not have the mathematical proficiency to flesh out broader conceptions of performance management, but more generally they remained caught in a focus on concrete observations and contextually dependent insights that could not turn data about performance into generalizable insights. Without modelling there were limits to what they could do.

On the back of these critiques of business education, a vast effort to renovate business schools was launched that drew heavily on the forms of expertise that emanated from the Rand Corporation. Systems analysis thus became the template for the emergence of what was then presented as management science. A rich literature has indeed highlighted how RAND exerted a decisive influence on the renovation of business schools, most notably through the vital agency of the Ford Foundation (Fourcade and Khurana 2013; Augier and March 2011; Gleeson and Schlossman, 1992; Locke and Spender 2011). H. Rowan Gaithers, the director of the Foundation, was a trustee at the Rand Corporation. He had been invited initially in 1948 to redefine the mission of the Ford Foundation and took it over in 1952, bringing with him various collaborators from RAND (Amadae, 2003).

Interestingly, the renovation of business schools that was then launched represents a rare case in US history when the traditional rhetoric about private management saving the public sector was actually inverted. Fresh from the disappointment of the military with the standards of corporate management during the Second World War (Klein 2015), the Ford Foundation saw it as a priority to upgrade managerial capacities in the private sector in order to face the challenges of the Cold War. This could only be done, it was believed, if scientific methods were finally applied in a systematic way by management, thus mirroring the efforts undertaken in the defense sector (Gleeson & Schlossman, 1995: 16). For this to be possible, managers had to be educated in analytical methods that were rarely taught in business schools. In particular, management needed decision models for managerial decisions that drew from the innovations of systems analysis (Augier & March, 2011: 3).

The Ford Foundation spent $35 million on business education reforms between 1954 and 1966 in order to support this renovation (Fourcade & Khurana, 2013: 128-133?). The money was earmarked for a few schools that would become beacons for other schools. More specifically, the focus was on graduate teaching to raise the standard of research which would help disseminate the model by forming scholars who would find positions in other business schools (Schlossman, Sedlak and Wechsler, 1998). The Ford Foundation was conscious to target deans who had the authority to hire faculty trained in analytical methods (Khurana, 2007: 249) This involved a concerted effort to hire from other disciplines, particularly economics, in order to bring the rigour missing from business studies (Fourcade & Khurana, 2013: 124).

The 'poster child', to use the term of Augier and March (2011), for this new generation of business school was the Graduate School for Industrial Administration (GSIA) at Carnegie Mellon (see also Nik-Khah, 2011: 120). Early on, it was regarded as the key laboratory and model that the foundation used for the renovation of business schools (Khurana, 2007: 255). The dean of the school, G. Leland Bach, exerted great influence as an advisor at the Ford

Foundation (Gleeson & Schlossman, 1995: 23) and shared the Foundation's belief that the renovation of management should build on the innovations of decision theory. As a result, many of the themes that came to characterise systems analysis were pushed and fleshed out in the context of business studies. The reliance on OR and thick analytics to ground decision making, the strategic turn to frame these decisions, the study of information processing and organisational programming as a way to address limitations in cognition, and finally the use of budgeting and cost benefit analysis as a baseline for decision making were all central components in the revolution of business schools (Knafo, Dutta, Lane and Wyn-jones, 2018).

The ramification of this revolution in business schools were numerous, but none was as significant as the impact it had on management consultancies that hired heavily from these schools. These consultants dramatically evolved from the 1960s onwards under the impact of what came to be labelled the strategic turn (Kiechel III, 2010). Right up until the 1950s, consultants such as McKinsey or Cresap, McCormick and Paget still focused essentially on applying the key legacies of scientific management, most notably the principles of the M-form corporation (McKenna, 2010: 112), to various organisations so as to separate strategy from operational considerations. But starting in the 1960s, they began challenging this divide to reflect more concretely on the ways in which data about operations could be placed into a broader strategic context in order to support decision-making at the top of corporations.

Leading the charge was the Boston Consultant Group and its founder, Bruce Hendersen, who worked to capitalise on analytical ideas that were in the air at the time. Not only were the attempt to apply systems analysis in the Department of Defense getting much press, but Henderson had himself worked at Arthur Little one of the rare consultants which had seriously considered OR and its potential impact on management in the mid 1950s (Thomas, 2015). Under the push of BCG, management consultants shifted towards a much more analytical approach that focused on strategic decision making instead of taylorist discipline or 'M-From' organisational reform.

Emphasising this radical departure in business studies and its ramifications highlights why the common references to the fact that NPM borrows corporate practices to reshape the public sector can be problematic even if not necessarily wrong. It perpetuates the assumption that what passes today as management is simply a product of market practices and encourages scholars to read the emphasis on performance simply as a change in the way policy is implemented, with the return of taylorist principles focused on increasing productivity. Yet, as

I have argued, a historical perspective suggests a more radical transformation in the way private management conceived of performance; one which originated in the defence, rather than the corporate, sector.

4. From System Analysis to Public Management

If the case of business studies and the strategic turn offers a perspective on the impact of systems analysis on corporate management, what about public management? The intriguing fact that lends credibility to the argument made here about a new managerial paradigm of governance emerging is that a very similar revolution to the one that took place in business studies also occurred in relation to public administration. And it was there too spurred by systems analysis leading to the sudden rise of policy analysis in the late 1960s.

This development was directly linked to the adoption of systems analysis as an administrative structure in the US federal state. The trigger for this was the appointment of Robert McNamara as secretary of defense. McNamara's first move was to hire Charles Hitch away from RAND and task him with implementing what became the Planning, Programming and Budgeting System (PPBS) which borrowed heavily from systems analysis. The apparent initial success of PPBS in the Department of Defense later emboldened Lyndon Johnson to extend PPBS to the rest of the administration in 1965. However, the decision to suddenly extend practices borrowed from the defense sector, where a certain expertise had been built during the 1950s, notably at the RAND corporation, to new fields of policy created tremendous stress in the administration (Jardini, 2000). Very quickly, it became clear that the requirements of such an extension, in terms of analytical skills required from public officials to function within PPBS, were simply not there as various federal agencies scrambled for expertise.

As Elizabeth Berman shows (forthcoming), this gave the impetus for the emergence of a new policy eco-system. The mid 1960s provoked a big explosion in the number of consultancies. A broad range of firms were then set up to exploit the demand for expertise, often by ex-RAND and defense sector experts who took advantage of the situation (Guttman and Willner, 1976). More importantly, for the purpose of my argument, was that this great demand for analytical expertise led to the creation of public policy programs tasked with forming civil servants steeped in the new decision techniques associated with systems analysis.

One can measure the impact of this extension of PPBS by pointing to the dramatic explosion within a five year period, starting in 1967, of new public policy schools in many of the top universities of the country: the Institute of Public Policy Studies in 1967 (University of Michigan), The Kennedy School of Government in 1968 (Harvard University), the Graduate School of Public Policy in 1968 (Berkeley), the School of Urban and Public Affairs in 1969 (Carnegie Mellon), the RAND Graduate Institute in 1969, The Fels Institute in 1969 (University of Pennsylvania) The School of Public Affairs in 1970 (University of Minnesota), the Lyndon B. Johnson School of Public Affairs in 1970 (University of Texas) and the Institute of Policy Sciences and Public Affairs in 1971 (Duke University)

The establishment of public policy programs was justified then on the basis of a critique of public administration that resembled the one addressed to traditional business schools a decade earlier. Policy analysts challenged the commitment of public administration to a professional training based on the ideal of a rigorous, meritocratic and neutral bureaucrat. This was said to encourage a focus on institutions instead of decision-making and action (Lynn, 1994: 232-233). The old Wilsonian vision (Wilson, 1887) of administrations as neutral caretakers implementing missions handed down by politicians was also dismissed for having perpetuated a neglect of policy (Fleishman, 1990: 736). More specifically, public administration was attacked for the poor quality of its research which was seen to be mostly descriptive and lacking in theory and quantitative analysis (Stivers, 203: 211). This field of study was accused of failing to attract promising students with the result that people who ended up in top positions in the federal administration usually came from other disciplines.

In response, a new field of study, public policy, was created in order to avoid having to deal with the legacy of public administration and its ensconced faculty. This made it easier to reset the curriculum around the ‘right’ analytical skills. In particular, public policy was meant to shift the emphasis away from the means at the disposal of government for implementing policy (i.e. the ‘narrow’ concern of public administration with efficiency and day-to-day details of administration) in order to focus primarily on the ends and target high policy (Allison, 2006: 65; Stivers, 203: 220). The goal here was to form public servants who would be prepared for a decision-making oriented career (Fleishman, 1990: 733).

In order to achieve this, scholars turned to the innovations of systems analysis. In the words of Radin, policy analysis was basically intended to open up system analysis to political science and public administration (Radin, 2000: 25). Similarly, Fleishman, who witnessed these changes, concluded that:

> 'It seems to me, in retrospect, that it is not unreasonable to attribute, in a shorthand way, the origin of the public policy schools to a desire to produce a supply of 'RAND-style' analysts. How else can one explain, in the absence of coordinating planning, not only the simultaneity of the programs but their substantial identity of curriculum – a curriculum that seemed to train students in precisely the analytic techniques first combined, so far as I know, by RAND research' (Fleishman, 1990: 735).

As with business schools, a particular emphasis was set on graduate studies as a means to raise the quality of research. This involved a direct emphasis on optimisation as reflected in what was perceived at the time as 'an invasion of public decision-making by economics' whereby 'the economic approach to decision making views every decision as an allocation of resources between alternatives, that is, as an economic problem' (Dror 1967: 197). Public policy programs put great emphasis on microeconomics to encourage thinking about policy in terms of efficiency and effectiveness (Elmore, 1986: 70) and relied on the tools of mathematics to anchor its method of analysis (Fleishman, 1990: 740). These tools would put great emphasis on data about performance as a means to support decision-making.

The interesting fact about this lineage is that public policy programs played a vital role in establishing public management *as a distinct approach to government and the civil service*. Until the early 1980s, people referred to public management in functional terms to speak of what civil servants do, for example when reflecting on whether their role was different from that of corporate managers (Perry and Rainey, 1988). There was no conception of public management as a distinct approach or, when it was understood as an approach, it owed a lot to scientific management as, for example, in the case of municipal reform movement of the early 20th century. But starting in the mid 1970s, a new approach of public management took shape in public policy programs, with the Harvard Kennedy school of Government leading the way.

Public management was a product of the need for the new public policy schools to think more closely about the question of implementation and how it participates in the making of policy. Courses in political and organisational analysis which were meant to cover the concrete political institutions and mechanics of implementation, that is the part of the curriculum that most closely resembled public administration programs, seemed out of line with the ethos of these programs because of the descriptive nature of their content. Public management was thus partly born out of a desire to realign these courses, and more generally the concerns they addressed, with the broader analytical orientation of the new field of public policy (Fleishman, 1990: 743). Mark Moore in particular has been credited with first establishing public management courses as an extension of the public policy approach (Lynn 1996). For Moore (1995), it represented an attempt to engage more dynamically with the institutions to think about them in strategic terms, a move which rejected the traditional separation between policy making and implementation. It recast administration as a political arena in which management at all level was involved through their decisions in the making of policy. By recasting the notion of value, it attempted to provide a new framework to assess performance in the context of the public sector and articulate managerial decision at all levels of the administration to the broader strategies of the organisation as a whole.

By the mid 1980s, many public policy schools had dedicated courses in public management. Public management was then taking on a more programmatic connotation being increasingly used to refer to a different approach to the civil services that differed from the old bureaucratic approach associated with the field of public administration. As this movement gained in confidence, it moved away from the pessimistic rhetoric of public choice that dominated the 1980s and reaffirmed the value of civil servants. The 1990s would be the classic era of the managerial turn, as managerial governance was released from the anti bureaucracy stigma of the 1980s. This shift was best represented by the advent of the Clinton administration largely influenced by public management thinkers, many of which were affiliated with the Harvard Kennedy School of Government.

This shift to public management was explicitly defined as a means to provide tools of decision making for public managers or bureaucrats. It was not conceived as a framework for limiting their power. Public policy and public management represented here the culmination of a new way of thinking about governance in managerial terms and which celebrated the civil servants as decision-makers. This managerialism, as a reaffirmation of bureaucrats as managers, found its iconic symbol in the ideal of the entrepreneurial civil servants. It was an odd concept for neoliberals who were wary of admitting that bureaucrats could do the same kind of things as corporate managements. Yet this notion was very much in keeping with a managerial conception that celebrated the work of optimisation of planners and justified the very freedom that neoliberals had sought to take away from civil servants.[7]

Conclusion: Towards a Research Agenda on the Managerial Turn of Neoliberalism

There have been considerable debates regarding the nature of NPM (Hood, Hughes 2003), the beliefs that drive it (Aucoin 1990,) and the diverse ways in which it is implemented (Dunleavy and Hood, Pollit and Bouckaert 2001). They attest to the difficulty scholars face when seeking to conceptualise a managerial turn often associated with a wide array of practices and ideas. As a result, numerous scholars have cast doubts as to whether there is a coherent set of practices behind this turn rather than a divergent array of reforms processes that are characterised by their diversity (Dawson & Dargie, 2002: 38). One may be tempted in the face of such an assessment to refrain from conceptualising the managerial turn of neoliberalism. Yet conceptualisation is important to gain distance from what we analyse. Without characterising what marks out an object of research, it is difficult to avoid normalising the managerial turn as if these practices were simply functional tools to address the concerns voiced by neoliberals. And indeed, much of the literature on NPM has read the managerial turn as a normal reflection of the broad neoliberal ethos in its attempt to renovate governance to make it more efficient in a time of fiscal crisis.

By contrast, I have used a radical historicist approach (Knafo, 2017), drawing out the historical connections between various historical developments in order to bring into focus what is new in NPM about the relationship between governance and management. By connecting various historical transformations to highlight the circulation of ideas and the actors that mediated these connections, I have offered a different foundation to conceptualise the managerial turn. As I argued, many things that seem impossible to disentangle when examined at face value can suddenly appear more clearly when we bring the weight of history to bear on the analysis. Tracking the connections between the rise of systems analysis, the renovation of

[7] The idea that managers should use the techniques of public policy to make authoritative decisions was in fact strongly contested by a neoconservative movement that converged with public choice theory in strongly advocating for the separation of public analysis from management. Aaron Wildavsky, who had been an early critique of systems analysis, later deplored the rise of public management in public analysis schools and its attempt to follow on the ill advised attempt to connect management with policy analysis (1985) which had also marked PPBS.

business studies and the rise of public policy, reveals, a systematic trend which forces us to think more seriously about the managerial aspect of governance itself. It highlights the importance to look back and study the nature of systems analysis and its evolution as a means to gain perspective and better understand the managerial features of neoliberal governance.

In doing so, I showed how governance became reframed as a practice of optimisation that relied on systematically assessing performance in order to support decisions about what strategy or policy to pursue. This gambit required a deep engagement with management so as to support the weight of its ambitions and contributed to the gradual emergence of a distinct symbiotic relationship between management and governance. In developing this argument, I have pointed out that the managerial turn has mostly to do with a transformation in the conduct of governance. It is primarily a means to empower top managers rather than a straightforward tool to discipline. It represents a means to develop managerial capacities and has little to do with the logic of the Market.

More generally, this history accounts for why corporate management practices and public management display such striking synergies: they are both rooted in a same paradigm of managerial governance. There is thus great compatibility between the practices of both fields and this has been readily exploited by corporate consultants. This also explains why public and private governance are becoming increasingly entangled as governance relies increasingly on managerial processes within corporations to be effective, as illustrated with the evolution of audits and risk management that document managerial practices in firms or organisations in order to provide a footing for authorities to deploy governance strategies (Power, 2007).

The implications of this argument for the way we think about managerialism and its political ramifications are profound. From an analytical standpoint, it helps account for why the foretold death of neoliberalism has so often proven to be misleading. For it rests on a misunderstanding of what is being promoted in the name of the Market. The intensification of planning in managerial terms is not a sign that neoliberal thinking continues to hold sway, but suggest instead that neoliberalism may not have been what we assumed it to be in the first place, at least when it comes to the public sector. This would also help account for why the centre left (Clinton in the US and Blair in the UK) has so often bought into the promises of managerialism as a means to address social concerns. From a political standpoint, this argument helps refocus the critiques of neoliberalism which too often target the ideal of the Market and its problematic emphasis on commodification. Instead, the real issue may have more to do with the rise of a managerial class in the public and private sector that has become adept at manipulating the resources of others in authoritative and self-serving ways (Dutta et al. 2018).

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