

# Beyond Bureaucracy

Alois Paulin

**Abstract** This chapter describes Beyond Bureaucracy as an emerging research field concerned with radical innovation for governance of juropolitical systems. The grand objective of Beyond Bureaucracy is to act as an incubator for the development of new forms of organisation and new technological artefacts, which would enable transformation of public governance. In this role, Beyond Bureaucracy does not prescribe a concrete outcome, but rather calls for creative ideas, radical visions, and rigorous discussions on how twenty-century technology can serve as a basis for further transformation and radical development. This chapter explains how Beyond Bureaucracy differs from related fields like e-Government or e-Democracy, provides an overview over the state of research in Beyond Bureaucracy, provides links to follow-up literature, and aims to provide a seed vision on the transformation potentials that could be researched-towards in scope of Beyond Bureaucracy.

Beyond Bureaucracy (BB), in a nutshell, is about the search for a novel paradigm for governance of juropolitical systems, where information and communication technologies (ICT) would *eliminate* the *need* for intermediary (human) agents in administering a society's common wealth (in terms of common resources, infrastructures, public offices, mandates, concessions, and the like). The guiding hypothesis of BB is the exploration of whether or not a core ICT system<sup>1</sup> that would cater to such grand objective *can* be designed and feasibly utilised for governance, as well as to discuss whether or not such ICT system could result in a boost of good governance, increase democratic legitimacy, incentivise economy, and ultimately bring forward a shift in civilisation of an unprecedented scale. In that sense, the BB researcher is advised to bear in mind that *Beyond Bureaucracy* deliberately invites it to leave the familiar Western ideal on how systems of governance are (or ought to

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<sup>1</sup>The use of *system* here does not prescribe/refer to a concrete instance of *one single* technical system.

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A. Paulin (✉)  
Vienna University of Technology, Vienna, Austria  
e-mail: alois@apaulin.com

be) organized, that is, to forget for a while for sake of progress well-established paradigms of the state, such as the trias politica, the concept of suffrage, the role of law enforcement agencies, and so on. Instead, the BB researcher is invited to step out of the box and—as Tim O’Reilly once put it (O’Reilly 2010, p. 12), *strip governance down to its core, rediscover and reimagine it as if for the first time*.

The guiding line of BB research is thus to follow the grand vision of a central ICT system, through which governance of common wealth and other societal matters *can* be co-created, controlled, and steered,<sup>2</sup> all without the *need* for a dedicated middle layer (*the bureaucracy*). To accompany, fortify, and justify this grand objective, BB research includes the study of the sustainability of modern use of technology for purposes of governance, as well as ethical, jural, democratic, and economic implications of such use (cf. Paulin 2015a). Some of these topics have been previously discussed in a BB-focussed special issue of the *International Journal of Public Administration in the Digital Age* (Paulin and Anthopoulos 2017), others are discussed as part of the contributions to the present book.

To this end, the BB vision calls for trans-, inter-, and multi-disciplinary input [see (Stember 1991) for an insightful definition of these terms, or (Jensenius 2012) for a concise overview]. Trans-disciplinary research is about creating a “unity of intellectual frameworks beyond the disciplinary perspectives” (Jensenius 2012); in BB this becomes relevant when for example jurisprudence and informatics join forces to derive the principles of a blanc slate jural system which goes beyond the constraints of existing laws [see (Paulin 2013) for such attempt]. Inter-disciplinary research then is about “integrating knowledge and methods from different disciplines, using a real synthesis of approaches” (Jensenius 2012); challenges in BB are inter-disciplinary for example in the context of aligning disciplinary semantics to serve as a common context against which the technical system can be designed and validated regarding its feasibility to address the grand objective. Multi-disciplinary research, finally, is about “people from different disciplines working together, each drawing on their disciplinary knowledge” (Jensenius 2012); in the context of BB, the global efforts that will contribute to the progress of this field and the dissemination of the *Beyond Bureaucracy* vision, will predominantly be efforts of a multi-disciplinary kind. In that sense, the present edited volume is a *multi-disciplinary* collection of research that is of relevance to the broader area of the BB research challenges.

The objective of this chapter is to provide guidance into the inter-/trans-disciplinary research challenges of the BB research field, as well as to point out the differences between BB research and related research endeavours that can be found under terms such as e-Governance, Digital Government, e-Democracy, or

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<sup>2</sup>This vision is not to be mistaken though for similar-sounding endeavours of the past, as e.g. the Soviet *All State Automated System of Management* OGAS, a failed undertaking whose goal was to network all parts of the Soviet command economy in order to control and steer them centrally (Peters 2016); neither should it be mistaken for the objectives of Leibniz’ mysterious *Characteristica Universalis*, which partly aimed at mathematically capturing societal relations (cf. Gerhardt 1890).

Smart Governance; Section “[Beyond Well-Trodden Paths: How BB Differs](#)” shall outline how BB is different in this regard. Section “[The Core Vision](#)” then shall outline the core vision of BB, focussing on its main technological pillar, which runs under the keyword *Governance Informatization*. Section “[Economic Potentials of Radical Innovation](#)”, finally, shall conclude with some final remarks on the potential of *Beyond Bureaucracy* to transform society.

## Beyond Well-Trodden Paths: How BB Differs

Researchers interested in utilising technology to transform any of the manifold relations between citizens and the state easily find a home in the e-Government (e-Gov for short) research domain. e-Gov is closely related, includes, or is partly even synonymous with terms such as e-Governance, Digital Government (the term used by US researchers), e-Democracy, Smart Governance, Open Government, and the like. The interested researcher thus finds a wide variety of research streams readily available to choose from, to which it can contribute, and thus make advances in its academic career. Established scholars in e-Gov then tend to study what is, in their view, a “complex phenomenon” (Scholl, n.d.); this includes drafting models that aim to assess the maturity of governments with regards to e-Gov implementation (Coursey and Norris 2008), hyping potential institutional transformation caused by the use of technology (Bekkers and Homburg 2007), or aiming to change how government agencies deliver their services to citizens (Anthopoulos et al. 2007; Reddick and Turner 2012).

The crux with these research streams however is, that they aim only to *incrementally* improve governance, taking the modern Western paradigm of the state as a confinement, which mandates a legislative system, a political system, a public administration, a judiciary system, law enforcement agencies, and so on.<sup>3</sup> Behind this backdrop, e-Gov is understood as an interdisciplinary field that merges public administration (PA) with computer science/informatics (CS) (Bannister and Connolly 2015). In this relation however, CS is put in a Cinderella-like role, reduced to being a provider of tools and systems that *serve* the needs and objectives of *the bureaucracy*: the “e” in e-Gov thus stands for information systems that computerize administrative workflows, store digitized data, open electronic channels for interaction with citizens and their participation in policy making or elective processes, make documents and data available over the Web or other protocols of the Internet, provide the e-Identity, the e-Mail, online forums, and the like.

Thus, in e-Gov, CS is deprived of its potential for *scientific* contributions to the field, that is, the innovative and transformative potentials of technology are stifled

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<sup>3</sup>The collective of these systems and their agents is *the bureaucracy* in the context of BB-research; for an overview over the differing semantics of the term *bureaucracy* as such, see (Albrow 1970). For similar uses of the term “bureaucracy” as in the context of BB, see (Downs 1967; Graeber 2015).

by the constraints of existing institutional, political, and legislative frameworks, which CS is tasked to serve. In a nutshell, *the bureaucracy* sets the agenda by which CS delivers tools and techniques in the scope of *professional* (rather than scientific) artefacts, whose effects are then observed by researchers and methods from PA, political science, and other areas of human and social sciences. What can be observed, are merely gradual improvements, where *the bureaucracy*, where so possible, changes its ways of operation from street-level to system-level interaction with citizens (Bovens and Zouridis 2002), while leaving the institutional framework essentially the same (cf. Paulin 2015b). At the end of the day, the role of CS in e-Gov is confined to incremental innovation, rather than research towards radical innovation.

Well-known is the quote, popularly attributed to Henry Ford, that, had he asked his customers what they want, they would have told him they would like a faster horse [see (O’Toole 2011) for traces of this fable beyond Ford]. Likewise, asking *the bureaucracy* what it desires and providing accordingly, is a *professional* (as opposed to scientific!) challenge, that can at most result in incremental change. At this point, BB aims to step out of the box posed by contemporary constellations of governance institutions and legal frameworks, and promotes *radical* innovation (“incremental innovations improve, whilst radical innovations transform” (Binks 2014)—see *ibid.* for a deeper discussion on incremental vs. radical innovation). It aims to provide a transdisciplinary platform for a radical rethinking of how human society can govern itself by realising the full potentials of the technologies invented during the twentieth century.

This then, is the main difference between BB and e-Gov: while e-Gov has a *professional* attitude to designing technical artefacts that serve the bureaucracy (its scientific contributions focus on observing the effects of these technical artefacts, rather than designing new technology), BB takes a scientific stance to designing new base technologies to enable *radically* new models of societal governance.

## The Core Vision

The twentieth century brought *electronics* as a base from which further radical innovations stemmed: digital electronic computing technology enabled general-purpose calculation of unprecedented scale, and the evolution of programmable computers; informatics advanced computing beyond the calculation of numbers into a dimension where structured data can be stored and processed by software; digital electronics, combined with informatics, enabled telecommunications to go beyond the limited capabilities of the telegraph, and to reach a state of ubiquitous communication where the Internet of Things becomes a conceptually feasible incremental innovation. With these radical innovations, the twentieth century saw radical innovation in trade, logistics and transportation, manufacturing, entertainment, communication, and other domains of modern civilisation. The twentieth century left little room for radical innovations in above-mentioned

domains—even though systems and services continue to improve, such improvement is not radical any more, but merely incremental.

One of the remaining twenty-first century's opportunities for radical innovation lies in the domain of societal governance, where on top of twentieth century technology new ideas can be advanced and realised, with promising potentials to boost economic growth. One such vision, which has been gaining momentum over the recent years, is *Liquid Democracy*, which radically changes the way communal/collaborative decisions in society can be made. In Liquid Democracy, collaborative decision-making power held by an individual can be delegated to another individual, which latter can delegate further, and so on (Paulin 2014). This way, a network of trust is formed, in which collaborative decisions (such as e.g. on budgetary issues, public policies, laws, or public mandates) can be made in a more inclusive and more democratic way (Blum and Zuber 2016; Nijeboer 2013). Liquid Democracy is spearheaded by technical innovation (Hainisch and Paulin 2016; Jabbusch 2011; Paulin 2014), and accompanied by theoretical considerations from philosophy and political science (Blum and Zuber 2016; Nijeboer 2013).

Another radical vision is *Governance Informatization* (Paulin 2017), which is about establishing a system of levers in cyberspace, through which the agents and resources of the common wealth could be steered. An essential part of that challenge is rooted in technology, where the challenge is to design the elements of an information system that would be capable to serve *any* potential type of political or legal system and absorb any changes of such without the need for the manual reconfiguration of such system during runtime. One can imagine such system as a global, virtual ledger-like file (database), which would contain information that would define the scope of action available to agents holding power to influence the course and faith of the common wealth, in a given context. Consulting this file would give one knowledge about the eligibilities a specific individual has in a given context, such as for example, if one has a valid residence or driving permission, is the legitimate holder of a public office, the legitimate representative of an organisation, the legitimate controller or user of a common resource, and so on. By changing the information in this system, the eligibilities of individuals and organisations would be tuned on a per-person level, or on the system level, respectively, by which the characteristics of the entire system of governance agents would be transformed (Paulin 2014).

Both Liquid Democracy and Governance Informatization (GI) have in common that they aim for eliminating middlemen which would mediate in (and thus potentially meddle with) the transfer of information between parties. There is no *need* any more for casting ballots, no *need* for counting votes, and no *need* for appealing against allegedly unlawful procedures in Liquid Democracy. Similar, there is no dependency on administrative personnel, which would mediate in the creation of legal rights, the transfer of property, or the provision of credentials in GI. Joining informed governance with liquid democratic decision making is the foundation for the vision of Sustainable Non-Bureaucratic Government (Paulin 2014), which is a pioneering model that aims to provide a clear technological basis for radical innovation in governance.

Conceptually, the idea is very simple: the virtual ledger-like file is the central data base in which all publicly relevant jural relations are stored, and from which all publicly relevant eligibilities are derived. The principle of a global file containing all relevant information on jural relations of a certain kind is well-known to Western thought in form of e.g. land registries, which are supposed to contain all data needed for governing property relations. The concept of a central file is a core principle in software systems: seen from a certain level, all one sees on the computer screen, all the words, the colours and shapes, the moving pictures, the game characters, and so on, are results of interpretations of a very long file of digital words, which lives in the computer's memory during system operation. And just like one's interaction with the world behind the computer screen is—from a specific technical perspective, a constant read/write interaction with the computer's memory file, so is it likewise possible to engineer a global (distributed) file which would store all necessary relations relevant to real-world systems of governance. Everybody would then have access to such central database and by interacting with it one would shape the fortune of society, its own relations with others, or—having acquired the appropriate eligibilities, influence the position and role of others in society, respectively. The technical challenges in assuring non-mediated governance for the interaction with such system are manifold, and have been partly explored throughout (Paulin 2012, 2013, 2014), where a proof-of-concept of such system has been demonstrated. What is more important though than the technical implications of infrastructure, are the societal and economic opportunities and challenges that such system could bring.

Imagine Following:

You feel unsatisfied with the level of taxes you are paying to your political community, and you're unhappy that you have no control over the money that is thus taken away from you. Besides, you have so many useful ideas for investments in public infrastructure in your neighbourhood, but despite your many mails to the authorities in charge, their priorities as usual differ from yours. You've had enough of this bureaucratic culture—long faded is the initial idea of modern democratic institutions, best explained by the old slogan “*no taxation without representation*”.<sup>4</sup> You take the initiative and start transforming society.

You start by creating code, which would change the way taxes are distributed: instead of the parliament having full control over taxes, your code provisions that each individual can use up to half of its tax duty for any common cause they wish. To enact this code—that is, to make it part of the code that regulates how the central database behaves, you need to enact the code according to the valid regulations.

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<sup>4</sup>Mind you: even though the political idea of this Eighteenth century slogan was representation through parliaments, one must bear in mind that institutional representation was the peak of democratic engagement possible at that time. New possibilities brought by the twentieth century electronic technologies invite to think of better and more inclusive ways, which might well render parliamentary institutions obsolete. Again, it is a matter of radical innovation [e.g. liquid democratic *decision-making* (Paulin 2014)] versus incremental innovation [e.g. participatory budgeting (Boukhris et al. 2015), or liquid-democratic *policy shaping* (Blum and Zuber 2016)].

Utilising the power of Liquid Democracy, you start convincing your friends to give you their trust and spread the word about your cause. You have a long battle ahead—the entrenched institutions and networks which directly or indirectly live from tax money fight every way possible to keep their privileges. But times have changed: you don't fight for a vague policy (which, should you win, would run danger to be watered down by lobbyists and corrupted by political compromises), but for code, which, once you've won, will be directly executed the way you designed it. Once you've won your battle, you've transformed society. The old institutions which before secured their funding by dwelling in shady lobbies, now have to convince individuals year after year of their usefulness, which gives the public full democratic control over which institutions survive and which die out. The result is greater transparency, higher ethics, and increased quality of public service offered by the institutions which managed to gain trust and secure public funding from the public directly.

The level of democratic control over institutions that make up the state, as described above, is something that can only be achieved using twentieth century electronic technologies. Never ever before in the entire history of human civilisation could such endeavour even remotely be considered. To further democratise society, we finally *can* think how to bring democratic control back into matters of taxation, as well as other matters of common wealth. To progress civilisation in this direction, is a prime objective of twenty-first century science and technology.

## **Economic Potentials of Radical Innovation**

It goes without saying that implementation of radical innovation requires a suiting business model able to justify investments in pursuing development and change. Even more so is a justification required if radical change is to be introduced in such delicate and dynamic system as societal governance, which has undergone a long and complex evolution over centuries, being shaped by wars and revolutions, technical discoveries, political innovations, religion, and so on. But then again, radical innovation in the domain of governance systems has ever since been part of societal change, a driver of progress and prosperity: The Prussian bureaucracy, the metric system (Napoleon), the post office, the social state, feudalism (and its abolition), medieval cities, parliaments, etc., were all based on radical innovations (either technological or organisational) of their time, which shaped civilization as we know it today.

e-Gov uses technology in the context of governance in an incremental way—there is either more of what there was before (more participation, more openness), or it is made available over new channels of interaction (governmental web pages, e-mail, exchange channels between governmental agencies). While this entrenches the power of agencies and reduces democratic control (Paulin 2016), it does not change the relation between citizens and the state. “Add successively as many mail coaches as you please,” wrote Joseph Schumpeter in his *The Theory of Economic*

*Development* (Binks 2014, p. 92), “you will never get a railway thereby”. “Breeding home pigeons that could cover a given space with ever-increasing rapidity did not give us the laws of telegraphy, nor did breeding faster horses bring us the steam locomotive” wrote Edward Menge (Binks 2014, p. 93) to likewise emphasize the importance of radical innovation. The same principle applies in governance: we can increase the density of referenda, increase the size of parliament, make all documents public, and incentivise each citizen to provide their opinion in public debates, it still won’t change the century-old paradigm where a privileged bureaucratic class<sup>5</sup> controls the course of society.

Governance Informatization (GI) has the potential to radically change this entrenched paradigm, democratize governance and in the same move boost economy by creating new specialised job types along new value chains GI would introduce. In this regard, we can draw parallels to the economic drive that evolved around the Internet, and later the Web. As a matter of fact, the basic principle is the same, and GI is heavily based on the principles and paradigms of the Web: in case of the Internet or the Web, one queries remote servers to obtain (or store) data of various kind, whereby the data exchange happens in form of sequences of characters, which on each side are interpreted as information and accordingly processed/visualised/consumed; communication within GI would, basically, be about exactly the same—storing and retrieving data on remote servers. The difference between GI and the Web in this regard is twofold: on the one hand, GI has more stringent requirements regarding its communication protocols (cf. Paulin 2013), on the other, it requires the creation of a novel *fiat* system in which the thus stored and retrieved data make sense (cf. Paulin 2014). To facilitate the interaction of human users with the system, an ecosystem of user-friendly applications, technical tools that would facilitate in the design of *code*, and so on, would have to be designed, maintained, and commercialised. Schools could teach how to interact with the system (and thus, how to actively participate in society), and more complex operations, such as how to compose complex code, could be studied at universities.

Radical innovation has plenty of success stories throughout the modern history of (Western) civilisation: the eighteenth century industrial revolution disrupted global manufacturing which before that for millennia stayed the same; it led to a radical transformation in the culture of work and production in the West (Zuboff 1988), which yet in the twentieth century was a role model culture for the rest of the world to catch up with (cf. (Dikötter 2010) for the adverse effects of the struggles in Mao’s China). The ninetieth century brought to Europe radical societal innovation in form of urbanisation, dismantling of the feudal system, and a rise of social ideologies (which posed a foundation for the European twentieth century social states, and a breeding ground for the modern womb-to-tomb bureaucracies). The twenty-first century, finally, “catapulted humanity from the paraffin lamp to outer

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<sup>5</sup>This includes, but is not limited to the beneficiaries of the system of public administration, the political system, the judicial system, the public healthcare system, system of public education, military, etc.

space”,<sup>6</sup> unleashing an unprecedented scale of economic activities that evolved around radical innovations in the domains of logistics, industrial production, farming, navigation, communication, information processing, medicine, etc. It goes without saying that each epicentre of the respective disruptive innovation became an awe-inspiring role model for the world to follow suit: Great Britain as the cradle of the industrial revolution, France for the civil liberties, Germany for the heavy industry, and California for the high-tech & “dot-com” economy, which made this US state surpass nations such as Italy or Russia in economic might (ccsce.com 2015).

## Outlook and Transformative Potentials

Governance Informatization (GI), as a pillar of Beyond Bureaucracy, enables citizens to take up initiative and *design & program* their own contribution to governance, and coin and govern new types of morph-able, cyberspace-based communities beyond the scope of traditional bureaucratic paradigms and the *imagined communities* (Anderson 2006) of nation states. The ability to step out of the box, work hard and start new, would give GI the character of a new economy, that would attract investments, build-up hopes and hypes, and would open new avenues towards greater societal progress and new economic opportunities in science, technology, and business.

Technological development would maintain the perpetuation of the system in a similar manner as twenty century technology is perpetuating its progress dynamics through its three technological ecosystems (Paulin 2016)—the primary ecosystem, which evolves around the base technology (e.g. the Otto motor) that enabled the radical innovation (e.g. the invention of the automobile) in the first place (or *is* the radical innovation itself), the secondary ecosystem, which uses technology from the primary ecosystem to create systems for users/consumers (e.g. cars, busses), and the tertiary ecosystem, which evolves out of the possibility provided by the secondary ecosystem to integrate third parties through interfaces (e.g. manufacturers of car tires, child seats, spare parts, etc.).

The drive that would trigger the evolution of the technological ecosystems could kick-start a paradigm-shifting transformation of society, which could realise the old Marxist objective of a post-state society. Such transformation is a justified expectation, since the ability of GI to enable self-governed communities beyond the confinements of national territories and entrenched societal systems addresses the native culture of cyberspace, where new modes of production [e.g. peer production (Raymond 1999; Schmidt 2014)], new business models (e.g. Amazon, Booking.com, WeChat), and new modes of communication (e.g. the Web, e-mail,

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<sup>6</sup>I owe this quote to my father, Prof. A. Paulin, who frequently used it to emphasize the paradigm-changing impact twentieth century technologies had on human civilisation.

instant messaging) threaten entrenched social institutions erected from opportunities of past generations.<sup>7</sup>

Behind this backdrop, *Beyond Bureaucracy* means first of all one thing: it provides a technology-driven alternative to think of the next steps in the evolution of human civilisation. In times where the outlook for the future of society is characterised as “post-democracy”, “post-politics”, or as “politics of simulation” (Blühdorn 2007, 2014), societal transformation through radical (technological) innovation is an option worth to explore. While doing so however, one should bear in mind that it might be beneficial to leave entrenched worldviews on the role of traditional institutions in governance deliberately out of consideration, and thus to allow for new opportunities to emerge that could transform society for the better.

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<sup>7</sup>The reactions to which are reflected in diverse data privacy legislation, the institution of information officers, data retention laws, national firewalls, etc.

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