An Unbound Prometheus?
Bureaucracy, Technology, Technocracy, and Administrative Innovation

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Introduction

Along with the expansion and diversification of government in terms of tasks and personnel that began in the 19th century, a need for the application of new bureaucratic techniques and technologies emerged.[1] In public management literature, this need is, in recent decades, often erroneously assumed to be largely confined to a so-called VUCA – volatility, uncertainty, complexity, and ambiguity – world. This VUCA world is supposed to present a multitude of problems and challenges to public leaders.[2,3] This temporally restricted perspective is, however, too focused on the present day.[4] In reality, the need for strategies for dealing with complexity was present by the end of the 19th century. New challenges fueled the development of a rational and scientific approach to solving societal and government problems. In the United States and the Netherlands, these challenges, propagated by practitioners and academics, gave rise to the study of public administration.[5]

To use a rather modern expression, change and innovation in public administration have always included ›software‹ – bureaucratic techniques – and ›hardware‹ dimensions. The hardware dimension refers to an increasing mechanization of work processes, not only in core administration and implementation agencies but also in state enterprises. The software innovations came about through transformation of internal work routines, management procedures, and public service delivery.

Change and innovation can be viewed through either an empirical or a normative conceptual lens.[6] The normative approach to bureaucratic change and innovation is the focus of the historical analysis in this paper. The normative appreciation of the use of technology among policy-makers and the academic community may have led to a technocratic approach to public governance. In that technocratic approach, we will recognize a utopian and a dystopian perspective on the effects of adoption of new technologies in the private and public sectors.[7] The utopian and appreciative perspective on the benefit of technology has long dominated in IT, engineering and government policy circles. While still dominant today, this view is increasingly challenged by philosophers of technology

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and critical sociologists, such as those of the Frankfurter Schule.

A conceptual history of innovation, technology, technocracy, and how innovation became a normative concept for examining change in administration is too extensive a topic for this contribution. We will therefore focus on the intensifying technologization of government affairs and the ensuing question: does this lead to a bureaucratically dominated technocratic government?

Below, we will examine past and present debates on positive and adverse effects of technocracy on governance. The latter pertain to effects on the scope for democratic governance and thus the position of political leaders, bureaucrats and citizens in decision-making. Will technologization lead to an impairment of the position of citizens and politicians within the system of governance? These questions are often thought to be of principal relevance only to present-day government and society. In fact, this has not historically been the case, as we will demonstrate below. We will concentrate on developments since the 1880s, illustrating our discussion with examples from the Dutch context. However, this discussion has wider temporal and cross-national ramifications. First, we need to examine the related concepts of ›bureaucracy, bureaucratic change, technology, and technocracy‹«. How does change in the public sector relate to technocracy? What does that imply for the formulation and application of good governance criteria? This raises a further point to consider: the connection of technocracy with political power; more explicitly, the interrelations of bureaucracy, technocracy, the administration of change and political power, especially the power of the citizenry and democracy – a long established field of historiography. This is not only relevant to the responsibility of political leaders and representatives to absorb and transmit technological changes in public administration and society, but also and especially to the position and authority of political officeholders. Is this position marginalized, since the word ›technocracy‹ seems also to involve a reduction of the position of politics, regarding the need and space for political choice? Are political choices being made redundant by – administrative – technology and bureaucratic technocrats? To answer these questions, we must begin with a conceptual analysis.

The Context and meaning of Innovation, Change, Reform, Technology, and Technocracy

In the past, just as in the present, people have been consistently gripped by a fascination with impending future changes.[8,9] When anticipating change, the attractiveness of technology and the opportunities of innovation are made more apparent and alluring by the prospect of progress.[10] This fascination with the possibilities of innovation is also connected with the urgent desire to get a grip on an unpredictable future and its associated dangers. More recently, forms of ›prophecy‹ have resurfaced in, using Weber's terms, »a demystified, modern, rational world«.[11] In the insights and visions of futurologists, trend-watchers, and other modern fortunetellers, we find more authoritative origins and justifications for the work of proponents of technological innovation, as a step toward reaching for a better – future – world.

This fascination with the future and progress has gradually been put on a more systematic footing by the search for a scientific and rational basis for prediction. Since at least the 1850s, an array of publications has been issued containing explorations and predictions of what awaits the world and, in the slipstream, what is expected of government and bureaucracy to guide these changes. That new prominence also can be seen in the technocracy movement in the USA, which we will discuss in more detail below. The appreciation of technology is situated in the outcomes of the industrial revolution, industrial production, and the innovations accompanying and supporting this change process.[12] The excitement provoked by these inventions, innovations, and their transformative effects on the economy and, perhaps even more pervasively, on society as a whole, explains the attraction of technological progress. However, this progress, while evoking wonder and possibility for some, inspires fear in others. The latter response particularly pertains to the rise of technocracy.

Concepts such as change, reform innovation, technology, and technocracy are interconnected; but are intrinsically vague, indeterminate, ambiguous, and in need of more precise definition. That imprecision may in fact be a key feature in the attraction of these concepts.

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However, for our analysis, it is rather problematic, as the myriad of concepts and the conceptual complexity, ambiguity, and changeability of their definitions over time obstruct a clear understanding. In addition, these concepts are highly charged and normative in nature, though this normative nature is often buried beneath a veneer of – political – neutrality. It has been argued that this transpires through a process of ›depoliticization‹.[13,14] This mechanism should thus be considered highly political in nature. Taken at face value, ›change‹ appears the least normative of these concepts. It conveys an altered state of being without expressing a preliminary value judgement about the appreciation, direction, or content of the alteration. In line with the thinking of American organizational scientist Henry Mintzberg on strategy,[15] we must make a clear distinction between emergent and deliberate expressions of change. However, while deliberate and emergent manifestations of change can both unfold over either a short or a long duration, emergent change suggests a predominantly gradual, unintended, or unplanned change process. The deliberate form of change constitutes a more immediate, intended, and planned course of action.[16] The notion of reform is usually reserved for deliberate change, although emergent change can also have reform implications in the long term.[17] ›Reform‹ pertains not only to actual changes but also to intended changes as articulated in plans and policy proposals. The connections among changes on paper, changes in reality, and changes with clear positive – or negative – effects are complex.[18,19] The concept of reform is often associated with notions of improvement, modernization, and progress.[20] It points to the idea of a positive renewal: a change for the better.

How is the relationship between innovation and technology to be assessed? Innovation occurs in multiple arenas: societal, bureaucratic, technological, and so forth. The concept of innovation has particularly strong links to technological improvement and, above all, to engineering and inventions. That technological connection becomes apparent in the public response to the tangible inventions that coincide with a process of innovation. That connection is associated with the Industrial Revolution and the work and lives of its engineers, to cite the title of a work by 19th-century biographer and moral philosopher Samuel Smiles.[21]

With ›technology‹, we enter a rather risky terrain, given the wide-ranging discussions in sociology, philosophy, among other fields, on its meaning and implications.[22,23] That ubiquitous but multifarious attention has to do with technology's alleged fundamental transformative social implications and, as argued above, its high level of conceptual ambiguity. Technology entails mechanisms, procedures, and methods of converting components, through use of means of production, into a final product. Technology is also rationally oriented: purposeful, thoughtful, and scientific, and thus to be considered ›value neutral‹. Furthermore, technology includes the use of so-called ›hard‹ science. Thus, not only are tangible tools – hardware – generated, courses of action – software – are also devised and developed. Crucial to this rational line of thought is the assumption that one acts to rank and weigh alternatives, identifying and selecting the better alternative. Ideally, it entails a binary approach. Therefore, vague and indeterminate decision-issues need to be resolved, not through ›irrational‹ intuition and/or personal judgments, but on the basis of objective comparison. This is loosely comparable to legal programming and perhaps partially explains the attractiveness of technology. Subjectivity and shades of gray in assessments and choices have to be eliminated in order to arrive at clear-cut – and, in IT terms, preferably binary – decisions. This necessity not only applies to the area of engineering but also to policymaking and organizational management, as has become apparent in the rational, synoptic approach to decision-making.[24]

Technocracy is currently viewed in public administration – PA – and political science literature as a rather negative phenomenon, but this has not always been the case. Technocracy can be defined as government by technocrats. The coining of the concept of ›technocracy‹ is attributed to the engineer William Henry Smyth in 1919: »The rule of the people made effective through the agency of their servants, the scientists and engineers«.[25] In 1932 the Committee on Technocracy, headed by, Walter Rautenstrauch in the USA, foresaw the collapse of the price system in economics and its replacement by technocracy. Technocracy can also be seen in the field of scientific management, in particular in the work of Taylor and Cooke. In the next section, we will go in more depth

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into Taylor and Cooke's work relating to the influence of technocracy in the public sector.

Finally, innovation and change through the application of a new technology can/will have disruptive consequences. In the ambition to make widespread use of technological innovation and change, an opening for the occurrence of disruptive effects emerges. The concept ›disruptive technologies‹ was introduced by Clayton M. Christensen and Joseph Bower in 1995 in their article »Disruptive Technologies: Catching the Wave«.[26] Disruption is a concept derived from business administration, relating to the idea that an organization is challenged in its very existence by seismic technological transformations, and thus must adapt and adopt the new technology or perish. Disruption is said to generate positive effects on economic progress and innovation, but also to lead to economic destruction and social upheaval. To apply this framework to the public sector unremittingly is problematic, as the very nature of public service delivery necessitates continuity and is subject to public and political scrutiny. Governments must, of course, adapt to wider societal – technological – developments. This has been a principal catalyst for government reform over the years. In addition, governments have to deal with the disruptive effects of new technologies on society and government: to address their negative side effects and/or to make more optimal use of the opportunities they present.[27] This responsibility explains the expansion of the role of government and the aforementioned diversification of tasks; it also explains the eagerness in the public sector for the introduction of new technologies, as we will discuss in the next section.

Innovation, Change, Reform, Technology, and Technocracy within Government and Bureaucracy

Modern government is premised on normalizing change, innovation, reform, technology, and the application of technological solutions. By normalizing, we mean two things: that change, innovation, reform, technology, and the application of technological solutions come to

be seen as normal, routine, and expected; and that they are seen to be good and positive, as things or states to be embraced and indeed encouraged, culminating in the recent celebration of contrived ›disruption‹ and its positive effects. These twin assumptions are typically presented as neutral, but they are, in fact, political. Change depends on choice and, in government, choice is always political, because it depends on choices between different values. The drive to change, modernize, innovate, and reform society and government stems from the perceived necessity of dealing with economic, societal, organizational, and other environmental pressures.[28] How to understand and deal with these challenges has been a central and growing concern of government policy-makers[29] and public administration scholars over the period under discussion.[30] Of course, these concerns also have a bearing on government, not only regarding the question of how to deal with societal needs, but also regarding the effects of innovation on the structure and functioning of government itself. Consequently, this concern has been placed at the center of PA reform literature since the late 19th century and can currently be found in the practical recommendations of international reform organizations such as the OECD and the World Bank.[31,32]

Innovation and the application of new technologies in private and public organizations entail the prospect of making the best use of the opportunities provided by technological change. This is made apparent in the work of Frederick Taylor (1856–1915). A mechanical engineer by training, Taylor was a founder of the scientific management movement.[33] Though historically much maligned, Taylor had, with the application of his »neutral scientific« principles, the best interests of employers and employees in mind. Interestingly, though Taylorism has attracted a fair amount of criticism in later organizational literature because it has been argued that his ideas lead to dehumanization of labor, process-robotization and thus the replacement of the most uncertain factor in the production process – human labor – can in fact be seen as a perfection of Taylorism.[34,35] The influence of this rational approach emerging from the world of engineering was not confined to private sector organizations or to the USA and France. Quite early on, Taylorist ideas proved to be an inspiration for governments in many countries.

Again, engineers played a role in promoting these ideas. In the USA, Morris Cooke, like his contemporary and acquaintance Taylor, had an engineering background. He promoted his ideas within government and within the Public Works department of Philadelphia.[36] In the early 19th century Netherlands, a polytechnic was founded in Delft as a distant successor to a military engineering training school. This Delft polytechnic (the current Delft University of Technology) was intended to produce academically trained engineers in the areas of civil engineering, water management, and building and construction for the public and private sectors. An important ›customer‹ was Rijkswaterstaat — the Directorate General for Public Works and Water Management. Rijkswaterstaat was created in 1798 in imitation of the French corps system and had as its principal workforce the corps of civil engineers.[37]

Towards the end of the 19th century, these Delft-trained engineers were increasingly involved in engineering projects for – predominantly local – government, Rijkswaterstaat and the private sector, due to the industrialization process mentioned above. In addition to engineering, they became involved in managing these projects. A number of these engineers became attracted to so-called economic rationalization efforts[38] and social-economic engineering comparable with the theories of Taylor and the later US technocracy movement.[39] A sizeable number of Delft students and professors were attracted to the emerging social democratic movement.[40] They saw in a technological approach a way to resolve the tension between capital and labor and thus end societal strains. The Royal Institute of Engineers (KIVI) also had a branch of technical economic engineering in which the emphasis was laid on engineering, economic and social planning, design, and rationalization. From the 1930s onwards, there was a deeply felt unease with what was seen as dysfunctional politics and unsatisfactory political decision-making procedures and outcomes, not only in this scientific community but also in the wider society. The ›messy‹ nature of (party) politics was seen as obstructing the development of adequate solutions for the social and economic problems of the day. In the 1930s, an engineer in politics (the Minister of Economic Affairs, Henry Gelissen) supported the construction of economic technical institutes.[41] These were intended to

stimulate industrialization projects as a way to end the economic depression. The idea of economic planning and forming forward-looking strategies was first glimpsed during WWI and came into full force in WWII, in order to support the war effort in the unoccupied, belligerent nations. Elements of this rational-planning approach based on the newest technological insights, with an active role for government, emerged in an embryonic form during the late 1930s. Given the results of this approach, governments embarked, after the end of WWII, on a program of extensive exploitation of the advantages of technological knowledge and innovation, through planning and planning agencies, futurologist insights, the commissioning of scientific advice, and the rationalization of work processes and organizations. This is a movement towards technocracy as defined by William Henry Smyth, as discussed earlier.

Technology can nevertheless be perceived as a double-edged sword. The idea that knowledge and control cannot be attained without paying a heavy price is ancient.[42] Thus, the associated downsides could emerge in parallel with the arrival of technological change. These dystopian projections demonstrate a deep-rooted fear of losing one's individual freedom to large all-powerful private companies and governments, who will comprehensively order and dictate human life. A second, related fear is that individual freedom will disappear as the result of an evolving set of technological changes, mechanization, robotization, artificial intelligence, and digitalization. Technology could thus overrun and supplant humanity. Libertarian movements – a contradiction in terms – and academic and popular literature express resistance to these visions of the future.[43,44,45]

The Consequences of Technology and Bureaucratic Innovation for the Relationship between Politics, Bureaucracy, and Society

The growth of government in terms of tasks, powers, number of civil servants, and the diversification of the knowledge and skills needed in the civil service was a direct response to an accelerating process

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of industrialization and increasing demands for social emancipation.[46,47] The exact timing of that expansion varied across countries according to their specific political-administrative, social-economic, and technological situations. In Western Europe, the beginning of this trend can be roughly situated in the second half of the 19th century.[48] But even before this, during the early 19th century, a bureaucratic revolution was already becoming apparent.[49] The increasing use and rationalization of (new) work and management methods, changing organizational structures, and the utilization of more advanced technical aids are a few of its manifestations. Making changes in bureaucratic technology has been a lasting feature of reform ever since. This has led to a continuous adaptation in perceived necessary requirements in the areas of knowledge, skills, and preferable mindset and attitudes of civil servants, regarding both internal bureaucratic matters and service-delivery to society. As a result of mechanization, changes in information technology, and, later, the digitalization of bureaucratic work, new positions have appeared and disappeared. Historically, this could be seen in, for instance, the growth in use of typewriters at the end of the 19th century and, later, in the reduction in the numbers of mainly lower clerical and administrative functions.[50] In contrast, this reduction was accompanied by an increase in advanced IT-related functions.[51]

It is thus hard to deny that technology and digitalization have had a deep and lasting impact on government and bureaucracy. The digital change process that began in the late 1980s and 1990s had an external dimension, transforming the relationship between government and society by changing the character of their interaction. It shifted what had primarily been a human form of interaction towards more distanced, digital contact.[52] This implied that bureaucracy had lost its personal face and came concealed behind a digital wall. Societal discomfort around this change recalls complaints uttered in the past, of invisible bureaucrats hiding behind procedures and walls of paper. This distancing effect enhanced public perception of a government plagued by bureaucratism in all its manifestations of formalism, red tape, and goal displacement, as described by Merton in 1940 and, subsequently, by many others.[53] In addition, due to

discrepancies in the degree of digital literacy seen across society, this change had serious consequences for the accessibility and the level of legitimacy of government among digitally challenged groups. Of course, this is very similar to – and has reinforced – existing differences in bureaucratic competencies within society.

The impact of technological innovations such as digitalization and IT on the structure and operations of government organizations can, however, be exaggerated. The prediction of the demise of bureaucracy and the emergence of an ›infocracy‹, as proposed by Zuurmond,[54] perhaps pushes the argument a bit too far as, in both Weberian bureaucracy and infocracy, process information, either on paper or in digital form, is at the very core of the bureaucratic model. This exaggeration prevents us from seeing the real effects and normative implications of technological change.

Though much is expected of government by digital enthusiasts and IT consultants, the idea of ›digitizing government‹ provides few clues to the solution of these access disparities. Making things even more complicated, digitalization, in addition to the digital literacy issue, reinforces, through the development of standardized procedures and protocols and through the use of algorithms, a dehumanized e-relationship between government and citizens. Assessment of the wishes, needs, and possibilities of citizens is based on the needs, abilities, and skills of the political and bureaucratic designers of these e-governance systems.[55] Government itself defines the profile of the ideal citizen/customer according to its self-image. The government may thus be seen as constructing its own citizen. This is not a new phenomenon: it has already been described by Van Braam (1957) in relation to the Netherlands in the 1950s and preceding years.[56] However, this process has intensified in recent decades.

At the start of our discussion, we said that attention would – also – be directed to the implications of technological change for the relationship between politics, civil servants, and society. Central to our discussion has been the concept of technocracy, as, on the positive side, a source of innovation and an instrument of change for the better. Public officials are perceived as the experts *par excellence*, the professional, permanent government officials with knowledge of and experience in bureaucratic work processes and

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governance technology.[57] This has actually been the situation since the rise of the – modern – bureaucracy. The use of experts and apolitical institutions has been encouraged in order to deal with government challenges in the aftermath of the Industrial Revolution. The importance of bureaucracy as a personification of legal-rational authority and an embodiment of a rational, efficient, and superior organization has been well argued for, from Weber onwards. Accordingly, the claim that power and responsibility are being transferred to civil servants from political institutions has long been a commonplace assertion in political-administrative and administrative-historical analyses. The argument that the separation between politics and governance has to an extent disappeared as a result of this shift has been developed in an extensive body of literature.[58] Whatever the exact level of truth in these claims may be, the American political scientist and public administration scholar B. Guy Peters has formulated an alternative model to this classic formal-legal model. Peters has proposed a so-called ›administrative state model‹.[59] In this model, civil servants have predominance in a rationally conceived process of decision-making using internal and external (technical) advisory expertise. According to this perspective, political leaders are only figureheads or part of the administrative state, while civil servants actually have the power, or have even adopted an official role. It sounds very much like a reiteration of Weber's »Beamtenherrschaft«.[60] In the administrative state model, rational policy development and implementation are emphasized and thus take a ›technical‹ bureaucratic posture, avoiding arbitrary and intuitive political choices. It should be added that political officeholders can, by relinquishing their predominant role in the policy-making process, shed responsibility for having to make difficult decisions. This has been made apparent in many PA analyses concerning the effects and background of New Public Management methods and approaches in governance, in the Netherlands and elsewhere.[61]

In a technocracy, technical experts supplant the role and power of political and social leaders. Politics, however, involves determining value judgments and making binding choices about them. These choices are inherently arbitrary, while the civil service role is one of a rational combination of purposes and means.

Politics is ›messy‹ and the activities of the ›rational‹ public official are, according the technocratic view, essentially objective and value-neutral. This normative vision explains the appeal of technocracy and planning. This can be seen in recent Dutch administrative history. It may be observed, for instance, in the Netherlands, in many State Commissions on the running of government and, in the UK, in the British Fulton Report of 1968. Technocratic dimensions of government are emphasized in the pursuit of further rationalization of governance through planning, application of advanced instruments, and identification of desirable characteristics in officials to be recruited.

The question of whether all decisions and decision-making procedures can be reduced to technical and purely rationally based decisions remains. The popularity of ›new public management‹[62] in many countries as the dominant management doctrine from the 1980s until the 2010s is a recent example of this depoliticizing and rational managerial mechanism.[63,64] This managerial and technocratic dominance in decision-making and public management has come under severe public, political, and academic scrutiny from the 2010s onwards. Criticisms include arguments that variations in problem definitions, preferences, and opinions among actors thwart the possibility of choices that can be made in a substantively rational and value-neutral way. Thus, public officials cannot – fully – substitute substantive political choice with an instrumental and technocratic management approach. In the Netherlands, a series of political and bureaucratic crises – involving among others the Tax Agency, the Social Security Agency and the Public Security Agencies – have made this point rather poignant. These crises were caused by perverse and dysfunctional effects emanating from the application of new public management methods and the digital government. Citizens complained of being crushed by the system. This led to a highly critical parliamentary inquiry and the fall of Rutte's third cabinet in 2021.[65] This has begun the early stages of recalibration of the way the political administrative system and bureaucracy is supposed to operate.

Conclusion

Bureaucratic innovation through the introduction of new technologies, such as the digitalization of internal work processes and public service delivery, has had undeniable benefits in terms of efficiency, predictability, and convenience. This is, however, not the whole picture, as there are also undeniable drawbacks attached to the change. Through digitalization, work processes have become increasingly driven by protocol and standardization. One could even say they have become more bureaucratized, perhaps not in purely Weberian terms, but from a scientific-management perspective. Two potential negative side effects of digitalization as a bureaucratic innovation – strategy – merit special mention. First, citizens must have ample bureaucratic and digital competencies in order to access public services. In addition, one can, especially if one is not a standard case, be lost in the system. The Dutch Council of State and the National Ombudsman have pointed out these issues regularly over the last decade, and they are also clearly apparent in the recurring political-administrative crises discussed above.

Perhaps the normative consequences of bureaucratic innovation have been the most crucial ones. These pertain to the relationship between officeholders, the legislature, and society on the one side and unelected technocratic bureaucratic officials on the other. By rationalizing government decision-making and performance through a predominant emphasis on a technological and hard-science take on governance, the idea of an apolitical and value-neutral government has been enforced. That technocratic and hard-science take on government and bureaucracy is, as we have argued, highly political in nature, entailing paradoxical denial of the fuzzy and partly subjective nature of policy issues and diversity in political, bureaucratic, and societal thinking. The idea of technological change is connected in both cultural myth and scientific work to the titan Prometheus of Greek mythology. The word ›Prometheus‹ is sometimes used as a symbol for organizations and associations in the technical realm. By stealing fire from the gods, humanity can control nature and escape the power of the gods – nature. Humankind can determine its own destiny.[66] This makes the idea of socio-economic progress plausible; see also Robert Nesbit's analysis of the Prometheus myth and progress.[67] By employing hard and soft science-based technologies, government and bureaucracy can make use of opportunities to deal with internal and external organizational challenges. Internal structures and work processes within public organizations and interorganizational and intergovernmental relationships between – networks of – public organizations can be innovated. The same applies to the possibility of improving public service delivery and restructuring the relationship between public organizations and citizens.

However, on the flipside of the coin, there are potential drawbacks for society, government, and bureaucracy: the gifts of Pandora's Box, the ancient, deep-rooted belief that knowledge and control are not to be had without paying a price. Modern-day dystopian perspectives provide ample examples of this line of thought; this implicit bargain must be taken into account by public officials, academics, and the public.

Central to our discussion has been the temporality of technology and technocracy and a political vision of the necessity and desirability of bureaucratic and government change and innovation. At the same time, technology, technocracy, and scientific expertise root their authority in their – apparently – nonpolitical status. Paradoxically, this can also be a part of their political attractiveness, allowing the shedding of political responsibility by government and bureaucracy. This use is also highly political. Ultimately, technology is not a neutral instrument for public sector organizations. In conclusion, we argue that the promotion of change, technology, and the rise of technocracy in the Netherlands has only led, in fact, to an intensification of bureaucracy and thus the disempowerment of society, not its liberation. The point seems to be that it is impossible to reduce policy-making and policy-implementation to technical-bureaucratic considerations alone without invoking the peril of grave public dissatisfaction.

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14 See also Matthew Flinders / Jim Buller: Depoliticization: Principles, Tactics and Tools, in: British Politics, 1/3 (2006), pp. 293–318.

15 Henry Mintzberg / James A. Waters: Of Strategies, Deliberate and Emergent, in: Strategic Management Journal 6/3 (1985), pp. 257–272.

16 Christopher Pollitt / Geert Bouckaert: Public Management Reform. A Comparative Analysis - Into the Age of Austerity, Oxford, UK 2017.

17 Walter Kickert / Frans-Bauke van der Meer: Small, Slow and Gradual Reform. What Can Historical Institutionalism Teach Us? in: International Journal of Public Administration, 34 (2011), pp. 475–485.

18 Pollitt / Bouckaert: Public Management Reform.

19 van der Meer: Openbaar bestuur en het ambtelijk apparaat.

20 This is perhaps the most value-laden concept, suggesting an inevitable and unbreakable chain of events leading to the present. See also Reinhart Koselleck: Futures Past on the Semantics of Historical Time Translated and with an introduction by Keith Tribe, New York 2004.

21 Samuel Smiles: Lives of the Engineers. With an Account of their Principal Works, London 1861–1867.

22 Maarten Franssen / Gert-Jan Lokhorst / Ibo van de Poel: Philosophy of Technology, in: The Stanford Encyclopedia of Philosophy (fall 2018).

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26 Clayton M. Christensen / Joseph Bower: Disruptive Technologies. Catching the Wave, in: Harvard Business Review January-February (1995).

27 See the current promotion of ideas on how to deal with and use the opportunities exposed by disruption to improve public service delivery through technological (e-based) innovation, by consultancy firms as PwC and Deloitte.

28 Jos C.N. Raadschelders / Frits van der Meer / Theo A. J. Toonen: Comparative Civil Service Systems. Comparative Perspectives, Houndsmill 2007, 2015.

29 Frits van der Meer: Crises and Administrative Innovation in The Netherlands, in: Yearbook of European Administrative History, Baden-Baden 1995.

30 See the work of Woodrow Wilson from his early career as a political science professor, his successors in the USA, and Gerrit van Poelje, the founding father of Dutch Public Administration as a professional academic discipline. Van Poelje started as a civil servant and became permanent secretary of the Ministry of Education. He ended his career as a member of the Dutch Council of State. In the cases of Wilson and van Poelje, we see a combination of active practice with an academic approach to the improvement of administration.

31 Gerald E. Caiden: Administrative Reform Comes of Age, Berlin 1991.

32 Frits van der Meer: Publieke Sector Hervormingen, Den Haag 2021.

33 Frederick Winslow Taylor: The Principles of Scientific Management, New York 1911.

34 van der Meer: Publieke Sector Hervormingen.

35 For an overview of these criticisms over time, see: Robert B. Denhardt / Thomas J. Catlaw: Theories of Organization, Belmont, CA 2014.

36 Jean Christie: Morris Llewellyn Cooke. Progressive Engineer, New York, 1983.

37 H.W. Lintsen (ed.) / A. Bosch / W. van der Ham: Twee eeuwen Rijkswaterstaat, 1798–1998, Zaltbommel 1998.

38 Delft engineers such as Ernst Hijmans and Berend Berenschot were founding members of influential economic advisory and consultancy firms.

39 Harry Lintsen: Ingenieur van beroep. Historie, praktijk, macht en opvattingen van ingenieurs in Nederland, Den Haag 1985.

40 Baltus Pekelharing, the chair in economics, was influential in this area. He was personally criticized in 1903 by the Prime Minister Abraham Kuyper for forming a generation of social democrats. https://www.cbs.nl/nl-nl/onze-diensten/overzicht-publicaties/het-licht-van-de-statistiek/1892-1940/machtige-mannen-met-een-missie/baltus-pekelharing-rode-professor.

41 https://dnpprepo.ub.rug.nl/10334/2/PP_1975_02.pdf, (14. 05. 2021).

42 There are similarities to the account of Adam and Eve in Genesis, but these can also be found in other creation narratives. A penalty must be paid by Adam and Eve after eating the fruit of the Tree of the Knowledge of Good and Evil. After losing their innocence through the acquisition of knowledge and perception, they are exiled from the Garden of Eden.

43 Ayn Rand: The Fountainhead, New York 1952 [1943].

44 Ayn Rand: Atlas Shrugged, New York 1996 [1956].

45 Robert Nozick: Anarchy, State and Utopia, Oxford 1974.

46 Frits van der Meer: Voorwaarden, waarborgen en ambtenaren, Leiden 2012.

47 van der Meer: Openbaar bestuur en het ambtelijk apparaat.

48 Jos C.N. Raadschelders: Handbook of Administrative History, London 1998.

49 Jos C.N Raadschelders / Mark R. Rutgers: The Evolution of Civil Service Systems, in: Hans A. Bekke / James L. Perry / Theo A.J. Toonen (eds.): Civil Service Systems in Comparative Perspective, Bloomington, IN 1996.

50 Frits van der Meer / Laurens J. Roborgh: Ambtenaren in Nederland. Omvang, bureaucratisering en representativiteit van het ambtelijk apparaat, Alphen a/d Rijn 1993; Gerrit Dijkstra / Frits van der Meer: The civil service system of the Netherlands, in: Frits M. van der Meer (ed.): Civil Service Systems in Western Europe, Cheltenham/Aldershot 2011.

51 Gerrit Dijkstra / Frits van der Meer: The Civil Service System of the Netherlands.

52 van der Meer: Openbaar bestuur en het ambtelijk apparaat.

53 Robert K. Merton: Bureaucratic Structure and Personality, in: Social Forces, 18 / 4 (1940), pp. 560–568.

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55 van der Meer: Openbaar bestuur en het ambtelijk apparaat.

56 Aris van Braam: Ambtenaren en Bureaukratie, Zeist 1957.

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59 Guy B. Peters: Comparing Public Bureaucracies. Problems of Theory and Method. Tuscaloosa, FL 1998.

60 Max Weber: Wirtschaft und Gesellschaft. Grundriss der verstehenden Soziologie. Mit textkritischen Erläuterungen hrsg. von Johannes Winckelmann, 5., rev. Aufl., Tübingen 1976.

61 Gerrit Dijkstra / Frits van der Meer: The civil service system of the Netherlands, in: van der Meer (ed.): Civil Service Systems in Western Europe,

62 New Public Management has been mockingly rephrased as New Scientific Management.

63 Christopher Hood: Public management for all seasons, in Public Administration, 69 (1991), pp. 3–19.

64 Janet V. Denhardt / Robert B. Denhardt: The New Public Service. Serving, Not Steering, Armonk, NJ 2002.

65 Parliamentary Commission Bosman: Tijdelijke commissie Uitvoeringsorganisaties (TCU) (2021) Eindrapport; Parlementaire ondervragingscommissie Kinderopvangtoeslag (POK Commission Bosman) Windrapport 2020.

66 Koselleck: Futures Past.

67 Nisbet: The History of Progress, pp. 18–21.

Abstract

We will focus on the intensifying technologization of government affairs and the ensuing question: does this lead to a bureaucratically dominated technocracy? The coining of the concept of ›technocracy‹ is attributed to the engineer William Henry Smyth in 1919: »The rule of the people made effective through the agency of their servants, the scientists and engineers«. We will examine past and present debates on possible adverse effects of technocracy on the scope for democratic governance and thus the position of political leaders and citizens in decision making.

About the Author

Frits van der Meer holds the endowed CAOP chair 'Comparative Public Sector and Civil Service Reform' at the Institute of Public Administration of the University of Leiden. His ongoing research activities concentrate on (comparative) public sector reform, the Enabling State and government performance. This line of research is set in the context of a gradually changing multi-level governance system and the emergence of an enabling state. Themes of interests in this area are, for instance, the analysis of the interrelationship between the changing size, composition and professionality dimensions of governments and civil service systems on the one hand, and their per-formance on the other.

Gerrit Dijkstra is senior lecturer at the Leiden University in the Netherlands. Besides his university work he is an honorary judge and in addition he has been involved in (inter) national advising, teaching and consultancy and member of various advisory boards and commissions. His work concentrate on legal dimension of Public Administration theory and practise for instance in the extent and effects of juridification of PA issues. He is also extensively involved in comparative public sector and civil service reform studies.