

## Re-locating accountability through technology: from bureaucratic to electronic ways of governing public sector work

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# Re-locating Accountability through Technology: From Bureaucratic to Electronic Ways of Governing Public Sector Work

Abstract

## **Purpose**

*The paper explores the implications of e-government for horizontal/social accountability (to citizens) by looking into its shifting location. Its main purpose is to show how the introduction of information and communication technology in the public sector changes how public sector work is organized, shifting the traditional sources of accountability, and to discuss the implications of those changes.*

## **Design/methodology/approach**

*The study comes from desk-based research that brings together literature on electronic government and accountability studies and situates them in the context of a bureaucratic public sector.*

## **Findings**

*It shows that e-government entails digitalization of public sector work by restructuring work, re-organizing public information and knowledge and re-orientating officials-citizens relation. It argues that in the e-government era accountability is inscribed in the technology and its embodied standards; is a horizontal technological relation that renders officials accountable to the handling of digital interfaces and renders citizens co-producers of digital information responsible for bringing the public to account. The paper shows that these changes do not necessarily bring better or worse accountability results but change the sources of accountability bringing shifts in its locations thereby rendering it more precarious. The paper ends by discussing the implications of digital accountability for good public administration.*

Keywords: *accountability, bureaucracy, e-government, technology, citizens*

## INTRODUCTION

Information and Communication Technology (ICT) has been extensively used in governments around the globe mediating government procedures, officials' work practices and modes of interaction at both inter and intra-governmental level (Blackburn, 2016; Buffat, 2015; Ciborra, 2005; Horrocks, 2009; Moon, 2002; Pors, 2015). Electronic or digital government, as it has come to be known, displays great variation depending on the purposes it serves and the way in which it is defined, orchestrated and carried-out (Moon, 2002; Yildiz, 2007; Zhang, 2002). For instance, e-governing has been initiated in some countries (such as the UK and US) in order to reform public sector and in other countries (such as China and Singapore) with the intention to exercise political power and reproduce authority (Hand and Ching, 2011; Zhang, 2002). Nevertheless, many e-government initiatives display similar features; their function is underpinned by ICT intended for integration of public processes, standardization of work, digitization of information and is surrounded by a rhetoric of citizen-centricity that aims to improve accountability (Ciborra, 2005; Cordella, 2007; Kim et al., 2009; Moon, 2002).

There is a vast body of literature that has looked at the impact of e-government on accountability (by strengthening or weakening it)(Pina, Torres and Acerete, 2007; Wong and Welch, 2004) and at the properties technologies have as enablers of accountability (Stamati et al., 2015). Little attention has been paid to the source of accountability in a digital government era or to the possibility of accountability in e-government altogether given the different way in which public sector work is organised. The aim of this paper is to explore the implications for horizontal/social accountability, that is officials' accountability relation with citizens (Bovens et al., 2014) of the mediation of ICT in the public sector. The

study examines the shifting location of accountability in the light of the changes ICT brings about to public sector work by re-structuring it, re-organizing public information and knowledge and re-orienting the citizen-official relation. We move away from the view that accountability is a virtue that differentiates good from bad conduct towards a view that sees accountability as a mechanism affected by changes in the context and the structures that organize public work such as technology (Bovens et al., 2014; Bovens, 2010). The paper contributes to studies that explore changes in public accountability conditioned by the mediation of ICT in public sector work (Giritli Nygren, 2010; Pors, 2015; Stamati et al., 2015; Vanhommerig and Karré, 2014; Wong and Welch, 2004). It makes three assumptions. First, accountability is embedded within the context that renders it meaningful (Ahrens, 1996; Sinclair, 1995; Willmott, 1996) and cannot be dissociated from it. Understanding this context means simultaneously understanding what it means to be accountable, to whom and for what. As we argue in this paper the implementation of ICT reorganises work in the public sector and thus simultaneously changes established (that is bureaucratic) arrangements of accountability. Second, any attempt to reform a context in order to improve accountability means shifts in existing accountability arrangements (Dubnick, 2011), which do not necessarily lead to better or more accountability. Third, in the context of the public sector there are different accountability arrangements (for an overview see Olsen, 2006 and Bovens et al, 2014), this study will look into social or horizontal accountability, which refers to accountability relations that occur between officials and citizens (Bovens et al., 2014). For the purposes of this paper we focus on the work that street-level bureaucrats do which is largely characterized by a direct involvement in public service delivery, frequent interaction with citizens and use of discretion in the application of policy (Buffat, 2015; Pors, 2015; Lipsky, 1983).

The remainder of the paper is organised in the following way. The next section situates accountability in bureaucratic public sector and explores its location drawing upon Weber's work on the ideal type of bureaucracy. The following section critically reviews relevant literature on e-government and discusses how digitalization of public sector work changes accountability. The penultimate section discusses the shifting location of accountability as governments move towards the adoption of electronic modalities of governing the public sector. The paper ends with some concluding remarks.

## **LOCATING ACCOUNTABILITY**

Originating from financial accounting and book keeping, accountability has received considerable attention in the past three decades due to its diffusion into other spheres of social practice and contexts such as public sector organisations (Power, 1999; Strathern, 2000a). Accountability is located in the practice of narrating and justifying activities. This practice typically involves an accountant and an accountee (Bovens et al., 2014; Chan, 1999; Mulgan, 2000; Neyland and Woolgar, 2002; Parker and Gould, 1999; Roberts and Scapens, 1985; Yakel, 2001) and is accompanied by evaluation of accountant's practices against certain standards or criteria (Bovens, 2010; Chan, 1999; Klenk and Pieper, 2012). These can be legal standards that officials need to meet, such as the constitution and the law (Bovens et al., 2008), procedural standards that prescribe how public processes need to be performed and performance requirements that identify outputs and outcomes (Gendron et al., 2001; Jos and Tompkins, 2004; Parker and Gould, 1999; Ryan and Walsh, 2004; Yang and Rho, 2007). These standards construct different types of accountability; for instance, financial accountability (Yang and Rho, 2007) implies accountant's responsibility for efficient use of resources. Compliance with standards, and the possibility for sanctions that non-compliance implies, illustrates the relation that accountability has with auditing (Roberts, 1991). As Power (1999) argues to make one accountable means to make one give auditable accounts.

Similarly, Neyland and Woolgar (2002) define accountability as the rationale for audit; the reason that holds actors liable to account for their practices by turning to approved means of assessment, verification and measurement. This practice-based perspective to accountability constructs ‘individualising’ effects in as long as it subjects accountors to the standards they have to meet and simultaneously renders them objects of examination and evaluation against the achievement of these standards (Roberts, 2001).

Accountability is also a relationship. Specifically, external accountability, as it has come to be known, is defined as a relationship between an accountor and any party or stakeholder (such as government and community) external to but interested in the action that is being accounted and in its outcomes (Ahrens, 1996; Barberis, 1998; Bovens et al., 2008; Neyland and Woolgar, 2002; Parker and Gould, 1999). Seen from this viewpoint, external accountability ‘*enacts intersubjectivity*’ (Shearer, 2002 p. 545), fosters, ideally, dialogue and trust, involves reciprocity and renders the accountor object of critique and of approval or disapproval by others (Mulgan, 2000; Roberts, 2001; Shearer, 2002; Willmott, 1996).

Further, accountability is very much shaped by the culture of the organisation which engenders particular forms of conduct. Organisational culture is embodied with values and norms that define, albeit abstractly, how individuals conduct themselves within an institution. This for instance could refer to the way in which organisations split jurisdictions and define standards of professional behaviour (Bovens, 2010; Bovens et al 2014). This very much affects how individuals understand their responsibilities and what expectations they have to meet (Roberts, 1991). Next section presents how accountability is located in a bureaucratic public sector.

## LOCATING ACCOUNTABILITY IN BUREAUCRATIC PUBLIC SECTOR

The function of the public sector works on the basis of principles and values that originate from a bureaucratic organising modality. Weber's ideal type of bureaucracy constitutes a classic example of how public sector is organised across countries (often independently of their political systems) and a reference point for many e-government initiatives. The latter typically intend to constitute a departure from bureaucracy or an electronic version of it (Bovens and Zouridis, 2002; Cordella, 2007; Vanhommerig and Karré, 2014). Weber presents bureaucracy as a modern institution whose function is underpinned by legal-rational authority and organizational principles and a culture that condition accountability (Weber, 1948). According to Weber the office is accompanied by distinct jurisdictions and responsibilities for which its holder, expert at a particular jurisdictional area, is rendered accountable (Blau, 1970). The office is underpinned by rules and the law, which define what is allowed (and what is not allowed) under certain circumstances (Olsen, 2006; Weber, 1948). This renders bureaucracy a formally rational-legal environment that provides a standard mode of working, a rationale behind actions and decisions and a '*way of conducting oneself within a given life order*' (DuGay, 2000 p. 74). The holder of the office is rendered accountable to peers and to citizens for abiding by the bureaucratic law and for acting in accordance with regulations (DuGay, 2000). Even in the cases when the law and rules become contested or inapplicable the formally rational environment and the expertise of officials are supposed to suffice for guiding their behaviour (Weber, 1948).

Accountability is defined and identified by the existence of rigid hierarchical relations (Blau, 1970; DuGay, 2000; Finer, 1941; Roberts, 1991; Weber, 1948), which indicate differences in expertise, authority, jurisdictions and responsibilities (Clarke and Newman, 1997; Cordella, 2007; Fountain, 2001a). Typically, officials who hold positions in lower hierarchical levels

are accountable for implementing policy and making operational decisions, within the remit of power that has been devolved to them (Adler, 2012; Fukuyama, 2004; Roberts, 1991). They are also accountable to their superiors. Those who hold positions in the upper echelons of hierarchy are responsible for policy setting and its outcomes and account for their decisions to people who are external to the public organization yet interested in its function and results such as tax payers, government and the electoral body. Accounting within public administration is in this sense an enactment of power relations, already embedded in a bureaucratic hierarchy (Roberts and Scapens, 1985).

The Weberian ideal type of bureaucracy is underpinned by a particular organisational culture that fosters accountability. To begin with, 'impersonality' conditions accountability (at least in theory) in three interdependent ways. Impersonality differentiates and separates private from public interests and renders officials accountable for protecting the latter. It also deters officials from usurping the authority their Office entails in order to create, for instance, dependencies with citizens (Weber, 1948). By excluding individualism bureaucracy manages not only to eliminate discrimination and favouritism and to ensure equal and democratic provision of public services (Clarke and Newman, 1997; Cordella, 2007; DuGay, 2000; Stokes and Clegg, 2002) but also to create an egalitarian exemplar of a work organisation that has well-defined limits of accountability.

The above organizational features are not just instruments that operationalise bureaucracy. They constitute the bureaucratic ethos that renders bureaucracy an iconic example of good public administration. Legal rationality and hierarchy allow bureaucracy to '*locate responsibility and blame unequivocally*' (Roberts, 1991 p. 367) creating in this way a visible and transparent setting and to ensure commitment to due process and fair treatment of all eligible citizens (handled as cases) (Clarke and Newman, 1997; DuGay, 2000; DuGay, 2005).



Weber described an ideal type of bureaucracy that has hardly, if ever, existed in this particular form. Different countries have displayed different styles of bureaucracy, depending on their cultural and political context, and, similarly, their public sector has responded in a different way to its obligations to accountability (Olsen, 2008). For the purposes of this paper though, the Weberian bureaucracy constitutes a setting that fosters accountability because of the way it organises public sector work. The question that emerges from this review then is how does an organisational change, like the one that e-government conditions, relocates accountability and what are the implications of such change?

## **ACCOUNTABILITY IN A DIGITALISED PUBLIC SECTOR**

E-government is the deployment of Information and Communication Technology (ICT), broadly defined to include online platforms and portals, e-voting systems, online consultation, and social media in the provision and sharing of information, in the communication among public organizations and between public and non-public organisations and citizens and in the reorganisation of public sector work (Belanger and Carter, 2012; Danziger and Andersen, 2002; Dunleavy et al., 2008; Giritli Nygren, 2010; Moon, 2002; Silcock, 2001; Vanhommerig and Karré, 2014). This paper focuses on the reorganisation of public sector work in the light of digitalisation and on its implications for accountability. It examines three manifestations of digitalization of public sector work: restructuring of public sector work, re-organisation of public information and knowledge and re-orientation of the relation between citizens and public officials. These constitute fundamental changes evidenced by both academic and policy research (see: Andrews et al., 2016; Buffat, 2015; Pors, 2015; Giritli Nygren, 2010; Giritli Nygren et al., 2013). Digitalisation does not have the same scale and impact on all public services. For example,

work whose performance is specified, tasks are routinized and operational freedom is restricted such as taxation, bookings of healthcare appointments, reimbursement and back office operations such as the processing of applications for driving license renewal are all automated (Giritli Nygren, 2010; Giritli Nygren et al., 2013). Non-routine and usually professional work remains largely intact, although studies report attempts to standardize it, (Ref to be added). Street-level bureaucrats' work is more hybrid in the sense that a part of it is routinized and thus amenable to standardization and automation whereas another part relies on the use of discretion and autonomy in face-to-face interactions with clients (Andrews et al., 2016). According to a report by the National Audit Office around 15% of front line workers in the public sector in the UK are involved in paper-work, clerical tasks and data requests, tasks which as the report suggests can be automated by technology (NAO, 2009). This study considers street level bureaucrats' work because it focuses on horizontal accountability and thus on how officials' interactions with citizens are reconfigured by digital technology and on how degrees of work standardization and autonomy play out in the digital government and impact on accountability.

### ***Re-structuring of public sector work***

ICT are typically used for restructuring public sector work leading to integration or joining-up of previously isolated departments (Andrews et al., 2016; Bloomfield and Hayes, 2009). Joining-up is a stage in which the public sector is assumed to operate in a seamless way (Bellamy, 1999; Lenk, 2002; Silcock, 2001). Technology plays a pivotal role in this by providing the necessary infrastructure for collaboration and exchange of information across boundaries (i.e. departmental, organisational), by rendering information digital, storable and durable, and thus re-usable, and by enabling access to it from different locations allowing in this way broader participation. Once achieved, to varied degrees, joining-up is supposed to foster accountability in two ways. First, it renders officials interdependent encouraging, in this way, implicit or explicit forms of peer-control that deter self-serving behaviours.

Second, integration presupposes allocation of clear jurisdictions to each involved party and shared responsibilities. These two ways unite public officials under common objectives for which they are rendered both individually and collectively accountable (Illsley et al., 2000).

This dual (individual and collective) form of accountability is manifested in the construction of one-stop shops, a typical feature of e-governments (Blackburn, 2016; Dunleavy et al., 2008). One-stop shops are physical or electronic access points that bring together multiple organisations (Illsley et al., 2000). In their ideal form, one-stop shops are organised in a front and a back office (Bloomfield and Hayes, 2009). The front office is responsible for interacting with and serving citizens directly whereas the back office is liable for processing citizens' enquiries (Lenk, 2002). The front and the back-office configuration constructs a new accountability relationship in which each office is accountable to each other and to citizens for meeting their common purpose, citizens' service.

Restructuring of public sector work engenders changes in its organisation. E-government does not merely transform manual bureaucratic procedures into electronic (this would be merely automation) but rather intervenes and alters them (Bellamy and Taylor, 1998). In particular, reorganisation eliminates tasks that are perceived as being outmoded, unnecessary and complex and recreates work by merging existing or creating new tasks (Pors, 2015). It is also aiming at simplifying processes so that they can be carried out in a regulated, almost automatic, manner, without the need for thinking and without regard to the individual official who is performing them (Bellamy and Taylor, 1998; Giritli Nygren, 2010; Giritli Nygren et al., 2013; Shim and Eom, 2008). This illustrates the intention behind e-government projects to standardize and automate work and thus dissociate accountability from human discretion (Buffat, 2015).

An illuminating example of accountability through standardization comes from a study of an electronic taxation system in Singapore (Tan and Pan, 2003). In their study, Tan and Pan (2003) illustrate the multi-phased process of transforming taxation from a paper-based, bureaucratic and inefficient system into one that is automated and citizen-centric. This was a two-stage process that started with digitization and centralisation of taxpayers' information and ended with automation of tax procedures and substantial reduction of officials' intervention. The new automated tax filing system became independent from officials who were in the past solely responsible for checking tax forms for errors and for identifying frauds. Standardisation was thus perceived as a means that fosters accountability.

### *Re-organisation of public information and knowledge*

Reorganisation of administrative procedures also involves reorganising public information. The latter refers both to the information that street level bureaucrats use in order to make decisions as well as the information that is disseminated to citizens for their consideration. The use of ICT refers to the transformation of information from paper form into digital form (Henriksen and Damsgaard, 2007). As soon as information takes a digital form it can be integrated into central locations, such as an electronic platform, and disseminated (Fountain, 2001a; Giritli Nygren, 2010; Pina, Torres and Acerete, 2007; Tan and Pan, 2003). It can also be tracked and circulated among officials independently of temporal and spatial boundaries. By 'informating' (Zuboff, 1989) officials, technology renders them accountable for their practices and decisions to equally 'informed' (at least in theory) colleagues and supervisors. Technology therefore conditions accountability through a process of simultaneous centralisation and decentralisation of information, which indicates the inextricable relationship between transparency and accountability (Bertot et al., 2012).

Re-organisation of public information and procedures was a fundamental feature of the e-government project OPEN initiated by Seoul Metropolitan Government (Kim et al., 2009). Through the OPEN, Seoul Government standardized administrative procedures by making them simpler and digital. Simplification presupposed dividing procedures into clear stages and setting time limits for the execution of each stage. Digitalisation rendered processes ICT-enabled and tractable by citizens. Indeed, OPEN allowed citizens to submit and track their enquiries or requests concerning a public service online. The authors report that standardization and digitalisation fostered accountability in two ways. First, it empowered citizens by rendering them knowledgeable about the progress and the outcome of their enquiries. Second, through citizens' informatization officials were held accountable for the outputs of their work and were obstructed (at least in principle) from unfair and illegal handling of citizens' cases.

Yet, the sharing of electronic information does not ensure accountability because it raises a question of its ownership (Meijer, 2001). For instance, in the case of a bad handling of a citizen's case it becomes vague who is to be held accountable: the designer, the user or the supplier of the technology? Commentators have also suggested that the digital nature information gets in e-government regimes leaves accountability in limbo. Meijer (2001) for instance has argued that electronic communication may miss important information because the handling of digital data becomes devolved to the individual. The need for up-to-date information may also contradict continuity, manifested through the existence of historical data and records, which is typically required when accountability is questioned.

### *Re-orientation of citizen-official relation*

Decentralization of public data also indicates that citizens become knowledgeable and responsible individuals endowed with the right to know and the responsibility to act and react on the basis of the information that is available to them (Ciborra, 2005; Fotaki, 2011; Fountain, 2001b; Richter and Cornford, 2008). ICT facilitates this by providing information about citizens' interactions and transactions with public sector organisations and the opportunity to track the progress of citizens' enquiries. (Bertot et al., 2012). Perhaps more importantly, it allows citizens to monitor government's function, decisions and results (Wong and Welch, 2004). Citizens' 'informatisation' (Zuboff, 1989) is assumed to increase their awareness and therefore their power to participate actively and intervene in public administration—for instance by submitting their grievances, initiating and supporting petitions etc. (Shim and Eom, 2008) – whenever they witness deviations from due process. This is supposed to encourage transparency and accountability (Davison et al., 2005; Kim et al., 2009). Indeed, governments around the globe are becoming increasingly supporters of social media (social networking sites, blogs etc.) because of the latter's potential to enhance governmental transparency by setting up a public sphere that promotes dialogue between governments and citizens (Bertot et al., 2012; Linders, 2012). Governments use blogs and micro-blogs to make announcements and disseminate information; to reach a part of the population, usually the youth, that would not otherwise be informed and engaged, and also, to provide a channel for citizens to express their views. Obama's administration and Open Government Initiative is an example of the diffusion of social media in governmental organisations (Snead, 2013).

Studies have shown however that transparency is not deterministic of accountability. The technologies the public sector has in place to interact with citizens need also to be characterised by high degrees of usability, interactivity and maturity (Pina, Torres and Royo, 2007) to protect anonymity and to foster collaborative ability (Stamati et al., 2015).

This means that the provision of information to citizens does not constitute accountability per se (Abdelsalam et al., 2013). Citizens need to be given opportunities to participate in public procedures, to have their say, to intervene and to know the outcomes of their intervention (Snead, 2013). Otherwise e-government initiatives may be used for self-promotion and for managing impressions (Bertot et al., 2012) or even, worse, for one-way communication that reproduces authority (Hand and Ching, 2011).

There is also another, perhaps more subtle and normative, way in which ICT achieve accountability. ICT play a dual role as a mechanism that both represents and constructs citizens' needs. Specifically, ICT provide officials with information concerning citizens' transactional histories with the public sector and, by reshuffling, linking and processing this information, ICT generate new information about citizens' identities and needs (Henman and Dean, 2010; Lips et al., 2009). Through technology public sector officials are supposed to know who citizens are and what they need. ICT act in this way as a customer relations management tool (Bovens and Zouridis, 2002; Giritli Nygren, 2010). Drawing upon the information technology generates and provides, officials are held accountable to citizens for offering customised services that meet their needs. Fountain (2001b) however doubts that citizens' needs can ever be adequately homogenised, categorised and known, irrespective of the sophistication of the technology being deployed. Indeed, as some commentators argue, technology constructs a narrow market-oriented image of citizens presenting them as '*...time-pressured, value-for-money oriented, information hungry...*' individuals (Richter and Cornford, 2008 p. 219). In doing so it leaves aside all the other social, political and legal needs citizens have.

Over time and with the advancements of internet technologies and with further digitalization citizens are portrayed not as mere consumers of public information but also as (co-)producers (Linders, 2012) or as partners in the delivery of public services (Pors, 2015). Examples of this are when citizens provide information to governments for instance by reporting crimes; when they are involved in crowdsourcing; when they are consulted or even when they use a governmental platform in order to organise themselves and provide services to the community (Linders, 2012). These opportunities can be possible provided the public sector adopts an open approach to the use of public data (Vanhommerig and Karré, 2014). Large data sets that were previously restricted to public sector use may now become available to the public at large. Citizens can therefore process, analyse and contextualise open public data and thus produce new uses of them and new meanings. At the same time, however citizens are also held liable for making their own choices in terms of what information is necessary to know and what actions they should be taking. Buffat (2015, p.150) names this as 'self-government'. Further, social media have also allowed citizens to become more engaged with public matters and procedures. We have thus witnessed cases according to which citizens make use of social media in order to call the government or other public authorities to account for matters they deem as necessary (Schillemans et al., 2013). The use of social media during a series of global citizen-led protests (Arab Spring, Occupy Movement etc.) in 2011 is an example of this.

This section described how accountability can be effected in e-government. Our view is that this perspective neglects the consequences (intended or unintended) of those changes for the practice of accounting, the relationship between accountors and accountees and the culture of accountability, issues which we discuss in the following section.



## **RELOCATING ACCOUNTABILITY: FROM BUREAUCRATIC TO ELECTRONIC GOVERNMENT**

This section discusses the shifting location of accountability as governments move from bureaucratic to electronic modes of governing public sector work, and specifically the work that street-level bureaucrats do, and the implications of such shift for horizontal/social accountability. This section discusses this shift by making a comparison between work in bureaucratic and in digital government and how this impacts on accountability. Table 1 provides a brief illustration of the main analytical points made in the following paragraphs.

TABLE 1

Electronic governing shapes the practice of giving accounts in two ways. First, ICT are embodied with rules and standards that standardize organisational processes and guide officials' decisions and actions (Grimmelmann, 2005). Rules, often taking the form of decision trees, prescribe officials' actions, render their work a pre-processing activity and reduce opportunities for autonomous thinking and acting (Buffat, 2015; Fountain, 2001a; Henman and Dean, 2010). For instance, the issuance of a birth certificate is reduced to a series of executable steps that guide officials' requesting behaviour without allowing free-thinking. In this way, technology achieves predictability and reduces, if not eliminates, idiosyncratic behaviours (Fountain, 2001a; Gunge, 2000; Shim and Eom, 2008). Compared to bureaucratic public sector, in electronic governing accountability remains a rational-legal practice of compliance with rules embodied, not solely in standard operating procedures and codes of practice, but also in the technology. Given the limited room for manoeuvring and interpretation technology permits, specifically in relation to its code, the opportunity to interpret the rules differently are scarce compared to bureaucratic work where working around rules was possible. This then suggests that digital government is a shift towards a tight implementation of rules and standards, that leaves limited room for interpretation and

free-thinking possibly a movement towards the ideal type of bureaucratic intentions rather than a departure from them (Bovens and Zouridis, 2002). This could in turn foster horizontal accountability in the sense that there is clarity about due process and this is followed without deviations.

Second, the mediation of ICT renders information digital and publicly available and makes citizens able to track the progress of their requests, to monitor the appropriateness in which their cases are being handled and to intervene whenever they observe deviations from due practice. In this way, technology challenges officials' power and authority, which largely derives from their exclusive knowledge and expertise in the function of the public sector. Citizens' informatisation means that officials are rendered accountable to, supposedly, informed citizens for the decisions they make and for the outcomes of their decisions. Yet, studies show that citizens' informatisation and participation in public processes is more of a rhetoric than a reality due to information asymmetries that continue existing despite the diffusion of information to the public (Fotaki, 2011) and due to digital divide that excludes a proportion of citizens from interacting with the public sector in a technological manner. Also, the potential of technology to create a seamless ('joined-up') public sector suggests an imperative for knowledge sharing and transparency that engenders a type of peer-control and holds officials accountable to each other. Joining-up is driven by the assumption that where knowledge resides, unaccountability flourishes. Contrary to this in bureaucratic governing officials' accountability is unquestioned; it is an outcome ensured by officials' qualifications, expertise and legitimate authority (Weber, 1948). E-governing therefore conditions a shift in the location of accountability: from being an inextricable part of the Office and its holder's expertise (in bureaucratic public sector) to being an inscribed part of the technology and of its embodied rules and knowledge that can be disseminated to third parties such as citizens and other officials but not changed by them.

E-government also shapes the existing relations of accountability in public sector. Technology renders officials accountable for engaging with ICT-mediated activities such as processing citizens' data, handling the interfaces (i.e. websites, call centres, one-stop shops etc.) public sector has with citizens and monitoring the quality of data that technology provides (Bovens and Zouridis, 2002; Meijer, 2009). Officials are expected not only to work with ICT but also to work while having limited or, in some cases, no direct contact with citizens. Communication and interaction between officials and citizens becomes dependent upon the information officials get through ICT (Lips et al., 2009), which however is often of demographic type, excluding more detailed information that does not fit to standard categories inscribed into ICTs (Henman and Dean, 2010). Reliance on technology also provides limited opportunities for socialisation, dialogue and trust (Roberts, 2001). As technology mediates and, more importantly, dominates officials' work and their relation to citizens it also conditions mechanistic public service delivery and depersonalisation (Pors, 2015). One may argue that in bureaucracy impersonality conditions similar depersonalisation effects; in Weber's terms however impersonality is a part of the culture of bureaucracy intended to ensure equity in public service (Weber, 1948) and thus it is inextricably linked to accountability. Nissenbaum (1996) argues that computerisation of society, with technology mediating social relations, renders technology the most immediate bearer of accountability i.e. the accountant. In the case of e-governing however the mediation of ICTs makes this less possible. ICT does not change the subject of accountability (the accountant) but enlarges its object. Officials continue being accountable to citizens but as they engage with them through technology they are also rendered accountable for the use of technology and for the outcomes of such usage (Meijer, 2009). We need to point out that public officials have always worked with technology but in e-governing this involvement is greater in both scale and importance.

Also, e-government portrays citizens not as passive recipients of public services but as individuals that can be informed about the function and the results of the public sector and take responsibility for participating in public procedures and decisions. Citizens are expected to engage with the technologies the government has in place such as blogs, microblogs and social networking sites by following, liking, retweeting them and by producing content too. This involvement does not necessarily imply either better representation of citizens in public procedures or stronger accountability. In the e-government regime citizens may be considered more than passive recipients of public services, a critique often being made of bureaucratic public sector, but they are not seen as representatives of the collective public or active participants in public administration either, unless activity is equivalent to the posting of a comment on a social networking site. This renders citizens' participation a political issue in as long as the ability to enact citizenship in the e-government era becomes a prerogative of those who are capable of engaging with technology, getting informed about available choices and making decisions. The imperative to citizen orientation legitimises a new role for citizens that is diametrically opposed to the role they were assumed in bureaucracies. In bureaucracy citizens were seen as clients, those that needed to be served, within a culture of impersonality that treated them in an objective manner and as cases. With e-government the official-citizen relation becomes transformed with citizens becoming continuously more involved in the process of delivery of public services, as partners or co-producers of public information and service (Linders, 2012; Pors, 2015).

## CONCLUSIONS

This paper argues that electronic governing has shifted the location of accountability in public sector. It shows that e-government entails significant changes in how public sector work is organised by digitalising structures and information. The paper shows that these changes do not necessarily bring better or worse accountability results but change the sources of accountability. Specifically, it shows that in bureaucratic public sector accountability was hierarchical, embedded in a legal-rational modality of working and fostered by a culture of impersonality whereby every citizen was treated as a case. In the e-government era accountability is inscribed in the technology and its embodied standards, sets up horizontal relations whereby officials are held accountable for the right use of technology, of digital information and of the handling of technological interfaces whereas citizens are seen as knowledgeable consumers and co-producers of digital information responsible for bringing the government to account.

This re-location of accountability has also implications for good public administration. A Weberian approach to good public administration implies the delivery of public service in line with legal and constitutional obligations, and standard due operating processes that respect equity and citizens' social, legal and political rights. Accountability is in the bureaucratic good public administration a commitment to meeting the public interest and the public good (Day and Klein, 1987) 'without emotion or enthusiasm' (Du Gay, 2008). E-government seems to attribute a new meaning to good public administration. It does so by reducing the relation between citizens and public sector to its transactional aspects. By reducing public participation to citizens' use of digital media it ends up dissociating the public sector from its political, legal and social purposes conditioning *de-politicisation*. Also by eliminating dialogue and face to face interaction it reduces the socialising aspects of accountability (Roberts, 1991). We argue that the risks associated with the re-location of

accountability in e-government lie with the possibility for de-politicisation (dissociation from social, political and legal purposes) and citizens' exclusion.

The introduction of technology in the public sector does not necessarily mean more or better accountability (Power, 1999). At the same time, there is no accountability without mechanisms to ensure it. The question is how and by whom these technologies need to be designed, used and evaluated, what underlying purposes they serve and what possibilities they may open up. These are important questions to be raised in as long as new modes of governing the public sector are expected to change existing forms of accountability often irreversibly.

It has to be anticipated that the introduction of a new organizational mentality in public administration, especially one that is competing and often incompatible with conventional bureaucratic principles, is likely to bring shifts in the location of accountability. The aim of this paper was to describe some of these shifts and to discuss their potential consequences in the era of e-government. We described tendencies that do not in any way constitute deterministic claims about accountability in the electronic government of the public sector. Cultural, political and social factors shape e-government, and therefore accountability, in various possible ways (Ciborra, 2005; Horrocks, 2009; Moon, 2002; Silcock, 2001; Vintar et al., 2003; Von Haldenwang, 2004; Pina, Torres and Acerete, 2007). For instance, we have shown that shifts in accountability presuppose major societal transformations that are difficult to occur in contexts where patronage and patrimonial practices are deeply rooted (Gascó, 2005). We would thus expect that the initiation of e-government in these systems will not necessarily be accompanied by similar shifts in accountability. Further, accountability is relevant to the characteristics of the services offered (Day and Klein, 1987).

We need to anticipate that public services which are complex and heterogeneous requiring the involvement of more than one organizations (public and non-public) and more than one field of expertise are likely to blur the chain of accountability further. Also, accountability is not an institutional outcome per se. No matter how well designed an e-government project is if it is not enacted accountability will always be *in potentia* but not *in actu*. For instance, publishing information to citizens and giving them the possibility to respond and feedback is in theory only an indicator of accountability unless some form of action is taken on the basis of this information. The practice of accounting is after all a 'social practice' (Roberts, 1991), largely dependent upon accountors and accountees, the context within which their relation is situated and, as we showed, the technologies that mediate such relation.

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