THE STATE, DEMOCRACY AND THE LIMITS OF NEW PUBLIC MANAGEMENT: EXPLORING ALTERNATIVE MODELS OF E-GOVERNMENT

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Abstract

The point of departure of our analysis on the evolving role of the state in contemporary society is offered by the innovations introduced by e-government within the democratic, administrative and bureaucratic processes of the modern state. A vast literature on this topic presents e-government as a great opportunity to innovate the business of government, for instance by the re-introduction of New Public Management (NPM) ideas. On the other hand, this paper argues that a blind juxtaposition of such a model of state governance overlooks the potential to support innovation not only in the reshaping of government services, but also to increase social welfare and create more democratic forms of governance. We critically evaluate the model of governance underpinning the development of e-government associated with NPM, and ultimately present an alternative approach – an alternative problematisation – one appropriate for the conceptualization of ICT that serves the goals of state governance.

Keywords: Governance, state, New Public Management, e-government, innovation.

1. INTRODUCTION

Across the developed and developing world, the internal organisation of the state is being reconfigured in an operative matrix of government activity supported by the deployment of information technologies. Implicit in such a programme of government (a *programme of e-government*) is a problematization of the nature of citizen/state interaction as well as a projection of one essential contemporary technology of government, ICT. E-government programmes describe and project a distinct conceptualization of what ICT embodies as an actor within the political realm of government, and how it is implicated in the shifting of the boundaries of the state and its modalities of democratic governance. These schemes involve a redefinition of the question of the state, its organisation and its spheres of action for the promotion and sustenance of welfare and development. The formation of networks across government and the development of digitally networked forms of organisation are a typical expression of the changing landscape emerging in the contemporary condition as expressed by the notion of the 'knowledge society'. We will argue that these initiatives are part of an architecture of legitimacy implementing ICT to establish new backward, forward and lateral mechanisms to extend political power over national territories with the aspiration to govern at a distance economic activity, social life and individual conduct.

For instance, in recent reports of the International Council for Information Technology in Public Administration (ICA 2001), a major forum and research body analysing e-government's status and efforts in a number of European, American and Asian countries, diverse approaches to e-government are noted. In the USA they report the objective of e-government as to integrate islands of automation and to simplify business processes to maximise the benefits from technology; in Canada the aim is to redesign services in ways that 'make sense' to citizens, businesses and international clients; in Norway and Spain the emphasis is placed on the modernisation of public services and administrative procedures; while Singapore stresses the need to create a knowledge based work-place for technology experimentation. More generally, e-government is seen as a priority activity for reform of public management and for achieving better (or good) governance in many countries around the globe (OECD 2003; OECD 2003a).

Unfortunately, as e-government is narrowly defined as a technology to enhance the efficiency of transactions through ICT applications, not only the literature reviewed above fails to tap in the potential of web-based technologies to facilitate the linkages of the various government organisations and institutions, but does not even recognises the deep changes that the deployment of such technologies will entail to increase social welfare and for the constitution of more democratic forms of governance. E-government thus enacts a programme, which is central in the transition from pre-existing information systems, structures, procedures and infrastructure, but constitutes at the same time a political technology.

The structure of the rest of the paper is as follows. Section 2 assesses critically the rational assumptions of NPM in government (the conventional programme) and related models for building the systems and the infrastructure for e-government. Next we delineate the limits of NPM and explore alternative models of e-government exploring the Irish revenue on line system, participatory budgeting in Brazil and the London congestion charge scheme. Section four will discuss the cases along the path traced by Dunleavy's et al. (2005) critique of NPM in e-government. Finally, following Soshana Zuboff's (2002) in 'The Support Economy', we will argue for the need of introducing 'sibling systems' to support the alternative problematisation of e-government discussed here. Conclusions follow.

2. THE NEO-LIBERAL STATE AND NEW PUBLIC MANAGEMENT

Many authors have studied the re-organisation of government activity following the introduction of NPM (Larbi 1999; Fortin 2000; Lane 2000; Ferlie 2001; Christensen 2002). In nuce, the introduction of NPM was an attempt to modernise 'old type' bureaucracy seen as static, dysfunctional and unable to adapt to changing circumstances. Barton (1979:28-29), commenting on the causes of the 'bureaucratic maladies' in the public sector, mentions the following problems: 1) the adoption of rigid rules and the lack of managerial discretion (preventing effective and innovative action); 2) the impossibility of firing incompetent workers and rewarding competent ones; 3) the perverse incentive system with reward being given for the expansion of budgets and staff regardless of benefit to the public; and 4) the 'irrational' decision processes not linked to any 'cost/benefit' type of analysis or material incentive compared with those of market oriented businesses.

The ideas underlying New Public Management (NPM) have certainly influenced many programmes of reform in western governments (Weiss 1976; Hood 1983; Hood 1991). However, there are different aspects of the functions and functioning of the state stressed by NPM reforms. According to Barzelay (2000:156 in Dunelay et al. 2005:3) NPM 'is primarily concerned with the systematic analysis and management of public management policy. This policy domain relates to all government-wide, centrally managed institutional rules and routines affecting the public management process'. We see an important

element in this literature is the emphasis it places on the creation of more effective organisational arrangements to increase the state's ability to offer services (if not itself provide them), using novel institutional arrangements, increasing the use of market-oriented mechanisms, and introducing the concept of 'partnership' between the public and the private sector, not only as a way to share risks and expenses of experimentation, but also to create an information infrastructure that is better able to provide efficient service delivery as well as innovation in policy. We will show that such ideas have generally addressed the above by introducing policies and systems aimed at reforming primarily bureaucratic activity and in support of greater efficiency, marketisation, accountability and decentralization (see figure 1).

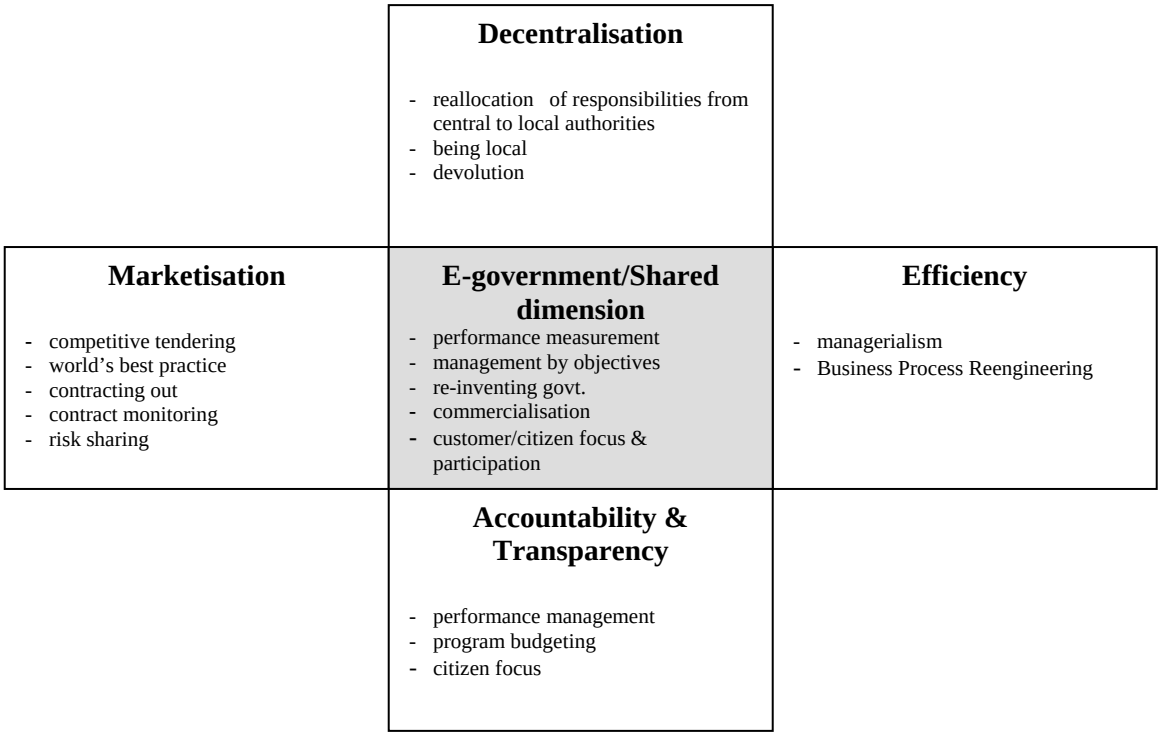

Figure 1. The four poles of NPM: reforms in government and the location of e-government.

Efficiency is to be reached by improving the input to output ratio, thus reducing unit costs, decreasing staff if appropriate, and adopting new methods of working (Perry & Kramer, 1983). *Marketisation* prescribes the shift from vertical hierarchies of command and control to horizontal contractual relationships within (and beyond) the public sector, revolutionizing contractual relationships in procurement, tendering and delivery of services (Pollitt, 1993). *Accountability* sought to hold public officials more accountable for their decisions, for instance based on the effect that these have on social welfare, and controlled by performance measures and quality criteria under the same labour market legislation as private sector workers (Gregory, 1995). Finally, *decentralisation* advocates the transfer of decision making to lower levels of the public sector and the creation of more autonomous (and decoupled) units within and beyond government to stimulate initiative, increase local responsiveness and provide tailored local solutions (Pitt & Smith, 1984). This includes the design of systems and institutions leading to stronger mechanisms of accountability and the possibility of participation by the citizen and other non-government organisations.

Drawing on such an analysis, for instance, Osborne & Gaebler's (1992) in their book 'Reinventing Government', present anecdotal evidence from the USA proclaiming the benefits of reforms proposed for the innovation of public governance when coupled with the use of ICT. The authors report also the creation of more efficient and information driven mechanisms for government, for example in training and adult education markets based on the use of such technologies as 'smart' credit cards, electronic information kiosks and a computer system holding the key data on the performance rating of providers. Heeks (1999) similarly parallels the appearance of e-government with a crisis of the public sector that can be addressed only in consideration of radical reforms, and asserts that the delivery of such reform depends critically on a more overt role for information handling and a greater use of ICT.

Thus, some authors argue that e-government serves potentially as a powerful mechanism for the transformation of governments from traditionally functional and departmentalised bureaucracy to dynamic, customer-focussed networks which provide seamless services across related functions at a single point of call (Chen and Grant 2001; Ho 2002). Others (HPG 2000; CFID 2002) echo similar private sector wisdom, including the need for strong leadership, sound management skills and a clear vision. Equally the conventional dogmas of management consultants. As understood by this literature, e-government urges government organisations to re-design following key managerial 'value drivers', identified ideally by relying on the participation of the internal users of the information infrastructure and the external users of the products or services provided, but all too often drawn from a narrower managerial base.

In this context, the advantages provided by e-government require significant change in the structure of the public sector as well as a reorientation of the management of its activities (Moon 2002; Burn and Robins 2003). Jane Fountain (2001) in her book 'Building the Virtual State' elegantly suggests that the evolution of the intertwining and diffusion of ICT in government would hardly lead to the emergence of a state where technology enacts various networks of relationships within and across bureaucracy. Her analysis points out that the literature advocating a demise of Weberian bureaucracy as a result of the introduction of e-government is inflated, since the social and cultural institutions underlying bureaucracy are still important and seldom innovated in the process. As Margetts (1998), points out ICTs have a major role in reshaping how governments exercise their authority, defined as the 'ability to command and prohibit, commend and permit, through *recognised* procedures and identifying symbols' (our emphasis) (Hood 1983:54 in Margetts, 1997). This suggests that the social and cultural context of the bureaucracy is also defined by its power over the definition of the processes through which such authority is exercised.

Rose and Miller (1992), for instance, focussing on the history of public sector reform, explain the introduction of technology as the consequence of the 'problematising activity' of governance in the neo-liberal state as **the** nexus for the legitimisation of political power. The authors discuss innovation in government activity from a Foucaldian perspective as a 'technology of power' which is at the basis of the very existence of government as the locus where social problems are articulated and conflicts resolved. They point out that "it is through technologies that political rationalities and the programmes of government that articulate them become capable of deployment" (Rose and Miller, 1992:13). Ciborra (1998) captures the meaning of the capacity of an information infrastructure to enable and align all processes in an organisation with the notion of *Gestell* operating within and across different organisations. Such grid (or *Gestell*) thus constituted to support the programme of e-government becomes the nexus of the enactment of the communicational, procedural and informational elements of the programme of governance (or e-governance). This in turn produces discursive forms of coordination regarding both the definition of the policy and service delivery focus of what then can be understood as a governance model that involves the translation of such discourse into definitions for best practices which people experience 'individually' and yet also 'collectively'. Hereafter generating an architecture of legitimacy, which can be

described in terms of its 'symbolic capital', constituted by shared values, which legitimise the definition of a base of power that makes certain scopes for action both possible and necessary.

3. THE LIMITS OF NPM: TOWARDS A DIFFERENT PROBLEMATISATION

The question of government and the state can thus be seen historically as the constitution of a matrix within which authorities seek to shape the beliefs and conduct of others, delimited by the capacity to relate themselves to a fragile 'grid' of relations. Today this involves a grid of governmental relations (Rose and Miller 1992) extending to the definition of e-government activities, but more broadly also to the state's ability to govern. A problematisation of the relationships enacted within such grid in relation to the deployment of technology in the public sector is offered by Cornford and Klecun-Dabrowska (1996) studying the electronic provision of health care services. Cornford and Klecun-Dabrowska (1996) point out how heterogeneous technology and services can be linked up remotely to provide health services 'at a distance' over various telecommunication networks. Their governance therefore becomes relevant not just for the structuring of service-delivery activities, but it is a political plan, a vision or a 'glue', which links together the actions and responsibilities of the organisations and institutions involved in the extension of such a grid and their structuring, scope and evaluation.

Here we build on the initial study of Chadwick & May (2003), and extend the models of state governance to highlight the interplay of e-government initiatives and state governance. The cases that are described in this section provide suggestive evidence that alternative theoretical perspectives to those embodied in the conventional e-government programme with its essentially managerial models are possible. In table 2.2 below, we summarise e-government's governance models, actors, policy and service delivery focus, based on the kind of services that can be developed based on their discoursive and symbolic capital with respect to actors and interests within society and implicit in the programme of e-government. These results show a pattern linking the nature of the services to be developed, the actors and interests that these serve and the type of state governance implied by the development of specific 'service' infrastructures.

Within the NPM/managerial model, the role of the state is regulatory, services and information are provided to 'customers/users' supposedly as quickly and efficiently as possible. The rationale to invest in e-government is provided by increased efficiency and savings in administrative costs. The focus of the services provided includes such transactional activities as tax filing, passports, driving licenses, etc. as well as on-line access to government information. The model of state implicit in such a governance arrangement is the ideal type minimal state (Ciborra and Navarra 2005). This is expected to hold accountable all actors and interests involved in the provision of public services by arms-length contractual relationships and the devolution of the state's service provision functions to public/private partnerships even without direct citizen participation. Unlike the other models, the assumption driving the creation of managerial e-government services and infrastructures arises from a taxonomy which conceptualises the state's activities primarily as bureaucratic and (as we have seen before) as extending the values of marketisation of the state's activities.

The consultative model, on the other hand, suggests also some degree of citizen/state interaction. The state regulates from the top, but in response to the requests of civil society organizations, business groups, and other organised interest groups. The consultative model of governance expands the scope of e-government beyond issues of bureaucratic nature to encompass also a wider spectrum of state activities. The difference with regards to the previous model is not only cosmetic or administrative. The very constitution and participation of actors and interests converge towards the key ideas of transparent policy making, but also policy making and innovation which can be enacted by e-government. This model suggests that e-government needs to be meaningful to the policy process in a situation which promotes decentralisation by

the interlinking of legacy systems beyond the boundaries traced by NPM, thus transcending the traditional boundaries of state activity. Delegating authority to local agencies, civil society partners and private sector service providers is one of the problematising activities introduced by e-government and may lead to the power of the policy maker at the central level being both restricted and enhanced.

On one hand, actors at the local level can certainly be delegated with more responsibilities over process customisation, the consolidation of data repositories and other control related activities that can free the policy maker to focus on the policy process. On the other hand, delegation of such authority may increase the need to report to the higher level, augmenting the sheer quantity of information circulating in the system. Although this may be generally perceived as of benefit, it inevitably means introducing new ways of codifying and categorising information. But, if true adaptation to local circumstances is part of the agenda, then not all categories will be equal or applicable across localities. Thus to some extent fragmentation may increase, hardly improving the quality of information for aggregate analysis at the central level, or service delivery at the local level. The opposite effect is also seen, with central authority reluctant to share information lower down the hierarchy or beyond its boundaries. In a recent OECD survey, for example, on knowledge management in central government it was reported that less than 50% of central government agencies share knowledge with local agencies (OECD, 2003b). As Chadwick and May state it, 'Information is regarded as a resource that can be used to provide "better" policy and administration' and especially, we would add, when the environmental characteristics that give texture to the nature of the transactions involved are both interrelated and strongly conditioned by multiple agents, interests, agendas and priorities. Within such governance model, typically the services' focus would be on the development of e-voting applications, instant opinion polling and other electronically mediated inputs from voters.

	Managerial	Consultative	Participatory	Disciplinary
Governance Model	Regulatory and responding to the needs of the new economy; efficient and fast delivery of government services and information to 'users'; increased transparency	Regulatory; responding to the needs of societal interests as expressed electronically; *better* policy provision to citizens as 'users'	Promotion of free speech and rights of expression; electronic mediation of citizens and civil society involvement	Enforcing of welfare increasing policies; better policy provision to citizens
Actors and interests	Government; 'customers'; business; mass media	Government; 'customers', business; interest groups	Voluntary associations; interest groups; deliberative autonomous groups	Government; business; citizens; non-government organisations
Policy focus	Marketisation, efficiency, accountability	Decentralisation, transparency; policy testing and innovation	Constitutive of democracy itself, legitimacy of the state, citizen involvement in policy making, feedback and definition of priorities.	Collective social welfare, surveillance and e-enforcement; accountability
Service delivery focus	On-line taxation; benefit claims; 'one-stop shops'; market research data; government information to the public	e-voting'; instant opinion polling and petitions; electronic input from voters and interest groups; 'electronic town meetings'	Autonomous mechanisms on the borders of the state, discussion lists; peer-to-peer technologies; cyber political participation and representation, policy responsiveness, citizen adherence	Interoperable information infrastructures applicable beyond specific service focus

Table 2. Governance models, actors, policy and services' focus in e-government infrastructures (based on Chadwick and May 2003).

An example of this model comes from Ireland. Ireland was declared by the European Commission second only to Sweden for its success on the realisation of e-government for service delivery at a state level (Ranger 2003) and was also nominated for three awards at the 2003 'eEurope Awards for eGovernment' (McLindon 2003); for the Revenue On-Line Service, for the General Register Office e-enabling life event data, and for its contribution to intra-government cooperation by implementing a messaging infrastructure. The Revenue on Line Service (ROS) is perhaps the most interesting; not only it has a good record of development (see O'Donnel, Boyle et al. 2004) and cut the time taken to prepare a tax assessment form, but it has also made a positive contribution to the environment (Cross 2003). The ROS represents not only

a useful system for filling income tax forms on-line, but an example of how governments can use such systems to enhance welfare and pursue new policies. Thus the open architecture of ROS was used to rapidly host a new system to make mandatory electronic payments to enforce a 15 cents levy on each plastic bag handed out by shops at the point of sale. The system allows retailers to charge the levy directly to their customers while facilitating the retailer to make its returns on the levy via the ROS (Revenue 2004), enforcing the usage of the system for the payment of taxes. The result was immediate, 'one billion plastic bags vanished from Irish streets' (Cross 2003) and today the ROS has delivered more than 31,000 returns and more than 1.2 billion pounds has been paid through it (The_Irish_Times 2004).

The third participatory model aims to facilitate free speech and the right of expression of diverse social actors, by increasing the level of electronic mediation, civil society involvement and democratic representation. The collective definition of government priorities supported by the participatory governance model seeks to extend the representative base upon which important political decision are taken. Voluntary associations, interest groups and other deliberative autonomous groups are perceived as important as a means to increase citizens' engagement in the state through policy making as constitutive of the democratic foundations of the liberal state. Although in the table below we call it 'service delivery focus', perhaps in this case it should be pointed out that there is not an area which is drawn specifically to provide services, since the objective here is to increase political participation in discussion lists, or on-line forums understood as autonomous mechanisms operating at the borders of the state and yet having feedback or improving the way in which it manages its functions and activities.

In Brazil for example, participatory budgeting, following the example of the city of Porto Alegre, offers a positive example and an alternative operationalisation of how ICTs might be effectively used in increasing social welfare. Based on an understanding that decisions regarding the use of resources are important for citizens, participatory budgeting has sought effective involvement of citizens leading to policy responsiveness, with special concern for the definition of priorities for the distribution of investment resources (De Sousa Santos 1998). In this case, budget information can be accessed by the public, while 'citizens and civil society organisations directly participate in making budget decisions through a year-long cycle of mass citizens forums, [and] thematic assemblies addressing specific issues' (Heimans 2002:6). The number of household with access to water increased from 80 to 98%; the number of children served by municipal sewerage systems increased from 46 to 85% and, perhaps most strikingly, tax revenue increased by nearly 50% (De Sousa Santos 1998; Schneider 2001in Heimans 2002:37). Note also that in the example legitimacy and engagement has consequences not just in better policy formation and repsonsiveness, but also in adherence to the state.

The fourth model can be identified with the creation of systems not essentially or only for service delivery but also to embed rules to discipline users and providers and enforce welfare increasing policies. We therefore call it 'disciplinary', though as we will show it can be more flexible than the name would suggest. Here the role of the state is primarily seen as the enforcer of welfare increasing policies, to promote growth, equality and development. We highlight that in most of the e-government literature such a strong model of e-government is seldom directly addressed, other than in the context of privacy and monitoring. What is of importance here is to support a system with in-built compatibility, which results from the possibility to scale up with both *de jure* and *de facto* standards that could then lead to a commitment from all parties involved to deploy the system so as to increase social welfare.

For instance, the case of the London congestion charge system is an interesting example of e-government which follows the unfolding of the present new problematisation, albeit rarely discussed in those terms. Described as the biggest ICT project in the UK and the largest transport management project in the world, the system is composed of a video network of fixed cameras placed in clusters or nodes to capture

vehicles number plates as they enter the center of the city. The images are transmitted to a to a central control where the information is checked against a database by the computer to establish whether the owner of the vehicle has purchase a valid ticket. Fines are sent automatically in case of non-compliance. The results of the congestion charging schemes have led to interesting results within the charging zone, interestingly although surveys have still to prove with certainty the results of the scheme, the initial results stress the positive impacts on social welfare. According to the Summary Review of January 2005 report of the Transport for London, thanks to the reduction in car traffic and congestion there has been an estimated reduction of about 12% in emissions of NOx and PM10 from road traffic.

4. DISCUSSION

Central to the alternative models of e-government presented here is the appreciation that e-government involves the creation, development and interlinking of a variety of social, institutional and technological ecologies not only to deliver services which are perceived as legitimate, innovative and useful, but also to increase social welfare. One of the key ideas that underpin e-government initiatives, drawing from NPM, is the assumption that models from the private sector can be transferred with benefit for the governance of governmental activity. In part this is presented in functional terms, with private sector administrative and managerial practices (as well as systems and software) seen as relevant and appropriate. However, while this could be interpreted as an attempt to replicate e-government with reference to a pre-existing model, it should be stressed that the nature of government activity is not by mandate 'commercial'. This leads us to stress the high level of complexity involved in the creation of the large scale infrastructure to achieve it, as well as the difficulty of planning organisational restructuring activities by following the managerial model alone.

We should remind that private sector organisations are not democracies. In private sector contexts plans are usually made or endorsed at the top and then implemented down the hierarchy through the practices of command, consensus building, awareness training and change management, and we must be careful to consider the extent to which these models, practices and underlying assumptions alone can support the creation of systems that support a form of governance which serves policy and democratisation processes in government or which can support a richer interaction between citizens and policy makers. We see e-government therefore as a fundamental element of the transformation of democratic politics. Therefore, we argue that the vast majority of the literature on e-government does not consider its innovative potential and accepts a narrow functional view associated with New Public Management (NPM).

This may have negative consequences, for example, if it leads to ignoring or overlooking the capability of such programmes to promote the goals of state governance. Such a perspective, contrary to most of the available literature on the topic, focuses on a naïve exploitation of ICT as a 'service' infrastructure. On the other hand, we suggest the creation of innovative systems of governance or to support the re-integration and interconnection of government's informational capacity in ways that improve more democratic forms of policy making and policy execution. This can have also broader, but equally positive consequences by linking the question of e-government to the liberal state's essential role of increasing social welfare. Therefore, we argue that the mainstream models of e-government as managerial/service infrastructures described so far *per se* do not provide an emphasis in these terms and may risk a backlash which could waste the high sunk costs of software, hardware and infrastructure, and leave government itself in a deeper crisis. Following Soshana Zuboff (2002), we advocate that well functioning 'sibling systems' can offer a different point of departure in establishing the e-government programme.

As it is possible to appreciate form the case studies reviewed above the interwining of NPM and ICT as understood by the managerial model of e-government leads essentially to a model of governance which is decoupled from the nature of government's important function of increasing and nurturing social welfare via democratic politics. In the private sector, marketing activity, surveys or analysis of sales figures provides important input, but in the context of government organisations feedback means potentially more; for example, allowing more transparency and participatory interaction and involvement by citizens (Traunmuller and Wimmer 2004) not just in the way in which government operates and provides its services, but in the nature of the services themselves. Failing to understand such different domains (public and private) risk to trigger a profound political destabilisation if that model is blindly applied without enough appreciation of the underlying differences. Destabilising processes include the commercialisation of the concept of public institutions, and application of disembedded 'best practice' mechanisms which operate against historically negotiated relationships. The latter could lead to an outcome which fractures the established relationships of power it could also led to public failures of the modernisation process. Alias the process of drift studied by Claudio Ciborra (2000) in many studies of the implementation of large scale inter and intra-organisational infrastructures.

Dunleavy et al. (2005) have produced a strong critique of NPM and especially of the managerial model of e-government. The authors point out that NPM both as a set of policies and in the practices it has enacted over the past twenty years has died in the water. Today even its strongest advocates expect NPM to have little impact on altering the overall effectiveness of government. In their paper the authors discuss how the decoupling of the policy systems and the development of strong corporate managements have been problematic in the UK as well as in the United States, Australia, New Zealand, Canada, the Netherlands and Japan. Often, a blind juxtaposition of NPM has developed more intermediate organisations rather than increasing effectiveness in service delivery, resulting essentially in a) the formation of boutique bureaucracies with bizarre new levels of impenetrability (as in the case of accruals accounting in Australia - p.10); and b) without producing the desired or expected large-scale cost-savings (as in the case of the UK's Public Finance Initiative – p.7). Therefore, Dunleavy et al. (2005) envision the emergence of a new 'digital era governance' signifying a 'whole complex of changes, which have IT and information handling changes at their center, but which spread much more widely and take place in many more dimensions simultaneously than was the case with previous IT influences' (p. 12). The examples we have explored as alternatives to the NPM problematisation in e-government have looked precisely into such processes.

However, we do not see an information infrastructure only as a collection of different ICT, systems and applications, rather argue also for the inclusion of the dynamic and emergent (political) elements during implementation and to the importance of designing for improvisation, openness and flexibility (Ciborra 2000), ideas served through the participatory model. Therefore, we propose that technology in this context is better deployed if it supports a grid architecture, based on open standards rather than a traditional static infrastructure. This in turn implies a further shift in the traditional programme of e-government, away from considering each application in isolation and to consider the design of what Soshana Zuboff (2002) defines 'sibling systems'. Such systems are interpreted here as federated support mechanisms based on social relations and built on communities of trust. What characterizes the uniqueness of this notion in relation to our exploration of alternative models of e-government is the potential capacity develop networked forms of governance, which are paralleled by the simultaneous interwining of grids of various kinds of relationships.

Soshana Zubboff's (2002) important finding is that in organizations where strong values are maintained technology is responsive in developing new forms of organizations based on a commitment to shared values. In turn, this can facilitate the much needed distributed coordination along the metrics of supporting rules of engagement, which are not necessarily preconfigured, but emerge from dynamic negotiations,

similar to an orchestra akin of a conductor. *In nuce*, the cases presented above highlight the importance of seeing the process of e-government development not as static and narrowly outcome oriented, as the managerial model would suggest, but as in continuous flux as a result of changing standards, new and emergent needs and the dynamics arising during implementation.

These three brief studies suggest two key aspects of the e-government programme we outline; the need to support real participation of citizens in policy making, and the use of the state's powers in policy enforcement to increase social welfare. In contrast with a pure managerial model, in both Brazil, Ireland and London a combination of structured procedures (such as meetings, forums, policy initiatives and/or pre-existing infrastructures) with un-structured systems was accepted by the users. In each case citizens benefited (more water, less litter, less pollution), while government provided effective systems of policy monitoring and support. In each case social welfare increased and the emerging grid strongly behaved following the model of the 'sibling systems' briefly sketched above, which has allowed not only for the distribution of the benefits, but also of the costs of specific policies (bag levy, taxes raised). In Brazil, the use of the Internet in participatory budgeting understood in this sense could facilitate policy responsiveness and the promotion of social welfare and democratic objectives. In Ireland, electronic mandatory payment systems allowed the levy to be passed on to the customers, reducing the number of plastic bags. Similarly, in London with the support of a grid enacting the interconnection of various systems the congestion fee could both be enforced and collected leading to less congestion and pollution.

Finally, the cases briefly described above suggest that the capacity of the government to extend control in the spaces of a virtually enabled space of governance is not to be addressed by looking at how the government can control and regulate directly its development, rather on how the government can introduce systems to link the aspirations of liberal governance with the feedback from actions and activities of those it governs to increase social welfare. Therefore, the use of the term 'disciplinary' and its static connotation, derives form a dyslexic use of the language, but which voluntarily emphasises the importance of the potential of ICT to create a new space of governance which can reconcile the capacity of the state to enforce outcomes beneficial for society as a whole with the liberal aspirations of the groups and communities it governs. Thus creating a 'sibling system' able to operate across the huge heterogeneity of the single diverse functional programmes at the local and national level, 'dovetailing' the development of systems for policy enactment.

5. CONCLUSION

This paper explores the discursive and policy aspects of e-government in the context of the liberal state's aspiration for the constitution of forms of governance that support the goals of democracy. We argue that e-government is deeply involved with the transformation of the role of the state beyond the reengineering for the effective running government activities suggested by the NPM problematisation. To be sure, the model of e-governance supported by NPM is based on an idealized market rationality, which provides the point of departure for judging the role of the public sector and its framework for delivering public services. However, this has not lead historically to the reinvention of the public sector into a more efficient and accountable, resource prudent and decentralised organization. We find that instead it may be effective in achieving the opposite, with more centralisation and less democracy as a result.

This understanding urges us to look at e-government as more than simply introducing electronic versions of extant services. Beyond the narrow NPM conjectural domain, e-government is (or should be) expected to benefit the community by drawing together the public sector, civil society and international actors, as well as by improving consultation with, and participation by, all spheres of society and achieving a more

participatory process of governance and decision-making. In brief, the State, we argue, is different; it needs legitimacy and effective monitoring as much as compliance and trust, and in the case of e-government participation is central. In order to contemplate e-government based reform, society needs more than faith in good technology, but also technical and managerial capacity, and compliance. What is sought is partnership and legitimacy in the way reforms are perceived as an explicit promotion of social welfare, linked to effective monitoring, accountability and support. The three indicative case studies discussed above are intended to be illustrative of an alternative programme, which is not necessarily meant to be a prescription for following only one of the models studied here.

Such a programme is about designing information grids able to be exploited across and within new service channels, potentially transforming also the formulation of public policy. This suggests to us that new challenges lie ahead for the conceptualisation of ICT as an infrastructure for the state or technology of governance, one that links together a variety of actors in new and often tentative networks embodying various inter-institutional relationships and many creative interdependencies. Such a problematization of e-governance poses challenges to those who set out to develop software and systems, ICT platforms and infrastructures that can operate within and transform such varied organisational ecologies, but also for policy makers. The example of participatory budgeting in Porto Alegre is presented as a relevant alternative model to the dominant paradigm, providing interesting empirical outcomes to justify e-government's potential for promoting social welfare. Similarly, the Irish ROS shows how a new service, when functioning well, can provide an effective policy enactment platform and deliver results which were un-intended or unplanned when the project started. These suggest that new structures of government activity are centred on information infrastructures with an in-built capacity for interoperability (across functions) but also of compatibility (across domains).

To be sure, the functionalist problematisation expressed via the association of e-government and NPM is a recipe for rigidity and closure. Against the background of the NPM problematisation, the relations studied here in the context of e-government are between political organisations and the way in which forms of governance to be used for the formation of the networks of governance. This entails the composition of mobile relationships in technologically supported fragile dependencies, which seek to govern in a rational and effective manner the complexities of modern liberal societies. This requires also policy makers to take appropriately into account an emerging new accomodation between State, Citizens and other interests, which need to understand the possibility of using these technologies to support policy innovation. Therefore, we stress that beyond the NPM problematisation e-government is about three fundamental passages that are marking contemporary society, which also epitomise the future challenges for research in this area. The first concerns the design of grid architectures that are not just interoperable and compatible across legacy systems. The second is to support a good degree of flexibility and improvisation to allow the emergence of more democratic forms of governance. Finally, the third is about reconciling the two passages above by introducing 'sibling systems' unlocking the potential of e-government to enact new modalities of governance. In conclusion e-government should keep faith with the vision of the liberal state, a state made of sovereign citizens and communities calibrated by a balance of willing compliance and self-governance, focussing on networks of social innovation instead of the narrow NPM agenda alone.

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