



Research article

E-government: towards the e-bureaucratic form?

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Abstract

Bureaucratic institutions not only provide mechanisms to coordinate work activities in the public sector, but also serve to enforce the democratic values of equality and impartiality. This paper explores how recent approaches to e-government neglect these important dimensions of bureaucracy and proposes an alternative approach to e-government. This paper sets the wider new public management reform context to help explain some of the difficulties the NHS IT Projects are running into by 2007. The e-bureaucratic form is proposed as an e-government solution, which, while taking advantages of the information and communication technology as means of coordination, also help to enforce the values of equality and impartiality underpinned through the actions emanating from bureaucratic structures.

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Introduction

The diffusion of electronic business (e-business) and electronic commerce (e-commerce) technologies in the private sector has made governments worldwide profoundly interested in information and communication technology (ICT). Using an array of ICTs, governments worldwide aim to redesign dramatically many areas of government activities – from public procurement to welfare interventions. An example can be seen in the set of NHS projects debated in this Special Issue. However, just as the private sector realised that e-commerce was not just the development of websites, but more like an ‘octopus’ with tentacles in all of a business’s operations (Clegg *et al.*, 2002), the public sector has to become more aware of the effects e-government projects can have on the nature of the services a government provides to its citizens. So far the dominant literature has seen e-government as a next step in the rationalisation of government activities along the line of new public management (NPM) (Bellamy and Taylor, 1998; Fountain, 2002; Heeks, 2002) even if, as it will be discussed in this paper, there are critical positions against this assumption (Dunleavy *et al.*, 2005). Efficiency, accountability, decentralisation and marketisation are the main drivers of NPM policies. Competition is envisaged as a force that foster reforms and the redesign of the organisation in

order to increase governmental efficiency and effectiveness while retaining equity (Lane, 1997). Along these lines, Osborne and Gaebler (1992) coined the term ‘Reinventing Government’ arguing that under great fiscal pressure, public sector organisations must introduce market forces into monopolistic government enterprises to survive the reduced access to public resources. Following similar principles, at the beginning of this century, increasing attention was devoted to the potential use of ICT as a shortcut to enforce the rationalisation of the public administration (PA). In fact, ICTs can be a powerful tool to increase the efficiency of market mechanisms (Malone *et al.*, 1987; Ciborra, 1993). Fountain (2001) identifies the major economic effects of the use of the Internet in government as lower transactions costs, improved efficiency (due to positive network externalities) and the likelihood of new strategic and operational possibilities, such as customer-oriented services. Heeks (2002) discusses the role of technology in the reorganisation of the public sector, broadly stating that ICTs could impact on the four classical ‘pillars’ of the NPM agenda: efficiency, accountability, decentralisation and marketisation.

All these approaches identify the main problem of public sector organisation as resting with bureaucratic

institutions, and propose in various ways to bypass bureaucratic accountability which is seen as cumbersome, inefficient and unproductive, by, for example, using a system of accountability based on market's values. In practice, of course several authors, notably Elliot Jacques, have argued that in fact bureaucracy has been, and still remains, a sustainable, and mostly successful way of structuring large organisations, or units of these, especially where these relate to steady repetitive contexts and tasks. These arguments have received forceful endorsement more recently from Paul du Gay (2000). Taking this further, in a nuanced study of the NHS using domain theory, Mark and Scott (1992) pointed out that NHS-based organisations typically consist of a political, managerial and professional domain responsible for policy, administration and service, and their inherently different tasks will require different structures, even at the expense of domain friction within the organisation.

However, here it will be argued that the bureaucratic organisation is a fundamental guarantor of equal and impartial action by PA and hence enforces democratic values (Frederickson, 2000; Aberbach and Christensen, 2005). Here we question whether e-government initiatives are being conceived and applied as instruments that help bureaucratic institutions to enforce these democratic values. Perhaps the logic of many of these initiatives not only gain resistance for institutional reasons, as Currie and Guah suggest about those in the NHS. Perhaps the transformative intent itself is misguided, and attacks some major tasks that should be undertaken by public service management (Willcocks and Harrow, 1992). We propose that e-government policies themselves may need more careful rethinking, and may need to support rather more readily aspects of existing bureaucratic systems rather than see ICTs being utilised in order to dramatically reorganise and transform PA.

To develop this argument the paper is structured as follows: we first overview current e-government practices. We then introduce the main concept of NPM and present how and why e-government has been conceived as facilitator of NPM strategies. There follows a discussion as to why bureaucracy is important for retaining democratic values. This section prepares the ground for the criticism of e-government policies that, when designed along the lines of NPM ideology, are aimed at reforming the organisation of the PA, and reducing the role of bureaucratic institutions in favour of market-like structure of coordination and governance. We then detail how e-government can also be conceived as a strategy to support rather than to reduce the role played by bureaucracy in PA. This leads to the proposal that the e-bureaucratic form may well be a better e-government strategy in many government agencies in the developed and developing economies. Conclusions follow.

The tip of the iceberg – current e-government practices

Developments in the e-government arena bear a stark and worrying resemblance to those experienced by e-commerce during its boom at the turn of the century. Undoubtedly, public sector interest in e-government was massively stimulated by e-commerce developments between 1995

and 2001 (Wimmer and Traunmüller, 2001). Almost all the governments around the developed world have envisioned ICTs as powerful instruments to improve the quality of the services provided to citizens and businesses, and to rationalise the internal organisation of the administrative apparatus. As in the case of e-commerce, the initial expectations have not always been satisfied (Dunleavy *et al.*, 2006). Large parts of the investment in ICTs fostered changes both in the mechanisms used to provide the services and in the characteristics of the services provided by the PA, but it is difficult to assess if these changes have improved, *ceteris paribus*, the overall performance of the public sector. Independent observers are, in fact, not convinced these investments have provided the expected outcomes in terms of increased efficiency in the administrative procedure and improvement in the quality of services actually delivered. Fountain (2001), for example, asserts that approximately 85% of government information technology projects worldwide have been failures (Fountain, 2001). Similarly, the assessment of the case of the UK has recently highlighted that e-government costs not only soar, but possibly even outweigh the stated benefits it aims to provide (Rogers, 2003; Timmins, 2003). In 2007, the CIO of the UK Department for Work and Pensions estimated a public sector IT expenditure of £14 billion a year, with only 30% of the government's IT projects succeeding (Collins, 2007).

The reasons why governments have not been able to achieve the expected results can be informed by looking at e-government reforms as multi-layer projects that only provide the foreseen outcome when all the different phases of the move online of the government's activities are completed (Layne and Lee, 2001). In this scenario 'failures' may be considered as temporary outcomes that will be overcome when the overall project of reform is implemented. Accordingly, the actual state of the art of e-government can be described as the tip of the iceberg that still lacks the foundation that will make the change in the organisation of the PA sustainable in the long run. This first phase is characterised by actions that initiate the project of public sector reform – mainly providing websites to supply basic information to citizens and business that interact with the PA. Nowadays, much of the work carried out in most local authorities in the UK is dealing with this category of projects that focus on online information provision activities, most noticeably website development but with some interactive online activities (Unpan, 2005). Accordingly, e-government in a country like the UK will be able to provide the expected results only when the 'hidden' functions of the PA, mainly back office activities, are fundamentally reorganised by the adoption of ICT solutions allowing new ways to coordinate the work of back office functions.

The profound transformation of the public sector envisioned in these e-government projects has been widely coupled to the intellectual and virtually dominant set of managerial and governance ideas of NPM ideology (Homburg, 2004). The underpinning foundations of NPM are in fact providing a rich ground for the proliferation of ICT policies in the public sector (Gruening, 2001). NPM sees in e-government the foundation for new forms of communication and – deriving from that – new forms of

organisation for public institutions and their stakeholders. Building upon the NPM agenda, e-government is primarily motivated by the need for an improvement in the quality of the provision of the services and more generally by the need of a more efficient process of managing the PA. However, we argue here that the reasons for the high rate of failure experienced so far in the implementation of e-government projects, rather than being a temporary condition in an ongoing process of digitalisation of the PA, what we have described as the 'tip of the iceberg', is more connected to the principles of NPM within which e-government reforms have been contextualised so far (Dunleavy *et al.*, 2005). This is also the case in many aspects of the NHS IT projects discussed in the other papers of this Special Issue. To understand the high level of disappointment it is first necessary to grasp the principles underpinning the 'new public management' ideology.

New public management

NPM proposes a project of reforms to redefine managerial and governance practices in the public sector in line with objectives typical of market economics (Osborne and Gaebler, 1992). These new objectives embed ideas that contrast with the traditional administrative practices that have historically been driven by assumptions of bureaucratic efficiency, and also of democracy: the delivery of public services according to principles of impersonality, equality and fairness (du Gay, 1994). This radical change in the logic underpinning the organisation and governance of the public sector is associated with a fundamental change in the factors that count for assessing the action of the PA, not least a shift from effectiveness to efficiency (Pollit and Bouchaert, 2004). The most evident transformation proposed by NPM is to promote a management culture for the public sector that, as in the case of the private sector, becomes results driven, where the efficiency of the management supersedes the need of effectiveness in the delivery of the public services (Self, 2000). It also suggests structural or organisational choices that promote decentralised control through a wide variety of alternative service delivery mechanisms, including quasi-markets with public and private service providers competing for resources from policy-makers. NPM has several manifestations, but most typically it is a management theory about how to reform government by replacing rigid hierarchical organisational structures with more dynamic networks of small organisational units; replacing authoritarian, top-down decision and policy-making practices with a more consensual, bottom-up approach which facilitates the participation of as many stakeholders as possible, especially ordinary citizens; adopting a more 'customer'-oriented attitude to public services, and applying market principles to enhance efficiency and productivity (Pollit and Bouchaert, 2004). In practice, more transparency, more efficiency and more quality as well as reduction of expenditure are the main targets of implementing the NPM agenda, and it has been touted as the ideal process for creating a 'slim State' with 'slim Government' through 'slim Management.'

The set of policies and guidelines provided by NPM are grounded upon a very clear idea of the nature of the problems faced by the PA and the solutions needed.

Table 1 Principles of new public management

<i>Organisational forms</i>	<i>Coordination mechanism</i>	<i>Target</i>
Decentralisation Disaggregation Market	Prices Incentivisation Competition	Customers

The fundamental assumption is that the bureaucratic organisational structure must be challenged, introducing flatter organisation configurations that coordinate and control the administrative process following the logic of efficiency rather than the one of respect of norms and rules, typical of the traditional Weberian bureaucracy (du Gay, 1994; Bhen, 1998). The new organisational forms are envisaged as the proper solution to better serve the citizens' needs. Citizens are considered as customers of the PA and hence a main goal of government, as for private sector organisations, is to serve and satisfy customers' needs.

In a very simplified form, but useful for the argument presented in this paper, NPM principles can be summarised as in Table 1.

Despite these (mixed) expectations regarding the potential of the NPM agenda, the results of the adoption of these policies are at least questionable (Dunleavy *et al.*, 2006). The process of organisational change needed to achieve the expected result has in fact been more profound and complicated than expected (Peters and Pierre, 1998). This can be observed in the case of the NHS IT projects since 2003 (Public Accounts Committee Report, 2007). More generally, such change is not only demanding a reorganisation of public offices but also a profound re-definition of the logic underpinning the action of these offices. It demands the reconfiguration of public servants' conduct around one universally appropriate benchmark or principle, and that principle is enterprise. This change is made because from the perspective of enterprise, bureaucratic forms of organisational governance are inefficient and ineffective as they fail to open up and incent people's personal involvement and ideals (du Gay, 1994) in contrast with the incentive mechanism typical of private organisations. However, it must be noted that the actual prescriptions of bureaucratic organisations were not designed to detach people from the interest of the organisation, but to deeply ground their interests on the assumption that a good bureaucrat acts with the ethical aim of impartially and objectively serving public services and the citizen (Weber, 1947). By contrast, Batley and Larbi (2004) find that the effect of NPM reforms has been mixed, at best with some improvements in efficiency and mixed effects on equity. On the downside, they note that the transaction costs of radical reforms to automate service delivery agencies tend to outweigh the efficiency gains of unbundling, and that reforms that seek to separate purchasers from providers sometimes reduce accountability. These concerns also happen to haunt the NHS IT programme for reform, not least with their huge dependence on IT suppliers, and the consequent mixed accountability and transaction costs involved.

Moreover, one can point to a possible major shortfall of NPM reform, namely that the customer service concept could subvert the democratic principles enforced by traditional bureaucratic institutions. Instead of offering equal and impartial services to citizens, the customer service concept tends to ignore that some citizens have more influence than others in any political system and they are the ones who tend to receive the best treatment (Aberbach and Christensen, 2005). The customer focus concept also 'assumes that it is easy to define who government's customers are and that the political process will value the opinion of each individual or group equally. But we know that this is not how politics works. Groups vie to define themselves as the major recipient of government services and benefits, and those without organizational or financial resources tend to fare poorly in the struggle' (Walker, 1991). In short, a major defect of the customer service orientation is that it glosses over some of the most fundamental issues in politics, issues with implications for the distribution of power and benefits in society and for related questions of social justice, replacing them with a simple slogan such as 'putting customers first' (Aberbach and Christensen, 2005).

Last but not least, in the public sector the customer concept struggles to solve the problem of level of services. In the private sector, different customers get differently served on the basis of the price that they are willing to pay for a specific good or service. Private companies discriminate between customers on the basis of their wealth, and loyalty. Call centres give priority to customers who are spending more money on company products, while loyalty cards are used to provide better and quicker services to customers. In the public sector, discrimination on the level of services provided to citizens is built traditionally on more democratic pillars, not least impartiality and equity before the State. When governments implement reforms driven by a market logic, fostering the idea that citizens have to be considered as customers of the PA, they risk discriminating between citizens and failing to enforce the democratic values of impartiality and equality in the provision of public services. One needs to ask: maybe risk aversion is itself a fundamental requirement of the brief for PA, so why introduce policies that actually create new risks? If governments implement administrative procedures that speed up requests when citizens are willing to pay more for the service, as in the case of the USA where citizens can pay more to speed up the issuance of passports, or deliver different and more complex services to those who are able to use e-government solutions, governments fail to fulfil the democratic values of impartial and equal service delivery to citizens. Yet such tendencies are inherent in the NPM recipes for reform.

NPM provides a major set of ideas on which so much of current so-called e-government initiatives are based (Hammer, 1990; Chadwick and May, 2003). Since the diffusion of Internet-based technologies, ICTs were perceived as a tool to introduce a process of rationalisation of public offices and customisation of public services. ICTs became one of the pillars around which the debate on the re-organisation of the public sector took place. Fountain (2001) stated that the use of modern information technologies, like NPM techniques, affects the chief

characteristics of the classic PA paradigm, and therefore, they reshape the production, coordination, control, and direction processes that take place within the public sector. Dunleavy and Margetts (2000) even claim that 'NPM has been overtaken and superseded by the demands of Web-enabled government, which will substantively define one major theme of change in PA across all advanced industrial countries for the next decade at last'. Similarly, the Gore report (1993) stated that 'Electronic government will be fairer, more secure, more responsive to the customer, and more efficient than our present paper based system,' highlighting the overlapping of the fundamental milestones of the NPM ideology and the e-government reforms policies.

Once again these strategies can lead to creating differential treatment for citizens, thus failing to fulfil the goals of democratic institutions. In the case of e-government policies this is the case with the most common issue of a possible digital divide characterised by inequalities in terms of access and quality of public services for citizens. CRM strategies will make even more drastic this differentiation: citizens who will be considered in these systems could have better and richer services compared to citizens who, for one reason or another will not, or cannot, be included in these services.

The interconnection between NPM ideas and e-government is discussed in details in the next section.

E-government and NPM

E-government projects are intrinsically embedded in combinations of political reforms and organisational changes designed to enact, support and push a profound transformation in the organisation of the public sector. Compared to other policies of public reforms, e-government is often driven by technological determinist assumptions, where ICTs gain a prioritising role in redefining a government's agenda (Bouwman *et al.*, 2005). Government advisors, whether public servants or management consultants or IT suppliers, have largely fostered the idea that technological deployment in the public sector is a shortcut to achieving similar goals as the ones on which NPM is predicated (Chadwick and May, 2003). ICTs have in fact become one of the most common solutions implemented to standardise work procedures and smooth information flows, and to make more efficient and transparent overall organisational procedures – thus reducing the need for normative, rule-based mechanisms of coordination. Moreover, ICTs facilitate the customisation of services and *ad hoc* relationships with customers. Increased transparency and accountability are among the factors needed to introduce a market-like coordination mechanism (Malone *et al.*, 1987; Ciborra, 1993). Following this rationale, e-government is often described as the right move to implement the changes that are needed to leverage the efficiency of public organisations' performances and to promote customised services. To achieve these goals such technological-based projects have taken different directions. In the case of e-government it is largely agreed that four main strategies associated with ICTs can be identified (Huges, 2003). These four strategies are also described as stages, and represent the level of interaction provided by

the technology to support the relationships between citizens and the government:

Information: This is typically the first phase of the digitalisation of a PA. It deals with posting online the relevant information about the services offered by the public offices for the benefits of the external users. The information is provided in one direction only. The information usually concerns the description of the services offered by the office together with contact details.

Interaction: ICTs are used to facilitate a two-way communication between citizens and the public office. ICTs facilitate the exchange of information from the citizens to the public offices and in principle provide the channel for the public office to send information to citizens. This second opportunity has not that often used because it requires a profound change in the culture, organisation and procedural activities of the public offices. It is, however, supported by the technological platform developed to facilitate such interaction and one can see in the UK for example increasing take-up of this option in central and local government agencies, and indeed the NHS at national, regional and more local levels.

Processing: In this case ICTs provide the necessary tools to allow not only communication between citizens and public offices but also allows for tasks, previously carried out by public servants, to become forms of interaction or web-based self-service. In the UK, this can be observed with recent developments in the online self-assessment tax system and in driver vehicle licensing online.

Transaction: This is the case where public offices provide a portal for a wide and integrated range of services. The portal overcomes the limitation of the single web page. It requires an integrated approach towards the provision of government services, providing a path to them based on citizens' needs, replacing the traditional structure of department or agencies. The portal virtually integrates agencies and offices to deliver integrated services. This structure supersedes the need for the users to understand an agency's structure, the organisation of relationships within government, and bureaucratic relationships among public offices.

Core to these e-government strategies seems to be the conviction that to solve the problems PAs have experienced in providing services over the last three decades (Heeks, 2002) it is necessary to rationalise the information flow between citizens and the public offices and to rationalise the internal administrative communication flow. These ideas seem to provide new opportunities to bring to bear NPM policies such as the disaggregation of selected public agencies, the introduction of more competitive, market-like forms of control and coordination, and the customisation of public services to match customer/citizen needs.

The connection between NPM and e-government initiatives is justified by the potential role that ICTs can play in the reorganisation of internal and inter-organisational information flows. Several of the present major NHS projects are predicated on this justification for the large

IT expenditures being incurred (Homburg, 2004). Change in the flow of information-intensive activities of the public organisation potentially provides the means to support and implement the main re-organisational processes envisaged by the NPM agenda. ICTs, it is also assumed, can make government more accountable and transparent through this process of information rationalisation. As discussed by the transaction costs literature, ICTs can make it easy to access information and facilitate the organisation's capacity for processing and analysing this information (Malone *et al.*, 1987; Ciborra, 1993). Accordingly, ICTs facilitate the coordination of activities along the lines of market-like mechanisms of coordination and control, thus reduce the need for bureaucratic mechanism of coordination. Heeks (2002) gives one illustrative example of how ICTs have played a major role in the reorganisation of public services. In Ireland the Department of Social Welfare invested in an ICT platform to enable a process of decentralisation of responsibilities from the capital, Dublin, to outlying offices. In Chile it has been found that the very successful development of the e-procurement platform Chilecompra has redefined overall public procurement organisation and control. The e-procurement platforms provide a more transparent and accountable process to handle the public procurement. Meanwhile, the new procurement process increases the competitiveness of public procurement, providing access to a more competitive market (Avgerou *et al.*, 2005). In the UK, ICTs have been fundamental to enacting the process of decentralisation of the budgeting system, from local administration to publicly funded schools. *Ad hoc* ICT developments have provided the information platform to handle the new budgeting procedures, and hence to redefine duties and tasks in the budgeting process. These cases are only a few examples of how ICTs can successfully provide proper support for the deployment of NPM policies.

The rationales for the worldwide popularity and application of NPM and e-government are based upon ideas that are in fact quite similar: perceived unresponsiveness and rigidity of the traditional bureaucratic structures (Barton, 1979) and the resulting public dissatisfaction with the government, encouraging reformers to embrace managerial ideas. The shared political support for the culture of 'bureaucrat-bashing' fostered the development of this trend (Osborne and Plastrik, 1997). As a consequence, the goal of making government more responsive has become one of the most important reasons for the initiation of e-government projects.

The underlying assumption seems to be that democracy can only survive by delivering services efficiently, adopting market-oriented control and coordination mechanisms or by reengineering the public service itself, and adopting ICTs to support and push these agendas.

In line with the NPM ideology, e-government policies conceive the use of ICTs as a further step in the reorganisation of the public sector along the basic principles of efficiency that are governing the private sector (Homburg, 2004). ICT does in fact provide the infrastructure and software tools needed to support flat collaboration within a loosely coupled network of governmental units, but at the same time the diffusion of these technologies into government agencies naturally drives institutional reform.

These reforms are needed because it is difficult to maintain strictly hierarchical channels of communication and control when all civil servants can collaborate efficiently through horizontal channels opened up by the Internet and other network-based technologies (Ciborra, 1993).

These ideas of e-government reform of the public sector are led by the rationale that less bureaucracy in PA is a positive result to improve the quality of the government's actions. However, it is possible to reassess the more positive reasons why a bureaucratic setting is the foundation upon which many public sectors are organised. Shedding light on the values that are enforced by bureaucratic structures, we are probably better positioned to assess if and how ICTs can help the reform of the public sector. ICTs are in fact not only instruments to reorganise the public sector according to the NPM agenda, but are also possible instruments that can support the reorganisation and leveraging of the effectiveness of bureaucratic organisations (Willcocks and Harrow, 1992; Ciborra, 1993).

Before we analyse the possible effects of ICTs on the internal organisation of bureaucratic institutions, we will turn to why bureaucratic organisations may be important for the efficient operation of democratic States.

Government and bureaucracy systems

The relationship between citizen and government is mediated by a complex set of institutional, normative and cultural settings. In order to understand the nature of this relationship it helps to study the institutional and bureaucratic mechanisms that define the procedures and the practices that govern PA. In democratic regimes, the central role of PA is to mediate the relationship between citizens and the State delivering services to every single citizen in precisely the same way, so that the basic principle of equality in front of the law and the State is enforced. Fulfilling this goal the PA becomes the instrument through which democratic States enact their political choices. In order to guarantee the homogenous implementation of public policies and guarantee impartiality in administrative action, a PA is organised and regulated following a legal-rational logic. The procedural nature of the PA is thus the outcome of the need to enforce the impartial enactment of public policies.

The enforcement of these prescriptive values is, according to Weberian bureaucratic thought (Weber, 1947), strengthened by three key features of bureaucratic organisations (Kallinikos, 2006). In first place, bureaucracies have a formal and explicit hierarchical structure of authority. In the second place, bureaucracies have a detailed, rationalised division of labour. Thirdly, bureaucracies are governed by a set of formal, explicit, comprehensive and stable set of rules that are impersonally enforced in decision-making. Moreover, a fundamental stance of bureaucratic systems is the separation of the functions in the organisation from the person entitled to exercise that organisational function. According to Weber, the goal of bureaucracies and subsequently of bureaucratic organisation was the need to maximise efficiency. He suggested that bureaucracies are instruments of administration that are technically efficient because institutionalised rules and regulations enable all employees to perform their duties optimally.

Democratic States have created bureaucratic institutions because their articulated values are extremely powerful for enforcing impartiality and equality of citizens in front of the State and its apparatus. This has made the organisational principles uncovered by Weber as instruments to maximise organisational efficiency, also valuable as fundamental principles to mediate the relationships between citizens and the State in democratic regimes (Peters, 2001). It follows that the normative propositions regarding the role of bureaucracy cannot be neglected in the formulation of policies that aim at reforming the nature of the relationships mediated by a PA. The relationship between citizens and the PA is mediated by the offices of the PA and therefore by the civil servants who work to provide the services. The administrative rationality and impartiality of the administrative actions are only enforced if they become internalised in and inform the actions of public servants as they provide the services to citizens (Merton, 1968). The deep history of legal-rational systems indicates that they have been most frequently been adequate, despite their much recorded and discussed limitations, for organising the administrative apparatus of States and as guarantor of the overarching goals of equity and impartiality.

Recently, because of complex economic and political changes, it has been argued that the mechanisms of control and regulation of private sector economic systems are more efficient for regulating the actions of PA than bureaucracy (du Gay, 1994). Following this assumption, NPM suggests reforming the actions of PAs and therefore their regulatory mechanisms along the line of the competitive market, envisaging the invisible hand of the market as a major instrument that certifies impartiality in the action of the PAs and therefore the relationships that citizens have with those PAs. Following this argument, ICTs have been seen as an extremely effective instrument for strengthening some characteristics of the administrative system, namely the transparency, measurability and the efficiency of the action of PAs and therefore a means to facilitate the change of the mechanisms that regulate action, moving from rule-based mechanisms of control to quantitative measurements typical of competitive markets. This change, however, underestimates the consequences that the modification of the PA from a bureaucratic organisation to a market-based institution can have on the enforcement of the principle of equality and impartiality that govern the action of democratic States (Chapman, 1991; Willcocks and Harrow, 1992; du Gay, 1994).

In the following section, we discuss whether ICTs can be conceived and hence designed as solutions to support and strengthen the enforcement of the values of equality and impartiality brought about by bureaucratic organisation rather than as means to foster the change in these values. Given the much touted inherent flexibility of modern ICTs, one would assume that, in fact, this would be the case (Willcocks *et al.*, 2003).

E-government for bureaucracy

ICTs are not only tools to transform bureaucracies in market-oriented organisations, but are also tools to support bureaucratic administration functions. The implementation of ICTs to automate existing administrative procedures can

improve the administrative system's efficiency and effectiveness without changing its underpinning logic (Nohria and Berkley, 1994). Since the 1980s ICTs have been designed and implemented to provide suitable tools and solutions for the effective support of the bureaucratic organisation. Office automation software, database management systems, management information systems, decision support systems, and more recently integrated informational systems over the Internet, are some examples of technology-mediated solutions designed to make PAs in the developed economies more effective and efficient. Willcocks and Mason (1987) called this approach an augmentative orientation to ICTS – postulating that new technologies could be reinforcing the *status quo* – meaning in the public sector preserving existing values that guide the political system and making more efficient existing modes of operation. In PAs, this has been achieved by incorporating in ICT systems multiple levels of controls. The increased layers of control and the more transparent and less expensive monitoring systems provided by these ICTs solution offer a superior and more efficient quality decision-making process and help the design and production of more functional governmental bureaucratic systems.

As discussed by Ciborra (1993), different models of computerisation can be conceived for PA. His taxonomy, while providing alternative models of PA computerisation, did not really describe a model that matched the e-government projects deployed within the NPM framework that have proliferated over many parts of the world in the last decade. The main reason for this is that at the time of his writing the Internet was not as pervasive as it is today. A deeper analysis of his work reveals, however, that the model proposed by Ciborra (1993) did not describe NPM in terms of e-government deployments because his analysis relied on a different conceptual framework for the role ICTs can play in reforming PA. Ciborra (1993) and Malone *et al.* (1987) elaborated a model to analyse the impact of ICTs on organisation structures that, based on transaction cost theory, provides a clear description of the potential effects of ICTs on bureaucratic organisations. The argument is based on the assumption that failures in bureaucratic organisational mechanisms can occur because of information processing and handling-related problems. The transaction costs framework assesses different organisation structures on their ability to handle and process information.

As a response to e-government projects deployed under the intellectual framework of NPM (Dunleavy *et al.*, 2005, 2006), we here propose an alternative set of ideas to inform e-government strategies. This conceptual model for e-government policies considers the opportunities opened up by ICT deployment, but does not neglect the role of bureaucratic organisation as mechanisms for enforcing fundamental democratic values such as impartiality and equality of citizens. Here we suggest that bureaucratic organisation has to be preserved where it is able to provide coordination better than alternative organisational structures, taking into account all factors. This assumption does not pretend, as other forms of evaluation, to compare the costs of running a bureaucratic organisation *vis-à-vis* the cost of running a market-like organisation. It rather compares the costs of running the two structures to provide

the same set of organisational outputs. This means that it is not possible to compare market-like organisations and bureaucracies that provide different organisational outputs. It follows that when e-government policies are implemented to reform the organisation of the PA, and at the same time to change the nature of services provided by the same offices, we cannot compare these two different forms of organisation. This means that the value enforced by bureaucratic organisations such as impartiality and equality of the citizens in front of the State, are here considered valuable outputs that have to be preserved when considering alternative forms. The public sector in the UK is one example of a PA that, collectively, has gone through many difficult periods during the last 20 years. The main reason for a sense of crisis has been disappointment with the public sector's ability to deliver on the basic services it was expected to deliver (Heeks, 2002). The response to this crisis has been mainly dominated by arguments that rely on the political dimensions of the problem – redefining services, and the implementation dimensions – what alternative structures and instruments. But here we want to study if it is feasible to use ICTs to achieve organisation changes so that it is still possible to serve citizens with a specific set of services that have become increasingly difficult to provide through bureaucratic organisational structures. The reason this is an important question has already been suggested – it is our contention that fundamental public services can only be provided through the bureaucratic form because it is the organisation form itself, with its procedural-based structure that provides a large part of the values expressed in those services.

Following the argument underlying the work of Malone *et al.* (1987) and Ciborra (1993) we here ask if it is possible to design e-government policies that aim to improve the bureaucratic procedures needed to provide the services, rather than to change the nature of the services, and the processes for delivering them, as suggested by much NPM thinking.

Accordingly, it is interesting to study the failure of bureaucratic systems in delivering public services using the ideas proposed by transaction cost theory. Following transaction cost economics, we suggest that where bureaucracies have failed to deliver services effectively it is because they have not been able to handle the increasing amount of information and coordination activities that are nowadays needed to provide traditional public services. As a consequence of the increased areas of intervention of the public sector, as part of the expansion of the welfare state, such as child care, education, retraining programmes, and a great many other services that promote social welfare in general, the level of interdependence among sectors of the PA have increased and the public sectors have faced increasing difficulties in managing efficiently the administrative apparatus. The increased number of citizens and public offices, the increased integration of public offices and rising production and exchange of information between citizens, citizens and the PA and among different branches of the PA, have overloaded the bureaucratic organisation with information that now needs to be processed more efficiently to provide the expected services. The increased complexity of administrative processes dramatically reduced the efficiency of bureaucracy (Heeks,

2002) in delivering these services. So far the responses public authorities and government advisors have provided have frequently not succeeded in offering solutions that keep as a central focus the need to provide the given services. Instead proposals and actions have increasingly concentrated on the design of solutions that change the nature of the services provided and the best organisational solutions needed to efficiently supply these new services. An interesting spin-off has been a great overload in terms of organisational and technological change initiatives that, as is pointed out in other articles in this Special Issue, may well exceed the absorptive capacity of specific PAs subject to such a barrage, including the NHS, to cope, resulting in multiple points of disappointment and failure.

The e-bureaucratic form

Once one begins to entertain the idea that bureaucratic organisations are not necessarily the main reason for the administrative and service crises in public sector experiences all over the world since the 1980s, but rather that the cause can be found in the increased complexity and information overload in the administrative procedures needed to provide public services, we can explore possible solutions to this problem.

The solution we propose in this article is based on the notion of electronic bureaucracy. Even if this term has often been used as synonymous with e-government, according to the transaction costs model (Malone *et al.*, 1987; Ciborra, 1993) electronic bureaucracies are unambiguous organisational forms with very specific characteristics designed to achieve very specific goals. These are organisations that follow the logic of a bureaucratic mechanism to coordinate the execution of organisation activities, and hence to deliver services (Kallinikos, 2006). This typology of organisation differs, however, from traditional bureaucracies because ICTs are now used to facilitate and support the fundamental organisational functions of coordination and control that are defined in the legal-normative set of rules that prescribe how to coordinate the activities of the organisation and how to deliver the services. This set of rules is also, as already described, important pillars for enforcing a democratic approach to public service delivery.

This body of rules and routines represents the core information system that defines the coordination mechanism of the bureaucracy. Bureaucrats have to fulfil the ordinary duties following these normative prescriptions that define how and when to serve public services. This information system can fail to provide the efficient coordination mechanism needed to execute extremely complex and high interdependent organisational tasks (Galbraith, 1977; Williamson, 1985). In such cases, too many rules and norms will have to be taken into consideration while executing the tasks. Coordinating and controlling all the interdependent norms and rules that have to be considered jams the organisational processes, making impossible the final execution of tasks. In line with the transaction cost economics argument, bureaucracy is in fact efficient in coordinating organisation activities that do not deal with highly complex environments and highly interdependent organisation tasks (Williamson, 1985). In

this case it is in fact possible to ensure that the specific norms and rules are properly followed.

Where bureaucracy is not able to handle these new environmental challenges, it fails to coordinate the action of the organisation. Typical examples of such failures are delays in and waiting time needed to get proper answers from PA, and the failure of the PA in providing correct answers to specific citizen's requests. These problems are not the consequence of the organisational structure and the coordinating mechanisms underpinning the organisation of public offices, but rather are the result of the inefficiency of these coordinating mechanisms in dealing with the increased complexity of the work needed to deliver these services.

The solution to these failures can be found in ICT policies that tackle the problems right where the problems are. The failures are due to the incapacity of the PA in managing internal and external information flows and in processing these information flows along the line of legal-rational procedural mechanisms. ICTs, and hence e-government policies in general, should, we suggest, first try to deal with this set of problems. Where it then turns out that ICTs cannot support the bureaucratic organisation is where space needs to be made to re-think the nature of the services and the processes and instruments through which they can be delivered. All the other cases should be addressed by designing and implementing ICT solutions that support, and where possible, foster the bureaucratic capacity to handle within their structural mechanisms the new, always increasing, information flows. One consequence will be to not overload PAs with too many radical initiatives they are not set up to deal with. A resulting consequence may well be cheaper and more successful outcomes that preserve the democratic values and agendas that are supposed to inform PA actions.

Following this policy line, different ICT solutions can be designed and implemented. Different PAs in different country contexts face dissimilar problems while handling this increased information flow and increased level of interdependences among public offices. So it is impossible to provide a solution valid for all the cases. We want here to argue for a change in the logic that governs e-government policies rather than propose a taxonomy of ICT solutions to support these policies.

This change in the logic underpinning e-government policies calls for specific attention to the internal and interorganisational mechanisms that govern PA organisation and coordination. We propose that ICTs must be conceived as an instrument to sustain existing bureaucratic organisation forms. E-government policies should be developed with a renewed and caring attention to the original and true mission of PA in modern democracies, namely, the delivery of public services according to principles of impersonality, equality and fairness. These principles, as previously stated, are enacted by bureaucratic institutions through the enforcement of standardised norms and roles that univocally define how and when specific services are delivered to citizens. Designing information systems that help to enforce norms and regulations that institutional and administrative systems must rely upon is supported by the idea that information technologies can enforce processes of functional simplification, facilitating: 'the demarcation of an operational

domain, within which the complexity of the world is reconstructed as a simplified set of causal or instrumental relations' (Kallinikos, 2005). A more clear demarcation of the operational domain reduces the complexity of the enforcement of predefined norms and rules, valuing the establishment of e-bureaucratic institutions that serve the principle of impersonality, equality and fairness where traditional bureaucratic organisation otherwise fails.

In this case technology is able to blackbox patterns of sequences that are regulating procedural control of inputs and other kinds of buffers (Thompson, 1967) following the norms and regulations that dictate how to handle specific organisational sequences. Technology inscribes the relational sequences that bureaucracies have to follow to regulate the service provision. Inscribing in technological systems the relational dependences among norms and regulations that define interdependent actions of the PA, it is possible to decouple the operations of the technical system from the wider organisational and social relations within which such a system is embedded (Kallinikos, 2006). This reduces the complexity that public servants have to face while executing their tasks. Technology is prescribing how services can be executed, and these services match the regulation framework that a specific office has to be compliant with. Technology in this case takes over large part of the traditional duties of public servants. Technology acts as a supervisor that, thanks to its superior computational capabilities, is able to better control the actual coordination of interdependent bureaucratic activities.

It must, however, be kept in mind that the underpinning rationale that has led us to propose the establishment of e-bureaucratic forms of government as a primary goal for e-government policies is not always compatible with the integrated approach to e-government that foresees the perfect interdependence and digital interoperability of public offices, for example through a government portal that provides access to government services via an integrated gateway (Neef, 2001). These policies in fact increase the level of interdependences among public offices, underestimating the problem of increased administrative complexity that is always associated with integration programmes (Galbraith, 1977). Increasing the interdependences increases the complexity of the administrative work (Galbraith, 1977; Cordella, 2006) and hence the risk of government failing to deliver services. All integration policies have to be properly studied and designed keeping this risk in mind. Once again, the limits to bureaucratic handling of complex and interdependent tasks have to be considered when e-government policies are designed and implemented.

Conclusions

E-government policies can change the nature of the services provided by PAs. When e-government is conceived as a policy to enforce NPM ideology, it not only improves the speed, transparency and accountability of the action of the public organisations, but also changes the nature of the services provided by the PA. NPM in fact aims to reform the PA by reducing the role of bureaucratic institutions in favour of market like structures of coordination and governance. Bureaucratic organisations, however, serve to

enforce the democratic values of equality and impartiality of State actions, and hence add these important values to the services that are provided. This paper explored how traditional approaches to e-government neglect this important dimension of bureaucracy and proposes an alternative approach to e-government. The e-bureaucratic form is suggested as a specific e-government solution that while taking advantages of ICTs as mean of coordination, also helps to enforce the political values of equality and impartiality. The e-bureaucratic form is thus recommended as an e-government policy that helps to improve the effectiveness and efficiency of the action of the PA while reinforcing the democratic values of equality and impartiality in the interaction of the State with citizens.

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