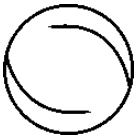

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When Bureaucracy Meets the Crowd: Studying "Open Government" in the Vienna City Administration

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Abstract

Open Government is en vogue, yet vague: while practitioners, policy-makers, and others praise its virtues, little is known about how Open Government relates to bureaucratic organization. This paper presents insights from a qualitative investigation into the City of Vienna, Austria. It demonstrates how the encounter between the city administration and "the open" juxtaposes the decentralizing principles of the crowd, such as transparency, participation, and distributed cognition, with the centralizing principles of bureaucracy, such as secrecy, expert knowledge, written files, and rules. The paper explores how this theoretical conundrum is played out and how senior city managers perceive Open Government in relation to the bureaucratic nature of their administration. The purpose of this paper is twofold: first, to empirically trace the complexities of the encounter between bureaucracy and Open Government; and second, to critically theorize the ongoing rationalization of public administration in spite of constant challenges to its bureaucratic principles. In so doing, the paper advances our understanding of modern bureaucratic organizations under the condition of increased openness, transparency, and interaction with their environments.

Keywords

bureaucracy, democracy, open government, open government data, organization theory, public administration, Vienna

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Introduction

The idea of "open government" enjoys growing popularity across town halls, local governments, and state administrations. While the concept's origins date back to the 1950s (Yu & Robinson, 2012), the possibilities and promises of recent advancements in information and communication technology (ICT) have generated a surge in its attractiveness. For instance, President Obama's "Memorandum on Transparency and Open Government" (2009) explicated his vision of a more transparent, efficient, and democratic administration:

> My administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government.

Since its launch in 2009, close to 70 national governments worldwide have endorsed the "Open Government Declaration."[1] Its central tenet is to provide access to government as well as to the data collected by state agencies; hence, in practice open government is closely associated with open government data (OGD). OGD suggests opening up public information storages and making data accessible to third parties for reuse (mostly using web-based interfaces). In order to qualify as "open," data have to fulfill certain criteria, including being provided for free and in a non-discriminatory way. OGD promises to deliver against two central claims of open government: on the one hand it proposes to ensure a more democratic, collaborative, and transparent administration through public access to data, deliberations, and decisions. On the other hand, OGD claims to spur economic growth. Private enterprise, so the assumption goes, can utilize public data and turn these into new services and applications. In a knowledge economy, as is argued in a *Forbes* article, data represent the new "crude oil":

> Data is just like crude. It's valuable, but if unrefined it cannot really be used. It has to be changed into gas, plastic, chemicals, etc., to create a valuable entity that drives profitable activity; so must data be broken down, analyzed for it to have value.[2]

Such promising metaphors spark policy-makers' imagination. For instance, the EU Open Data Strategy, suitably entitled "Digital Agenda: Turning Government Data Into Gold", estimates OGD to deliver an economic value of €40 billion per annum.[3] It is suggested that local government is especially well positioned to implement open government because it is predominantly at this level that citizens interact with government.

In contradistinction to the attention that open government attracts in practice, critical theorizations and detailed empirical investigations are rare. Addressing this lacuna through a study in the Vienna city administration, the objective of this paper is to trace the encounter between bureaucracy and the "open" as it unfolds. In order to do so we revisit the oeuvre of Max Weber. Weber diagnosed a fundamental tension between openness and what he described as ideal-type bureaucratic organization as the latter "tends to be administration that excludes the public" (Weber, 1921/1972: 572; authors' translation). The Vienna city administration is an example of a Weberian-style administration (e.g., Meyer, Egger-Peitler, Höllerer, & Hammerschmid, 2014; Pollitt & Bouckaert, 2011) that exhibits several of the characteristics of the ideal-type bureaucracy. Studying this administration, we juxtapose the decentralizing principles of the crowd, such as transparency, participation, and distributed cognition, with the centralizing principles of bureaucracy, such as secrecy, expert knowledge, written files, and rules. The paper, consequently, explores how this

theoretical conundrum is played out and how city managers perceive open government in relation to the bureaucratic nature of their organization. Geographically, the paper will take the reader into the corridors of Vienna's city hall; conceptually, it will take the reader to the heart of a key concern of contemporary organization studies: the changing nature of Weberian bureaucracy (e.g., Byrkjeflot & du Gay, 2012; Courpasson, 2000; du Gay, 2000; Greenwood & Lawrence, 2005).

The paper's contribution is twofold. First, it provides a detailed empirical analysis of how senior bureaucrats understand the relationship between their organization and open government. In contrast to politically or technologically (and often normatively) oriented debates, this paper provides an organizationally inspired analysis. Our reading of open government focuses on a concrete organization and its members as unit of analysis with the aim to arrive at broader implications for the organization of the public sector as called for, for instance, in a recent special issue of Organization Studies (Arellano-Gault, Demortain, Rouillard, & Thoenig, 2013). Second, our paper makes a critical contribution to the ongoing debates about the changing nature of bureaucracy in the context of open government. Drawing on Weber's conceptualization, we explore the processes and practices by which democratic idea(l)s, such as open government, are translated into administrable objects and incorporated in bureaucratic organization. These translations, we argue, shape the direction of bureaucratization while leaving the underlying principles of rational organization intact.

The paper is structured as follows. The next section offers a review of extant research that provides the point of departure for our study. After a brief account of the methodological choices that informed data collection and analysis, we present the findings of our empirical investigation. The discussion and conclusion focus on the more general insights derived from our study as well as implications for future research.

Theoretical Orientation

Open government and open government data: Origins and conceptualization

The term open government can be traced to debates in political science from the 1950s onwards (Yu & Robinson, 2012). Observing governments accumulating ever more information, scholars such as Parks (1957, pp. 3–4) argued that the "denial of information at its source disarranges the functioning of our political institutions and processes and the distribution of power." Suggesting the term "open government," he proposed free availability to be the rule from which exceptions should be granted only when necessary as for instance in cases that would compromise national security or violate privacy.

The current open government debate is characterized by a dual agenda where socio-political objectives (e.g., participation, collaboration, democracy, and transparency) as outlined by Parks (1957) are complemented by economic goals. Recent advances in ICT led to open government being practically enacted as open government data (OGD)—a notion that explicitly defines data as an informational "public good" provided by government for reuse by third parties. This way, OGD becomes the vehicle with which the objectives of open government are to be accomplished: by opening up government-owned databases, citizens can co-create *and* control government. Proponents of OGD argue that it fosters efficiency, innovation, participation, and transparency, which in turn generate economic and social value (e.g., Jetzek, Avital, & Bjørn-Andersen, 2013). As data have already been paid for by the taxpayer, and provide the possibility to generate additional value once released, OGD provides a shared common resource that transforms "a largely closed world [into] an open, interconnected world" (Jetzek et al., 2013, p. 3).

In much of the literature, open government is heralded as the latest tool for "reinventing of public sector organizations" (Hilgers & Ihl, 2010, p. 67; Bason, 2010; Newsom & Dickey, 2014). Akin to previous "reinvention" programs (Osborne & Gaebler, 1992), open government challenges bureaucratic administration by demanding "new ways of interactive public value creation and citizen co-creation by systematically integrating external actors […] into the governmental and administrative processes" (Hilgers & Ihl, 2010, p. 72). Hilgers and Ihl (2010, p. 83) conclude that network innovation practices are "likely to unleash the energies of citizens to solve public tasks." Open government requires a substantial change in administration's role. Janssen and Estevez (2013, p. 51) elaborated that "collaborative solutions require governments to embrace an orchestration role, monitoring and steering what is happening in the collaborative eco-system." The new relation between citizens and the administration is mediated by ICT, most notably the Internet.

Several authors have criticized these normative, perhaps overly optimistic accounts that do not analyze open government *in* practice but advocate open government *for* practice (e.g., Kreiss, Finn, & Turner, 2011; Tkacz, 2012). For instance, the narrative that an allegedly slow public sector needs to learn from the agile, market- and competition-driven private sector has been challenged (Alford, 2014; Mazzucato, 2013).[4] Others have critically interrogated the much-celebrated "wisdom of the crowd" (Surowiecki, 2004). Besides the observation that for the better part of human history the crowd was understood as source of irrational, explosive, and dangerous forces (see Canetti, 1960), it has been contested whether crowdsourcing actually leads to better results than expert decision-making (Sunstein, 2006). Complementing these points of critique, this paper is interested in a more organizational reflection: our question is how a Weberian-style bureaucratic organization incorporates "openness."

Bureaucratic organization and open government

In his writings Weber delineated an ideal type of bureaucracy; with this he did not intend to portray existing bureaucracies as they were but to describe some of their most pertinent general characteristics. Weber was well aware that in reality bureaucratization was a phenomenon that could take on different directions—an important point we will revisit as our story unfolds. Following the tradition of continental European administration, the City of Vienna is a bureaucracy that shares many of the characteristics that Weber identified (e.g., Hood, 2000; Meyer et al., 2014; Pollitt & Bouckaert, 2011). Hence, in order to understand how open government unfolds in practice, it is useful to rehearse Weber's arguments. This will allow us to understand how the Vienna city administration as existing bureaucracy, acting close to several of the Weberian ideal-type characteristics, organizationally dealt with the imposition of the normatively and politically charged discourse of open government.

According to Weber, bureaucratic organization is based on the "principle of official jurisdictional areas" or "competencies" (p. 551).[5] These competencies are ordered by laws and administrative regulations; they are assigned as official duties; authority to give commands is distributed and strictly limited in relation to these official duties; and "methodical provision is made for the regular and continuous fulfillment of these duties and for the exercise of the corresponding rights; only persons who qualify under general rules are employed" (p. 551). For Weber, bureaucracy includes "office hierarchy" with an established system of super- and subordination. The bureaucrat follows "more or less generalizable" rules which are summed up in a specific body of knowledge and applies this knowledge *sine ira et studio* (p. 563), impartially, and without affection to a level that Weber described as "de-humanized." And precisely therein, according to Weber, lies bureaucracy's major strength:

> The fully developed bureaucratic apparatus compares with other organizations exactly as does the machine with the non-mechanical modes of production. Precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs—these are raised to the optimum point in the strictly bureaucratic administration … (pp. 561–562)

Bureaucracy is a form of rational organization because every genuinely bureaucratic act, says Weber (p. 565), is based on a "system of rationally debatable 'reasons', namely either subsumption under legal norms, or a weighing of ends and means." The legitimacy of bureaucracy is based on this rational-legal authority (Gouldner, 1954); its ethos is linked to its efficiency and equality (Blau, 1956). The basic technology of the bureaucratic administration is the file. The file is the embodiment of the principle of written documentation of each case (Hull, 2012). Together with the officials and "apparatus of material implements" the file makes up the bureau (Weber, p. 552). Literally, bureaucracy means the rule of that bureau—consisting of the written file, the apparatus of material implements, and the rule-bound official.

In Weber's analysis technological development and its relation to bureaucratization plays a significant role. Historically, roads, railways, telegraphs, and other "modern means of communication enter the picture as pacemakers of bureaucratization" (p. 561). It is only because of telegraphy, post, rail, and other communication infrastructure that the modern state can be administrated bureaucratically:

> The extraordinary increase in the speed by which public announcements, as well as economic and political facts, are transmitted exerts a steady and sharp pressure in the direction of speeding up the tempo of administrative reaction towards various situations. The optimum of such reaction time is normally attained only by a strictly bureaucratic organization. (p. 562)

Weber reflects on the relationship between technology and bureaucratic organization, a point frequently overlooked. Perhaps surprising is the direction of his argument: for Weber, only a strictly bureaucratic organization is in a position to optimally cope with the increasing speed of information flow.[6] Received wisdom of the Internet era in general and open government in particular tells a different tale, arguing that the revolution in ICT challenges bureaucracy and leads to open networks (see, for instance, Castells, 1996).

Our close reading of Weber brings to the fore several conceptual fault lines between his ideal-type bureaucracy and the principles of open government. In contrast to Weber, open government argues for bureaucracy to "open up" and morph into a network-like structure in order to realize efficiencies of advanced ICT. As argued, for Weber modern means of communication are "pacemakers of bureaucratization," not its nemesis.

Another tension results from the relationship between openness, the public, and bureaucracy. For Weber, bureaucratic administration "tends to be administration that excludes the public" (p. 572). Most obviously, it is the "official secrecy" as one of the key principles which is directly opposed to the principles of open government. As Weber wrote,

> The pure interest of a bureaucracy in power, however, stretches far beyond those areas where purely professional interests might justify the demand for secrecy. The concept of the "official secrecy" is the specific invention of bureaucracy, and nothing is so fanatically defended by the bureaucracy as this attitude, which cannot really be justified beyond these specifically qualified areas. (p. 573)

Open government's main characteristic is to place the "public" at the heart of the "bureau." This leads towards an ambiguous situation: the central organizing principle of official secrecy is directly opposed by the idea that administrators would govern openly.

A further tension derives from the fact that bureaucracy is based on written rules rather than the wiki principle, informed by internal expertise rather than external crowd intelligence. As Weber (p. 337) argues, "the primary source of bureaucratic administration lies in the role of technical knowledge." As noted above, the first principle of bureaucracy assumes that technical expertise, official jurisdictional areas, and competencies are inside the bureaucratic organization, and not that they are injected from outside—and if injected from the outside, then through expert professionals, not through co-creating amateurs: for amateurs (from Latin *amare*, to love) are those who love what they do, which is in contrast to the bureaucratic tenet of *sine ira et studio*.

This issue is closely related to the contrasting ethos of bureaucracy and open government. According to Weber, bureaucracy—with its distinct ethos of separating the private from the public sphere and its emphasis on administration based on rules—is a prerequisite for a democratic, fair, and just society, as well as an impartial public administration. Open government and related forms of co-creation, in contrast, seek to include the "whole person" and are pitched as forms of social organization that result in "positive character formation" (Benkler & Nissenbaum, 2006). For Kreiss et al. (2011), the reunion of private and public, of economic and social, of creative and rule-based, and other promises of peer production represent not progress but rather a regress to pre-modern feudal structures that are at odds with modern bureaucratic principles of organizations.

The research question

In sum, the principles of open government represent a challenge to the Weberian ideal-type bureaucratic administration. For Weber, we can speculate, open government would have been an oxymoron. How come that numerous bureaucracies all over the world, including those that still incorporate many characteristics of the Weberian ideal-type such as the Vienna city administration, embrace open government? How do they deal with processes that aim to achieve openness and transparency through inviting the crowd to co-create services and experiences? Bureaucratic organization conceptually clashes with the informality and fluidity of the open. The proponents of open government ride on a wave of enthusiasm, powered by networked communication technology, promising economic prosperity and political equality, among a number of other positive outcomes. From afar, a few critics warn that the wave is rather a tsunami with potentially devastating consequences, and yet little is known of what happens when the wave hits the rocky shore of the bureaucratic organization. The objective of this paper is to give testimony of this encounter by studying how senior bureaucrats of the Vienna city administration perceive open government in relation to the principles of their organization. Hence, the question that this paper sets out to resolve is: how does the encounter between bureaucracy and open government unfold in practice, and how does the social process of continuous rationalization allow a bureaucratic organization to deal with and incorporate ideas that are in direct opposition to some of its core characteristics?

Methodology and Data

Empirical context

To date, there exist only a few empirical studies of open government; most research rests either on anecdotal evidence or on mere assumptions. This study provides empirical evidence from the City of Vienna Administration. Local-level government represents an appropriate level of analysis for studying open government because it is at this level—in contrast to, for instance, federal governments—where most direct interaction between citizens and administration occurs. The City of Vienna is a real-life bureaucracy that shares many of the characteristics that Weber distilled in his

ideal-type descriptions (Hood, 2000; Meyer et al., 2014; Pollitt & Bouckaert, 2011). Vienna provides a particularly interesting empirical case because, although, quite uniquely, official secrecy is of constitutional rank in Austria, the city is one of the leading proponents of open government in Europe (Egger-Peitler & Polzer, 2014). Marked by several awards, including the 2014 European Data Innovator Award, the city's achievements as open government thought-leader are recognized internationally. The ruling coalition of Social Democrats and Green Party agreed to advance the open government agenda in their program following the 2010 elections (and confirmed this strategy after their re-election in 2015). The administration argued that OGD was a delivery mechanism for open government. As one of our interviewees argued, "Open Data pushes Open Government forward" (F). Further echoing the dominant narrative, the city has promoted the dual benefits of open government, intended to enable economic growth as well as more transparency and democracy. As one of the central players explained, open data is the precondition for informed debates and controversies in society because it "makes visible processes within society" (K).

Since the city opened its online data portal in 2011, it has released a new dataset every three months.[7] Users can download the data under the creative commons license and use it freely as long as they comply with the "netiquette" put forward by the city. This "netiquette" stipulates citing the City of Vienna as data source, allows for weblinks between the city and the applications, and forbids using the data for racist, sexist, discriminatory, or otherwise offensive applications.[8] Data released include information on city maps, statistical information, budgets, data about the environment and infrastructure, as well as other, non-personal data. By March 2016, there were close to 200 applications available.

Empirical approach

In January 2013, we approached the City of Vienna leadership with the request to conduct interviews with senior executives about their views, experiences, and strategies related to open government. Since we were interested in the encounter between the city's bureaucratic organization and open government, a qualitative approach seemed appropriate. This choice responds to the call by Sørensen and Torfing (2011, p. 862) who identified a need for qualitative studies "to fully understand the complex processes and causalities in the production of collaborative innovation and to appreciate the role of the social and political actors' different interpretations of the collaborative and innovative processes, outputs, and outcomes." We designed a semi-structured interview guide that we used for fourteen interviews with fifteen senior managers of the City of Vienna, and two managers of the Vienna Transport Authorities (i.e., a public enterprise under 100% city control), resulting in about 13 hours of interview data. The interviews were held in German and all quotes in this paper were translated into English. To guarantee anonymity, we assigned letters to our interviewees. We commenced with those managers formally in charge of open government, and invited them to suggest others. This snowballing technique allowed relatively informal recruitment of interviewees. We stopped the process once interviewees did not suggest any new conversation partners. This justifies the assumption that we interviewed a fairly complete list of members of the intra-organizational network in charge of open government. Our approach implies that our data captures the viewpoints of senior managers. This is an important caveat, stressing that our data represents the views of those who have the power to make decisions; it also implies that our approach might miss divergent voices from lower ranks.

The aim of the interviews was to understand how senior managers perceived open government in relation to the bureaucratic nature of their organization, and how they subsequently translated open government. The concept of translation informed our analysis of the relation between the rhetoric of open government and its meanings and uses in the Vienna city administration

(Czarniawska & Sevón, 2005; Sahlin & Wedlin, 2008). The analytical value added is that translation suggests this relation to be an open one that can take different, surprising directions. We prompted our interviewees to reflect on the meaning of open government in everyday organizational life, how it had changed everyday routines, how it challenged the established identity and culture, how communication between the city and "the open" was organized, what the rules of the game were, and if and how processes could be strategically controlled, perhaps even directed. In our conversations we focused on the dilemmas and paradoxes that resulted for public managers such as the clash between the creativity and spontaneity of the crowd and the administration's emphasis on predictability and planning.

What our data represents therefore is not a realist account but rather a narrative that outlines how senior managers interpreted open government. This methodological limitation might be a resource, however, as it allows us to understand how the specific phenomenon was experienced within the bureaucratic organization. Paraphrasing Weber, we cannot offer variables of open government to explain reality; but we can explore versions of open government as narrated by our interviewees in order to understand its meanings.

Analysis: Turning data into a narrative

In an iterative process, we analyzed and coded our interviews, going back and forth between theoretical concepts and empirical data. It was the latter from where the metaphor that structured the narrative analysis emerged. One interviewee (H) compared open government with one of the big parks in the city center, the *Stadtpark* (City Park). He argued that to keep the data locked in the depth of the electronic archives of the city would be just like keeping the gates to the *Stadtpark* shut for the people of Vienna. In his view, the self-understanding of Vienna as an open city implied granting access to its data, just like access to its public parks. In subsequent interviews, the metaphor of the data-park was used repeatedly. Since we were interested in how senior city managers perceived open government in relation to their bureaucratic organization, the metaphor was a source of multiple meanings: with the metaphor, senior managers framed open government as something well-understood that they had control over. The metaphor rationalized their imagination, so to speak: following the metaphor's imagery, open government was a matter of turning a key and opening a gate. Moreover, the metaphor suggested open government to be something the administration already had experience with—it was just another exercise in making space accessible, albeit this time in the realm of the virtual.

Because of its richness, and its usage by city managers, the metaphor proved helpful in converting our data into a narrative. First, it raises the question: who are the people making use of the park? The *Stadtpark* in Vienna's city center regularly provides shelter for the homeless, but it is also home to Austria's highest rated gourmet restaurant. Hence we asked: who is the public that would enter the data-park, and how could the city administration interact with them? Second, the grass, trees, ponds, and serenity of the *Stadtpark* are valuable because of their proximity to the city center: a tree 30 kilometers further north or south would not be valued as much. In other words, the value of the park results from its relation to its immediate environment. Also, the park may give rise to new values: for example, a park creates new social bonds between people who meet there. Hence, the second question we analyzed was: what value(s) are created in the data-park, and how could they be accounted for? Third, like any other park, the *Stadtpark* represents an urban commons. While it may not share the tragic fate of the commons that Hardin (1968) predicted, conflicts of interest may arise nonetheless: is it a place for kids to play soccer, for teenagers to party, for the homeless to live, or for the elderly to read their newspapers in peace and quiet? The third question therefore focused on dilemmas of governance and conflicts of interest resulting from opening up

the data-park. The fourth and final section focuses on the organization's changing self-understanding and asks how senior bureaucrats construct narratives of such changes.

Findings

Of freaks and functionaries: Interaction between the bureaucracy and the crowd

As part of its open government strategy, the City started releasing data via its web portal in May 2011. The general public and, more specifically, a community of developers were invited to create innovative applications and services based on the data. One of the first applications included the "Toilet Map Vienna" app that helps find the nearest of Vienna's 298 public toilets. The app features an augmented-reality browser, a filter for disabled toilets, and a link to Google maps telling the user how to get there. "Woody" represents another creative application featuring the wood-eating worm Woody which must be fed with wood from one of the 120,000 trees in Vienna. In order to feed Woody, the player has to stand physically in front of one of the trees, and while feeding Woody, learns about urban nature. Though still of a rather playful nature, such applications were understood as weak signals of great things to come.

We were interested in who populated the newly opened data-park and created new services out of public data. Who was that community, how could it be identified, and how did the city administration interact with it? The core of developers that represented the "creative and innovative forces" consisted of an estimated 50 to 100 "freaks" (C; A). Asked how the city could identify the community, one interviewee answered that "you cannot find them; they find you" (B). He explained that there are certain "institutionalized crystallization points" such as non-profit organizations, foundations, and social networks that position themselves as spokespersons for the community, and as intermediaries between administration and developers. In its interaction with the community, the city relied on these "crystallization points" as amplifiers that would carry messages into the community, and back. One informant (B) emphasized the lack of democratic legitimacy of these "crystallization points" and the community as a whole. Rather than understanding the community as a cohesive group, he described it as being made up of more or less competing "individual interests" (*Einzelinteressen*). Those who were heard eventually were those who managed to push through with their interests, silencing other, less vocal claims in the process (B). Because there was no transparent process (such as voting) that would determine who was part of the community, or who could speak on its behalf, more Machiavellian power struggles framed what surfaced as "the community's interest." The community's actual inner workings and decision-making processes remained black-boxed. Ironically, as one interviewee reflected, the form of transparency that government aimed to achieve with the open government initiative engendered a new form of opacity: for crowdsourcing, he argued, does not consist of "orderly processes that are transparent and open to examination" (B).

Besides the freaks, other users of the data-park remained marginal—if present at all. This was surprising, given the economic potential that OGD had promised. Established firms and multinational corporates did not engage because, as several informants suggested, they could not see how the new "crude oil" of open data could fuel their existing business models. Another notable absence was that of ordinary ("non-freak") citizens: although OGD was imagined as a vehicle to make the administration more transparent and politics more democratic, the discussion about OGD was framed around what was technologically feasible and what would attract attention on the virtual shelves of app-stores.

The diffuse structure of the community posed a set of problems for the administration. Usually the city collaborates with third parties through contracts. One of our informants (B) argued that he

could in theory imagine that, for instance, a map of walking routes could be developed through handing GPS monitors to local walking associations. After a certain time, he speculated, a useful map might emerge. This could work because there is a "point of contact" (*Ansprechpartner*) and a "kind of contract" about what needs to be accomplished. But working with the OGD community was entirely different. In one interview this city manager compared interaction with it to "calling into the woods and awaiting what butterflies come back." Anything could come back, according to our interviewee: "gold or a Molotov cocktail" (B). Hence, the manager concluded, open sourcing can only work with content where quality standards are low or services are only playful supplements to a basic offer provided by the city.

The city map provided a good example to illustrate the resulting dilemma. Its production was described as a time- and resource-intensive process. A team of urban surveyors would visually examine the city and compare it with the existing map. Working continuously across the city, it took about three years for each visual control point to be checked. If their visual control suggested a significant change (2 or 3 centimeters in the case of a road, for instance), a more precise survey would be undertaken. Changes resulting from significant construction sites or roadworks were incorporated more frequently. The practice of mapping the city was bureaucratically organized: it was based on expert labor; it ensured accuracy, reliability, and consistent quality coverage of the entire city, but came at the expense of a slow, costly, and closed production process.

The Open Street Maps (OSM) community represents a worldwide movement that is dedicated to the creation of open-sourced city maps.[9] What were the perceived problems of working with the OSM community? A first problem had to do with quality standards the administration had to adhere to. Because reliability, accuracy, and quality are key, one cannot rely on open data inputs unless they are scrutinized in detail, so one interviewee stated (B). For instance, if one wants to determine the legal status of geographic boundaries of a piece of land, OSM is not a reliable means. Moreover, OSM maps might have gaps that reflect the community's lack of interest in certain geographical areas. The administration has to offer maps in equal quality for all parts of the city. If the community interest shifts, existing maps might not be updated. Even tasks that are supposedly easily crowd-sourced, such as feedback and error reporting, turn out to be difficult to integrate into the administrative routines. The interviewee (B) reflected on the "grown traditional structure of the administration" that is hard to align with fluid models of feedback: the "routines for integration are missing" (*Schiene der Einarbeitung fehlt*) when users call with new information. In order to include it in the city map the administration would have to verify the feedback and ensure the new information was based on the right scale, angle, and so on. One call might be easy to follow up, but what if 200 citizens call in a day?

The difficulties of collaborating with the community had a deeply engrained, cultural reason. Trust is key for communication with the community, as several interviewees pointed out. For instance, the community "must be able to trust the administration, which implies certain rules that the city administration complies with strictly in its communication with these hard-to-identify entities" (B). Our interviewee suggested crafting a code of conduct replacing the informal rules that guided initial interactions. Yet even if the city could formalize and put into writing (*verschriftlichen*) its approach to working with the community, the community could not do so unless it could take on a more formal structure. Since this was not very likely, trust remained the only medium for binding agreements. However, while trust was common within the city administration, in the context of working with the crowd—an anonymous mass of strangers—trust was neither a familiar category nor a base for collaboration, as our interviewee reflected:

> Trust is a central category. It is a huge challenge to create trust in an environment in which one is alien. As public administration one acts within a legal framework, and I will stick pretty much to that framework, but there [in collaboration with the crowd] I have to act completely differently.

In an environment that was alien to the city, trust was hard to establish; yet there was no other way to engage with the crowd. The dilemma resulted from the different frames that shaped behaviors and decision-making: administrative action is based on rules; yet the crowd is "outside these fixed administrative structures" (B). Collaborating with the crowd meant that the administration would have to leave behind its familiar legal base for action. Yet, the administration is accountable for its own actions based on such rules and laws, and routines for working outside the traditional framework are missing. One interviewee stressed that it needs assurance (*Absicherung*) from within the existing structure so that the administration could open itself up without anxieties. Since such assurance was absent, the encounter with the unstructured crowd created insecurity inside the organization. For our interviewee (B), the only possibility to engage with the ill-structured crowd was to learn the "netiquettes" of virtual communication. This new way of doing things would have to grow in a "shadow culture" and would evolve in contrast to the dominant "administrative culture."

In sum, interaction with the new public of open government created ambiguity and anxiety. The bureaucracy's hardly identifiable yet vocal "other" implicitly questioned the most basic categories of bureaucratic action, such as clear areas of jurisdiction, hierarchy, technical expertise inside the organization as well as points of contact, contracts, and formal rules as foundation and limit to all action. Learning to deal with the crowd would lead to a shadow culture that could only exist in parallel to the official administrative practice.

"Difficult, but evident": The values of open government

The metaphor of the *Stadtpark* further raises the question: what (new) values are created with open government; and how are they accounted for? The Weberian bureaucracy's ethos revolves around efficiency, predictability, and impartiality (du Gay, 2000, 2005); the values generated through open government are far more difficult to grasp and articulate. As one interviewee put it, the values created were evident, but difficult to define (F). His comment was symptomatic for our interviewees' struggle to understand what values were actually created as a result of open government.

On the one hand, all interviewees confirmed the creative and playful nature of the applications. They were "nice to have" (such as the "Toilet Map Vienna" app), but the administration would not have invested in their development, as one interviewee (H) commented. On the other hand, the city managers expressed the widely shared view that the playfulness of OGD activities had serious consequences: it was suggested that OGD applications brought into existence a whole range of new values. For instance, new applications that support the search for suitable real estate through combining data of available apartments, public transport, and other public infrastructure (such as kindergartens, schools, pharmacies, and so on) were described as having a clear commercial value, especially compared with the traditional real estate business (H). Such applications would be commercially viable because they added value for people looking to buy, sell, or rent an apartment.

Another city manager emphasized the intellectual capital that OGD generated. Young people use large amounts of data to work on real-life projects in order to produce innovative services. For our interviewee, this represented an exciting intermediary step between education and work experience that produced a skilled workforce. In this view, OGD was a laboratory in which people could experiment and learn. The true beneficiaries were the firms that would employ them later on. Further, from a tourism perspective, open data was not *"l'art pour l'art,"* but of essence (G). Hence, applications that enabled people to experience the city in new ways were particularly valuable for this sector.

Several interviewees suggested that new applications would create new social capital and new social cohesion among an (otherwise) increasingly fragmented and individualized population. For

instance, one interviewee (F) used share-applications as an example: these apps bring together people who are willing to share items such as work tools or sports equipment. The exchange can extend to services such as emptying one's post box during vacation, or offering to go for a walk with an elderly person. "A technological approach enables a new level of social interaction," the interviewee summarized: "Sharing is a means to an end, the end is to prevent fragmentation and social isolation (*Vereinzelung*)" (F).

All these examples reinforced the importance of open data applications for Vienna's global strategic positioning. It signaled that the city hosted an attractive and agile creative class that complemented the image as imperial city of high (but old, perhaps even tired) culture. The "symbolic value" (H) of the applications reinforced the image of the city as open and modern. In sum, a whole new set of values was meant to be created through OGD: quality of life was enhanced, Vienna's strategic position among global cities was strengthened, tourists' experience was improved, and social and intellectual capital was built.

The question of how to account for these values was discussed more controversially. Cost-benefit analysis and other tools the administration used as decision criteria for infrastructure projects could not be applied, as the costs of development of applications were not paid by the city and the benefits were hard to name let alone quantify. As one interviewee (J) said, perhaps the "Toilet Map Vienna" app has a marginal benefit for a few people only, but perhaps more importantly it signals that Vienna is a modern, high-tech city, and contributes to attracting global corporations to invest in Vienna.

The city had undertaken one valuation that attempted to put a monetary value on what the developer community had produced. The rationale was simple: the amount of applications was multiplied by the average amount of hours it took to produce them and with an average hourly rate which resulted in an estimate of production costs, totaling, at that time, approximately €200,000. Although senior managers referred to this number as "solid," it was an estimate that could hardly claim to represent the utility that the applications provided. The "simple calculation" (C) did not address the difficult task of turning new "evident qualities" into commensurable quantities that could provide a sound basis for managerial action and control.

Interestingly, some interviewees reflected on alternative, non-monetary forms of valuation. For instance, one manager (J) mentioned the number of downloads, visitors to the website, and other quantitative usage indicators as proxies for value creation. On another occasion, an interviewee reflected on the open data award for best applications that the city organized each year. The award was seen as a non-monetary valuation through which the city shows the value and significance (*Wertigkeit*, A) of the new experiences resulting from OGD. Despite these vague ideas about alternative forms of valuation, the question of translating the "evident qualities" into measurable quantities remained unresolved. It seemed, as one interviewee stressed, that "the awareness that values are being created here is the essential point" (A).

Our narrative illustrates some important aspects of open government in practice: first of all the administration engaged in activities although they could *not* be clearly accounted for. The ubiquitous and strong agreement that values were created existed alongside the acknowledgment that these values could only be insinuated, but not quantified. In a nascent stage senior bureaucrats engaged in the development of alternative evaluation criteria (such as measuring clicks, awards, and so on) that would indicate the value of OGD. But perhaps OGD was not the only example where the city engaged in activities that were perceived as valuable without "the measuring rod of money" (Coase, 1978, p. 210): public infrastructure works, for instance, suffer from similar problems. But what is unique to our case was that both the values that were propagated as well as the means through which they were achieved were novel. This may explain the search for legitimation in which our interviewees were engaged so vehemently, and account for the creativity on their

behalf to link OGD (new means) to new forms of value creation (such as educational and reputational value, social and cultural capital).

Governing conflicts of interest: Dilemmas of transparency and accountability in open government

The open data-park was not free of conflicts of interest. Our informants described transparency and accountability as contested idea(l)s.

First, transparency. Which data should the administration release, and what consequences might it have for the city, its businesses, and the community at large? A senior manager (I) stated the problem clearly: "the public administration knows a lot," but what can it share? He gave an illustrative example of the intricacies of releasing data. The *Marktamt*, the municipal department in charge of food providers, conducted regular checks on the hygiene standards of restaurants. Technically the office's reports could be easily shared on the OGD platform, and no doubt, a developer would quickly create an app that could tell the undecided tourist about whether a restaurant had faced problems in the past. This transparency would be most welcomed by tourists—but not necessarily by the hospitality industry. As our interviewee summed up, it is a question of political judgment to decide whose "interests prevail: that of the customer, or that of the restaurant manager?" (I). Another example of potential conflicts of interest resulting from transparency concerned apps that could be created through the combination of different databases. For instance, the already mentioned real estate app could use the city map, available apartments, and infrastructure data to facilitate the search for those looking for a place to live. Such an app could upset interests of established business communities, such as real estate agents or newspapers. In this case, the vested interest of the status quo clashed with the principle of transparency. The problem surfaced in many of our conversations: whose transparency is open government advocating? Our interviewees stressed that the law sets the boundaries for the administration in regard to what can be released. But reflecting on the two examples mentioned, he added: "The law is the border [for what can be released and what not], but one quickly gets into things that are located on the border" (I). In other words, the law did not provide clear-cut guidance for action but opened up a gray zone in which the public manager had to act creatively albeit under the claim of following rules and securing impartiality.

Second, accountability. While some OGD projects led to "nice to have" gadgets, others resulted in dilemmas of accountability. For instance, one story which was recounted in several interviews related to a car parking app that told users where they could park, for how long, and at what cost. One user parked in a zone which the app demarcated as free; yet, the driver received a parking ticket. Angrily, she complained: she had downloaded the app from the City's open data portal, and was not willing to pay the fine. As it turned out, she had not updated the app and hence she was at fault. The story hinted at a fundamentally new problem: the administration found itself in a position where it was held accountable for something a third party (or a user) had (not) done. Of course, the problem resulted partly from the city insisting on being named on every app as data provider. But the wished-for visibility had its downside. This story sparked a general debate about accountability: what if someone provided an app helping blind people to navigate public transportation but miscalculated the distance between train and platform by a mere 30 centimeters, which could be deadly in the case of subway platforms?

Another perhaps less dramatic, but highly contentious issue that was discussed in the media during the research was the release of data of the Vienna Transport Authority. Its management resisted because it feared that app developers would create competing apps to its own that would not keep up to date with changes in the schedule. After all, how should customers be able to differentiate between a late bus and a faulty app? For the Vienna Transport Authorities, putting data

out in the open meant that their brand and its central value of reliability was on the line, too. And they did not want third parties to fiddle with that.

This pointed to a more fundamental problem: innovation sparked by open data could only be accomplished through trial and error. Several of our respondents saw "the market" as corrective: the bad apps would receive negative reviews, hence the "intelligence of the crowd" would solve the quality problem quasi-automatically via negative feedback (A; J). One interviewee reflected that open government could be seen as an experiment in "communication with the sovereign" (B) where mistakes would inevitably happen. Yet the administration with its focus on reliability and quality was troubled by the trial-and-error mentality of OGD. As one senior executive explained:

> Reliability is a core value of the city. Where "City of Vienna" appears, the contents need to be of high quality. Hence we want a strategic approach [to OGD], not actionism. […] We want innovation, and we practice it, but we practice it in steps. (I)

The problem is of course that it is not the administration who makes the steps, nor can it decide the pace or direction of the steps. The argument shows the traditional understanding of bureaucratic administration clashing with open government: the administration feared that the trial-and-error learning processes that were inevitably related to OGD complicated the attribution of accountability. The city's competencies and expertise would be jeopardized as they would be held liable for outdated, unreliable, or faulty applications—despite the fact that the administration neither authored them, nor did it have the authority to hire or fire their true authors.

Conflicting narratives, converging practice

In this final empirical section we report how senior managers themselves understood the changes brought about by OGD. Our analysis reflects two apparently competing narratives. Some managers stressed that open government and OGD were nothing but the "logical consequence of the fundamental transformation" (A; H) towards New Public Management (NPM) that the City had subscribed to in the mid-1990s. Managers rationalized the changes by understanding them as a logical next step in the evolution from administration (*Hoheitsverwaltung*) towards a service provider. This continuity provided the "leitmotif (*roter Faden*) over the last years" (A; H). Following this interpretation, open government was conceptualized as strengthening and intensifying customer orientation and efficiency in the administration. E-government and the "virtual office" where citizens could lodge forms online were seen as predecessors of the shift towards OGD. In this light, the latter was nothing but the continuation of an increased reach of technology and simplification of administrative tasks that were meant to lead to more efficient government. This narrative represented change as linear, continuous, orderly, and predictable.

The counter-narrative was one of a break with the ideas of NPM. Some managers criticized the notion of the "customer" in public administration as "neoliberal folly" (F) whose days were numbered, thanks to the advance of open government. In their view, open government fundamentally changed the relation between the city administration and its citizens. The latter were no longer customers; rather, they morphed into co-producers who participated, co-authored, and shared responsibility with the city administration. One interviewee highlighted the resulting loss of autonomy (*Autonomieverlust*; G) of the administration as the logical consequence of open government. As one senior manager (C) explained, the "stories [i.e., apps that emerge from OGD] are not ours, and cannot be ours" because most of them rely on location-enabled mobile devices that combine data provided by the city (e.g., city map and public toilets) with information about the user (e.g., the user's actual location). The administration could never offer any of these services, said the

interviewee, because it would mean that it would collect (at least theoretically) information on its citizens' whereabouts. This argument stressed the role of the citizen as active producer as opposed to a customer who needs to be served.

Whereas the story of continuity attempted to subsume open government under past reform initiatives, the narrative of paradigmatic change and disruption described it as a "Trojan horse" (A) that would change the city from within. The two narratives coexist side by side, but featured different vocabularies of management. Both agreed that open government represented new territory; but the first narrative claimed that the old map written with the vocabularies of NPM was still true, whereas the other suggested redrawing the map to adapt to the new realities.

Despite all the rhetorical differences, in organizational practice both views led to the same conclusions. OGD was embraced, albeit for opposite reasons: either because it was the continuation of a successful path chosen two decades ago or it was the radical negation of it, as it turned the citizen-customer into a collaborator on equal footing with the administration. In this sense, OGD represented a highly strategic mobilization—enabling two different diagnostic framings which made their followers agree on concrete strategies of action. Perhaps therein lies a key to explaining the effectiveness of particular vocabularies of management, including the rhetoric of open government: their success is based on their inherent ambiguity that allows groups with conflicting worldviews to promote the same program for opposite reasons.

Discussion and Conclusion

Rethinking bureaucracy in the "open"

The suspicion that guided our inquiry was that the Weberian ideal-type principles of bureaucratic organization are at odds with the claims of open government. Literally, Weber's bureaucracy is the rule of the bureau, that is, the rule of the file, the apparatus of material implements, the officials, and their hierarchical relationships. At the core of bureaucracy is expertise defined by official jurisdictional areas, mastered by distinct competencies. Legitimacy derives from the efficient, rational, and impartial apparatus that works with precision, *sine ira et studio*. The public remains excluded from the inner workings of bureaucracy, something that is enshrined in the idea of official secrecy, which is defended by the bureaucracy "so fanatically" as nothing else (Weber, 1921/1972). Open government is fundamentally juxtaposed to these principles: distributed knowledge on the one hand and focused, defined expertise on the other; the crowd and the official; the passionate amateur-prosumer and the office as vocation; the wiki principle and the bureau with its files; transparency and official secrecy; voluntary co-production and clear areas of jurisdiction; open network and closed hierarchy—in all these points the principles of bureaucracy and open government are in contrast to each other.

By following the translation of open government into administrative practice in the City of Vienna, we looked at this theoretical puzzle with the lantern of empirical evidence. Our findings suggest that the normative rhetoric of much of the current open government discourse is at odds with its reality, at least as narrated by senior bureaucrats. Implicitly, the *Stadtpark* metaphor suggested a locus of open government that was clearly defined, enclosed by a fence, and controllable from the bureau. Moreover, since the administration had overseen the opening of parks previously, open government was not much more than yet another opening, i.e., making accessible what had been locked up. In glimpses, however, the park turned into the "woods" from which objects, including Molotov cocktails, could be hurled at the bureaucrats. For a moment, in the manager's (B) reflections the park turned into a jungle, openness into wilderness. This sparks the question: how was the encounter between the administration and open government organized so that the wilderness was tamed into a park that could be managed from the bureau?

Revisiting Weber allows theorizing this encounter. Weber argued (1921/1972) that bureaucratization is a historical phenomenon that necessitates inquiry into the specific *direction* in which it develops. This echoes an important yet frequently overlooked point in Weber's oeuvre: namely that rationality is a plural construct, evolving distinctly in different spheres of life (*Lebensordnungen*), and taking different directions (Adler & Borys, 1996; Courpasson, 2000; du Gay, 2008). In other words, rationalization and bureaucratization are not unilinear processes that reorganize all spheres of life univocally; rather, one should "attend to the multivocality of his [Weber's] usage of 'rationality' and 'rationalization'" (Kalberg, 1980, p. 1151). Hence, the question is: How did the encounter with the open *direct* senior bureaucrats' understanding of their organization? How did the managers cope with the inherent contradictions and conflicts this encounter brought about? We argue that it was through a series of translations that the city administration tamed open government, removing the conceptual thorn that it represented in its side, as Weber hypothesized (1921/1972); but with it, perhaps, it also removed open government's civic promises. How did this translation unfold in practice?

Bureaucracy's translation of open government

Our findings suggest that the coping strategy consisted of translating open government into open government *data*. The administration turned the original claim that open government would create a more democratic and efficient administration into a series of new claims: OGD would allow strategic differentiation, build social, human and cultural capital, boost inward investment, and so on. Through the translation process from open government into OGD, new values were introduced—none of them touching core principles of bureaucracy or requiring the city administration to change its fundamental practices, however. The expertise held by the bureaucracy is retained in the decision-making over which data qualifies to be released to play with. OGD is framed as nice-to-have gadgets, playful applications that are merely add-ons to the reliability produced by the administration. The park was, so to say, turned into a playground with the administration as guardian. The concept of open government had been transformed into a solution to well-known problems—and was hence not perceived as perhaps more radical challenge to bureaucratic practices as such.

Further evidence for this effect of the translation from open government as concept into OGD as practice is provided by the fact that senior managers rationalized it through two opposed narratives. One claimed open government to be the continuation of NPM by other means, while the other saw in it NPM's nemesis. While this disagreement on the discursive level provided a potential source of conflict, as strategy of action, OGD created alliances between otherwise antagonistic viewpoints. In this sense, the translation process "flattened" open government, making it fit onto the bureaucrat's desk: through re-dimensioning open government to producing nice-to-have apps, the difficult issues of openness, citizen collaboration, participation, democratization, and transparency were ironed out.

However, on a more general level, we do not see our narrative as yet another instantiation of Michels' (1911) "iron law of oligarchy" according to which bureaucracy necessarily perverts ideals articulated in the realm of democracy. Rather, we argue for the need to understand translations of democratic ideals into administrable objects. Our study reports one specific form of translation; but importantly, other forms of translation, or with Weber—directions of bureaucratization—are easily imaginable. Hence our study confirms Weber's point about the openness of rationalization and bureaucratization processes. Such a focus on the direction of bureaucratization implies paying attention to the "executive-level bureaucrat" akin to the studies on the "street-level bureaucrat" (Lipsky, 1980): as our paper suggests, it is at the level of senior public managers where crucial translations of policy into practice are performed.

Technologizing politics: Open government, administrative practice, and democracy

Open government rhetoric attempts to change city administration by making it economically more efficient and democratically more transparent and collaborative. As argued, open government is an imposition for bureaucratic administration which, as Weber (1921/1972, p. 572) argued, "tends to exclude the public, hide its knowledge and action from criticism as well as it can." The translation into OGD represents the appropriation of open government into an administratively digestible format. This turns political and social concerns into a technological issue, thus neutralizing their potential explosiveness for administrative and political elites. Therein lies the second lesson we can derive from our study.

For instance, "openness" as a central value was translated into "accessibility," which was then specified as data being machine-readable. Open government and its requests for openness are transformed into a format for data engineers and computers, not for citizens. Open data is not open (and legible) for the average citizen; it is "open" for computers and those who speak their language: it is machine-, but not human-readable data. It does not encourage citizens to engage in a debate, but it technologizes information exchange. User agency is mediated through digital interfaces and software design, subtly structuring the field of possible action and channeling choice and voice (van Dijck, 2009). Citizens are cast as technical experts in programming, coding, and designing who understand participation as application. This framing of the open government agenda as a matter of technology empowered a small, closed community and undermined the concept's potential to assemble new forms of social organization and collective action. The constitution of a network of citizens interested in open government turned into a network of technology-interested "freaks" who pursued their own interests in programing creative and potentially commercially successful applications. The permeation of technology translated claims of improved democracy, collaboration, and transparency into a series of applications and technical specifications that did not touch upon politically sensitive issues or the core workings of the administration. Rather, open data may provide an "easy way out for some government to avoid much harder, and more likely transformative, open government reforms," as Heller (2011) posited. In fact, Vienna's OGD engagement has been praised internationally, but apps such as the "Toilet Map Vienna" have little or nothing to do with the ambition of open government to disclose political decision-making processes.[10] Our case can be read not as an example of goal displacement as unintended consequence of bureaucratic management (Merton, 1940); rather, it is an instance of goal translation as the intended consequence of bureaucratic management.

This finding invites further reflection on the relation between politics, bureaucracy, and technology. The programmatic open government literature depicts the link as unproblematic, assuming that technology creates more transparency, which in turn should lead to more democracy (Dunleavy, Margetts, Bastow, & Tinkler, 2006). Yu and Robinson (2012) argue more critically that open government and OGD are two different concepts that address different sets of concerns; yet, in the current discourse they are conflated, which allows any regime to "call itself 'open' if it builds the right kind of website" (Yu & Robinson, 2012, p. 59). Hence the authors suggest differentiating between the "politics of open government" and the "technologies of open data." Both positions, the "dual world thesis" of politics on the one hand and technology on the other (Yu & Robinson, 2012) and the "congruence thesis" of technology leading to democracy (Dunleavy et al., 2006), misrepresent the interconnectedness of politics, bureaucracy, and technology that Weber diagnosed and that science and technology studies elaborated on (see Bijker, Hughes, & Pinch, 1987).

Weber understood technology as "pacemaker" of bureaucratization. For Weber, technology in general and communication technology in particular represented the condition for bureaucracy to come into being; and the increased speed of communication warrants further bureaucratization.

In other words, and extending Weber, the Internet is, despite all tropes, not a decentralizing network that leads to the end of bureaucracy but a technology that leads to new, perhaps surprising forms of bureaucratization.

As our case study has shown, the administration framed open government as a data-driven initiative, that interpreted openness as a form of accessibility to data, and that turned participation into an app contest. If affordances delineate "action possibilities" (Gibson, 1977) we should think of the administration as author of *bureaucratic* affordances which structured the making and meaning of open government in practice. In other words, while the socio-materiality of any given technology might structure the space of what is possible (Callon, Lascoumes, & Barthe, 2009; Orlikowski, 1992), our study shows that bureaucratic affordances constitute the space of what is probable.

Implications for future research

Our paper gives rise to a set of questions that may be useful for investigating modern bureaucratic organization under the condition of increased openness, transparency, and interaction with their environments.

As Weber speculated, "Once fully established, bureaucracy is among those social structures which are the hardest to destroy" (p. 569). This is because neither can the individual bureaucrat "squirm out" (*sich herauswinden*, as Weber put it) of the apparatus nor can the political master do without the efficiency, reliability, and expertise of the bureaucratic machinery. Hence Weber saw in bureaucracy a form of domination that is "practically indestructible" (p. 570). Perhaps this is why bureaucracy persists in spite of the critiques by what Crozier (1963, p. 180) called the "dysfunctional school" (consisting mainly of US-based critics of bureaucracy's efficiency claim, including Merton, Gouldner, Selznick, Blau, and Perrow) and despite the ideological attacks on bureaucracy through, e.g., NPM. While the many obituaries on bureaucracy have proven wrong (du Gay, 2005), bureaucratization is a developing phenomenon that takes different directions. Our paper argues that these developments are neither determined by exogenous factors nor are they contingent upon internal variables or managerial fiat. Rather, in order to understand the direction of bureaucratization in specific contexts we need interpretative (*verstehende*) inquiries into the translations of political ideas into bureaucratic practice, and how these translations change both in the process.

Second, our study invites further reflection on bureaucratic organization under the auspices of increased openness. Studies on the influence of social movements, activists, user communities, and other external groups have highlighted tensions and power struggles between organizations and their environments. Our paper adds to this conversation by bringing into focus the hitherto undertheorized yet basic problem of how bureaucratic organization copes with those external collaborators that fundamentally interfere with the Weberian ethos of bureaucracy. Hence our paper might stimulate further research that focuses on the encounter between bureaucratic organization and co-producers outside organizational boundaries, and how the struggle over the direction of administrative practices, organizational routines, and bureaucratic identity unfolds.

Third, in order to study the encounter between bureaucratic organization and its environments, including open government, empirical work on the mutual constitution and reconfiguration of politics, technology, and organization seems promising. Practice-based approaches and science and technology studies-inspired work (e.g., Leonardi & Barley, 2008; Orlikowski, 1992; Winner, 1980) invite a focus on the formatting of ideas into practice as well as its consequences and overflows (Callon, 1998). As proposed, technological affordances could be complemented with the study of bureaucratic affordances which analytically capture the formatting of policy into practice.

Implication for practice

Save for a few exceptions (e.g., Kreiss et al., 2011), academic literature promotes a shift from "closed" to "open" in which open government serves as tool for making boundaries vanish (Janssen, Charalabidis, & Zuiderwijk, 2012). The tone of these suggestions is overwhelmingly positive. For example, the recent EU Report on "Powering European Public Sector Innovation: Towards A New Architecture" (European Commission, 2013, p. 5) invites public servants to "embrac[e] creative disruption from technology" and "adopt an attitude of experimentation and entrepreneurship":

> These principles must be mainstreamed throughout the entire ecosystem of public sector actors for the greatest gains in quality, efficiency, fairness, transparency and accountability. (European Commission, 2013, p. 6)

Once again we find the claims for economic efficiency and increased transparency lumped together, mediated by the powers of ICT. Our study serves as reminder that it is not quite that simple: public administration does not resemble an oyster that is either closed or open. Nor is the figure of the risk-taking, experimenting "public entrepreneur" reconcilable with that of the impartial bureaucrat who acts on the basis of laws *sine ira et studio*. Indeed, as du Gay (2000) has pointed out, bureaucracy is distinguished by its own ethical protocols, including strict adherence to the rule of law, acceptance of hierarchical subordination, negation of personal motives, and so on. The opposite is expected from the entrepreneur, the political leader, or for that matter the co-creating amateur: "partisanship, fighting, passion, *ira et stadium*," as Weber wrote (quoted in du Gay, 2000, p. 46). Weber reminds us of the different spheres of life and the different rationalities they follow.

Our study suggests thinking more carefully about how an opening of public administration can be mediated. While technology plays a significant part in such mediation, it is only one tool. It needs to be complemented by reflections about the principles of bureaucratic organization, the ethos of the public servant, as well as the citizen and the public who provide the boundary conditions for future, perhaps indeed more "open" directions of bureaucratization.

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Notes

1. http://www.opengovpartnership.org/open-government-declaration; see also http://www.data.gov/cities.
2. http://www.forbes.com/sites/perryrotella/2012/04/02/is-data-the-new-oil, quoting marketing blogger Michael Palmer.
3. http://europa.eu/rapid/press-release_IP-11-1524_en.htm.
4. In comparison to literature on co-creation in the private sector, which gained momentum a decade ago, the notion of co-creation has a long tradition in public administration (e.g., Parks et al., 1981; Garn, Trevis, & Snead, 1976; Whitaker, 1980). For instance, 35 years ago Parks et al. (1981, p. 1002) suggested that "without the productive activities of consumers nothing much of value will result. This appears to be characteristic of much public service production."
5. All page numbers in brackets refer to Weber's *Wirtschaft und Gesellschaft* (1921/1972); translations by the authors.
6. The insight that technology necessitates hierarchical organization is reflected in Alfred Chandler's (1984) theory of the rise of managerial capitalism in the late 19th and early 20th century as a necessary reaction to technological change.
7. http://data.wien.gv.at.

8. http://data.wien.gv.at/nutzungsbedingungen/index.html.
9. http://www.openstreetmap.org.
10. This paradox is reflected in the fact that in the "Right to Information Ranking 2013" Austria is ranked last worldwide, behind countries including Tajikistan, Uzbekistan, and the Dominican Republic (http://www.rti-rating.org); yet simultaneously, Austria has received international awards for its open government initiatives.

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