Interpreting e-government and development

Efficiency, transparency or governance at a distance?

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Abstract

Purpose – The paper aims to show, through the case of Jordan, how e-government is difficult to implement, given the characteristics of the local administration, the socio-economic context and the dynamics of the technological infrastructure. It also aims to ascertain more generally whether the marketisation of the state, embedded in e-government, makes sense as the paramount approach to improve democracy and foster development.

Design/methodology/approach – Describes how the Kingdom of Jordan, as a case study of an innovative and extensive application of e-government ideas and models, provides a paradigmatic example of how ICTs are being introduced in economically less developed countries and identifies the risks of failure in implementation. Based on the empirical evidence provided by the case, examines the more general implications of e-government and new public management in the transformation of the relationship between the state and citizen.

Findings – The transformation of citizens into customers is problematic, and the correlation between good governance and minimal state with development can hardly be demonstrated historically.

Originality/value – The paper puts forward a new interpretation centred on the newly established link between aid and security. In this light, e-government appears to be one of the new tools for the rich metropolitan states to govern "at a distance" (through sophisticated methodologies and technologies) the potentially dangerous, weak, borderland states.

Keywords Government, Governance, Communication technologies, Developing countries, Jordan

Paper type Conceptual paper

1. Introduction

Heidegger (1978), one of the continental philosophers most concerned with the role and essence of technology in our modern world, suggests that trying to figure out whether technology is a bad, good or neutral tool is just a technical, instrumental quest. If one wants to get to the essence of modern technology, one should avoid falling into the trap of a technical, means-ends discourse. If the essence of a tree is not something vegetable, the essence of modern technology may not be something technical or instrumental.

We can retain from Heidegger's investigation two basic ideas on the essence of modern technology. The first is that technology is a way of revealing, a revealing that challenges nature, people, society, and the world we live in. The second is that the challenge posed by modern technology has a very special and consistent form, captured by the German word *Gestell*. In a way, *Gestell* has the characteristics of what

we would call, in information systems, an ICT infrastructure – enabling and aligning all the processes in an organization. But the idea of infrastructure has a static connotation (coming from structure), while the German noun has a more dynamic accent, since it contains the root of the verb *stellen*, which means ordering and aligning.

The essence of modern technology is a way of revealing that challenges the world by ordering it, that is by ordering resources, processes, people, and relationships. All are made present, available through order, calculus, and formalization. So that they can be recombined, aligned, aggregated and made ready for ... further ordering.

The interplay between ordering and revealing can guide our investigation into the deployment of information technology in the public administration and can help us in unveiling the complex phenomenon of e-government models, methodologies and policies deployed today by many governments and international agencies, with a special focus on the economically less developed countries.

E-government is information and communication technology (ICT) applied to ordering at least three kinds of processes. First, it attends to the relationship (transaction) between the administration and the citizen (customer) and the related re-engineering of the activities internal to the administration (Bellamy and Taylor, 1998). A second level regards the way in which the boundaries between the state and the market are redrawn, by the creation of an electronic, minimal state, more transparent, agile and accountable (Heeks, 1999; Stiglitz *et al.*, 2000). A third level deals with the purpose of aid policies aimed at introducing e-government into developing countries. Better accountability and improved transparency are the characteristics of good governance, and the latter becomes the *conditio sine qua non* for the rich states and international agencies to supply aid to these economically less developed countries (United Nations Development Programme, 2001). The study of the way in which e-government becomes a technology of ordering at these three different levels unveils at the same time hurdles, risks and inner contradictions. The composite analysis of the ordering and revealing effects of ICT in government can offer a new picture of this phenomenon.

In Section 2, the Kingdom of Jordan, as a case study of an innovative and extensive application of e-government ideas and models, provides a paradigmatic example of how ICTs are being introduced in economically less developed countries and shows what the risks of failure in implementation are. Based on the empirical evidence provided by the case, Section 3 examines the more general implications of e-government and new public management in the transformation of the relationship between the state and the citizen. Section 4 deals with the consequent re-orientation of the administration towards the model of the minimal, service delivery state and points to its inner contradictions. Section 5 contains an interpretation of the new emerging order linking aid policies and the new style of governance "at a distance" that the rich metropolitan states want to establish by funding e-government projects in economically less developed countries. Again, attempts at increasing the levels of order and control, for example through e-government applications, may backfire and maintain the present international regimen of durable disorder. Concluding remarks follow, including ideas for further research.

2. A case study: e-government projects in Jordan
As a point of departure let us consider a case study related to the implementation of e-government systems, services and applications in the special context of a developing country, The Kingdom of Jordan[1].

C. Barrett, Intel CEO, (Reach, 2001) has declared during a meeting in the region that:

Jordan has set a precedent for change in the Middle East region. It has demonstrated the achievements that can result from strong cooperation between the public and private sectors, particularly in the field of information and communications technology.

Indeed, Jordan is a textbook case for its vision to become the Singapore or Bangalore of the Middle East in the adoption of new information and communication technologies. In its attempt to follow some of the best practices indicated by international agencies, from the World Bank to the UN, and the donors of various leading Western and Far East countries, combined with the commitments expressed by the top of the State (the King himself and the newly created Ministry of ICT (MoICT)), Jordan incarnates the new thinking and practice on how to introduce ICT to enable rapid social and economic progress (Ministry of ICT, 2000). There is a variety of initiatives that may attract the interest of the observer: they regard the creation of new jobs in the ICT sector and the launch of a software industry (Reach, 2001); second, the diffusion of ICT in rural areas and the promotion of e-learning (projects like "Connecting Jordanians"; or broadband to the schools), and last but not least the establishment of e-government (Ministry of ICT, 2001). The e-government initiative is significant for a number of reasons. First, in Jordan the public sector is still the largest employer, thus representing a very important economic organization. Second, one can find in this domain many of the actors also present in the other projects: donors; public and private partnerships; foreign governments wanting to provide help, and so on. Third, there is the possibility of studying the deployment of a new infrastructure inside a large, complex administration in the context of improving its efficiency, but also to support the growth of the nation. This allows us to extend to the government organization in a developing country what we have learned in previous research projects about the strategic deployment and management of ICT infrastructures in the corporate world (Ciborra *et al.*, 2001).

2.1 The e-government strategy spelt out

Jordan's e-government plans are aimed at using new technologies to facilitate inter- and intra-agency communication and cooperation, as well as provide information and services to its citizens more efficiently.

The programme relies on four foundations:

(1) introduction of e-services;
(2) infrastructure development;
(3) education and training; and
(4) legal change.

It focuses on the following broad objectives:

- increasing information accessibility;
- improving government performance and efficiency;
- reducing costs;
- enhancing the competitiveness of government;
- ensuring transparency and visibility;

- promoting the ICT sector;
- e-skilling the public sector; and
- boosting e-commerce activities.

The e-government initiative is being implemented under the direction of a task force, an eight-member public/private committee headed by the newly formed MoICT. The new Ministry has been created following the privatisation of the postal services from what was the Ministry of Post and Telecommunications. It is responsible for setting the telecom policy and coordinating the e-government initiative, besides attracting investment in the ICT sectors, and setting the ICT policy and strategy plan for the telecom and postal sector. In particular, the Ministry will issue the technical standards and articulate the policy for the various government agencies to bring their data, services and transactions on-line (Ministry of ICT, 2001).

A number of fast track projects were launched in 2001. They include motoring services, taxation (income and sales) services, and land registry. Next will be the G2B and G2C portals and a government personnel directory. A new network is envisaged to enable government introduce knowledge management, empower and connect government staff. A program management office will establish standards and protocols for interconnecting government services – together with the system integrators – and for the development of a holistic view of a security strategy.

Four government departments are involved in the main fast track projects: The Department of Land & Survey (DLS); and three under the umbrella of the Ministry of Finance – the Income Tax Department (ITD); the Drivers & Vehicles Licensing Department (DVLD); and the General Sales Tax Department (GSTD).

Deloitte & Touche is the consulting firm awarded the contract for the analysis and design of the various processes and information requirements.

The principles guiding the consulting firm in this particular contract are:

- establishing proper governance structures for coordinating and promoting e-government initiatives in Jordan;
- identifying and implementing e-services which can be deployed rapidly and provide visible benefits to citizens as a "proof of concept" for e-government;
- implementing a common infrastructure whose services could be leveraged by all governmental entities;
- considering using multiple channels (beside the internet) for providing services, based on the level of their accessibility in Jordan;
- identifying and applying the changes necessary in Jordan's existing legislation system for enabling e-service delivery;
- using a phased approach for implementation;
- monitoring citizen feedback and continuously evolving e-services based on users' requirements;
- raising government employees and citizens awareness about e-government by proper communication and educational programmes; and
- planning for and managing change.

In two cases, ITD and DVLD, all the front office activities were analysed by the consulting firm. In the other two projects only a selection of front office services were studied due to time constraints.

Based on the projects' final recommendations, the MoICT will issue a request for a proposal (RFP) to select partners for the purpose of creating the detailed functional and technical design, carrying out the implementation and launching of the relevant e-government services (Ministry of ICT, 2001).

2.2 Emerging risks

> Beyond the Internet [...] e-Government requires an unprecedented degree of organizational agility – an agility that really involves enterprise transformation in the fullest sense. On the most basic level, this means that an organization is able not only to optimize the value of relationships with customers, but also to build a culture capable of making sharp turns at a moment's notice – not once, but over and over again [...] In other words, the outcome will be a true linking of front- and back-offices (Deloitte Research, 2001).

Since, in general, e-government is about the deployment of a complex ICT infrastructure, it faces a number of risks in relation to implementation, project management and policy, all risks that have to be appropriately managed (Snellen and Van de Donk, 1998; Fountain, 2001a; Heeks, 2002).

Though the analysts of the Fast Track projects were still completing the analysis and design work at the time of our study, a few difficulties, some of them unexpected, could be identified. Here is a flavour of the most important ones, similar to those that, in the private sector and corporate world, have often proved to be cause of major disruption or at least significant drift in use (Ciborra *et al.*, 2001). For one application, the one concerning the Department of Driving Licences and Motor Vehicles, we narrow down our study in order to show some of the hurdles which also point to some general problems regarding the prevailing style of e-government projects both in developing and advanced countries, to be further discussed in the next section.

Jordanian public administration is not a green-field site as far as IT is concerned. Rather, over the years, each ministry, department and agency has been implementing a number of applications. All these efforts come to represent the "installed base" of existing systems and applications which any new e-government initiative has to deal with. There are ministries or areas more advanced than others and a variety of infrastructures, often incompatible or plainly not integrated or networked. Thus, when considering the fast track projects, the one at ITD is relatively more advanced, or ranks higher on the "technical readiness" scale. In other services (e.g. sales tax) new systems have been introduced, but due to lack of involvement and user participation, there is resistance to acceptance; the DLS uses a database that does not support spatial techniques and an upgrade is in order: these, and others, are stand-alone systems. The analysts have found duplications, redundancy and low quality of data. Note that these negative aspects have been observed in connection with the already automated procedures and files, not in relation to manual ones.

In sum, the IT readiness within the government administration is uneven: it is a matter of technology (old and new platforms coexisting and new ones being implemented all the time, often independently from the e-government projects); the *de facto* independence and autonomy of the Ministries; the different practices in systems

implementation; sometimes inappropriate user involvement and training; the need for a deep culture change towards the new ways of working, and so on.

2.3 The case of DVLD

We can see the interplay between the three dimensions of technology, practices and culture at work in one specific fast track project – Drivers & Vehicles Licensing. This is a very much heralded application in the consulting reports celebrating e-government in the USA (implemented as web services in Nevada, Arizona, Pennsylvania and Alaska) (Deloitte Research, 2001). Stiglitz *et al.* (2000) cite it as an instance of how government can improve the efficiency of its services: a case where policy should encourage governments to undertake the redesign of internal activities through the use of ICT.

It is a quintessential application where the idea of e-service comes to the fore: better service to the citizens, decreased transaction costs, and opportunity for streamlining old-fashioned office operations. It is a showcase application. Though the analysis was not yet finished at the time of our study, a number of unexpected potential risks emerged, which seem to indicate that this application will be much more complex to implement than originally planned for. More generally, the DVLD case is, in itself, a "hologram" which enshrines many of the crucial problems of transferring e-government models and methodologies from advanced private and public organizations in developed countries to organizations operating in economically less developed countries.

First, the existing platform and software will be hard to convert: we deal with a non-centralized architecture, with non-systematic updating of the local and central databases, and mostly written in antiquated COBOL programs. The databases are not relational, hence it is cumbersome to run queries and give instructions. Overall, there is a low technical readiness, and employees are not very computer literate. If the technical backwardness was expected, it came as a big surprise that the sheer number of "dependencies" of the services surpassed the planning targets of the analysis phase. What looked like a straightforward application turns out to be decomposed into over 130 services that need to be documented. The list of dependencies is also impressive (about 35), and casts a shadow on the easiness of implementation. In other words, having a driving and other type of transport or vehicle licence involves internal transactions with the Prime Ministry (specifically, the General Intelligence Department), The Public Security Department, the Chamber of Commerce, the Ministry of Exteriors, the Ministry of Industry and Trade, The Ministry of Health, the insurance companies, the local municipalities, and so on. Of course, dependencies vary according to the product or service (public vehicles, trucks, buses, private vehicles, etc.).

All this is making the analysis job very complex. Add to this that the analysts need many statistics on the actual state of things, statistics which are unavailable, unreliable and late. Some processes have kept an uncertain description because their unfolding is hard to identify in a reliable manner. Next, consider the "angry orphans" phenomenon: the IT specialists threatened by the new application which will entail dropping COBOL (the old standard) and responding by creating obstacles that make the analysis work very difficult and incomplete.

Also, the new system must reduce the transaction time between the DVLD and the various dependencies. If this is not achieved, the mere speeding up of the procedures

internal to DVLD will not have a significant impact on the overall service delivery time (made of the internal time combined with the dependencies time). Finally, a basic requirement is the possibility of shuffling documents between departments electronically. This is difficult until the DVLD adopts the Electronic Transaction Law and its recommendations (Ministry of ICT, 2002). Once this problem is solved, then one has to tackle the electronic integration through 35 different organizations, with many of those dependencies not being computerized or having incompatible systems. On top of it, integration will entail interlinked accounting practices, since citizens have to pay for some of the dependencies involved. Currently they pay each Ministry or agency separately, while an integrated procedure would require redistributing separate payments from a global price of delivery of the service in a one-stop-shop fashion.

In such a maze, the ways out chosen by the analysts might further endanger the implementation process:

- the analysts get the information and authority they need by bypassing the Department altogether – typically, they would turn to the Public Security Department, and in due time this might worsen the animosity between them and the DVLD Department; and

- missing a reliable standard documentation (the "raw processes" are hard to access), MoICT design standards and global best practices imported by the consultants are made to replace the missing or unidentified activities.

These moves may solve the problem for the analysts of meeting their deadlines, but may render implementation more risky, in the sense that new processes will be grafted upon unclear, poorly understood activities.

In this respect, the final worries concern change management. The need for huge change management and training efforts is to be expected: to overcome resistance, to educate the computer illiterate, to change the management model. The latter will imply a radical cultural transformation: moving from a rigid, control oriented management style to a process organization servicing the customer (Caldow, 2001). Note that the transition is not from a public bureaucracy to a market organization (the concern of all the new public management literature) but from a military culture to a business/market culture.

The high risks and complexities of such a transition point to what may be the dangers hidden in this apparently banal application. Put in a nutshell: successful implementation and delivery of e-services demands the transformation of some parts of the Jordan state from a security apparatus into a transparent service agency, where a driving licence is not a public security or general intelligence document, but a quasi-commercial product.

In sum, even in the analysis phase, a mundane application, chosen because of its low risk and high yield in terms of engaging the citizens into the idea and experience of e-government, turns out to be a hologram in the small of the difficulties of e-government in a developing country: extremely complex, high risk, and calling into question the role of the state in relation to its citizens – a service provider or a public security apparatus?

From this perspective, the Electronic Transaction Law requires among other things that its provisions be interpreted according to the international trade conventions

(Article 6) (Ministry of ICT, 2002). This may be easily adopted by a department providing certificates to citizens, and thus transform its administrative acts into market services, but it may be much more difficult to implement by a security or intelligence arm of the State.

Finally, note that the case shows the two effects of modern technologies: ordering and revealing. E-government allows an unprecedented ordering of transactions within the administration and between the administration and outside institutions, firms and individuals (citizens as customers). At the same time, though, its deployment can proceed only by revealing the nature of the administration, and more in general of the Jordan state, and the contradictory requirements for its transformation.

3. Customer service or development?

The change is equally enormous for government itself, especially in this new view of citizen as customer [...] In this sense, the Internet represents more than just a new channel for service delivery. On its deepest level, the Internet is a catalyst that challenges age-old assumptions about how governments operate [...] In fact, in just a few short years, the Internet has started to shift the organizing logic of government from a product or process-centric approach to a customer-centric model (Deloitte Research, 2001).

The epochal transformation of a government department from a public security/military culture into a market-like service is just one extreme instance of the changes implied by most e-government applications (The Cabinet Office, 2000).

This is part of a wider shift whereby citizens become customers, as recommended by the new public management movement (Ferlie *et al.*, 1996; Barzelay, 2001). However, such a move has wide-ranging implications (Fountain, 2001b), which can explain the difficulties today's prevailing style of e-government applications are encountering, especially in economically less developed countries (Pratchett, 1998).

First, the notion of "customer" entails a number of market mechanisms, which cannot be completely transferred to a public administration possessing a monopoly of the service. For one thing, in a competitive market the customer has choice, which is not always the case for the citizens/customers (who else can supply driving licences besides the DVLD?). Also, citizens have no real exit option and prices do not reflect the matching of supply and demand for this service.

On a closer look, another difference stands out: firms try, primarily, to satisfy shareholders and not customers. Customer relationship management does not have a value *per se*, but only as an instrument to increase shareholder value. In order to do that, firms proceed to segment the market; and to implement various forms of price discrimination: tactics that can increase the inequality among customers. But equality of service is, in principle, the goal of an administration providing a universal service.

Furthermore, any attempt to govern transactions through market-like mechanisms implies a certain degree of standardization of the service provided. The less such a service can be standardized, the more the bureaucracy, especially the one facing directly the customer/citizen (the so called "street level bureaucracy"), will be involved in stereotyping, simplifying, and basically serving those clients who are easier to serve – given also that the bureaucracy is subject to internal performance monitoring. This will generate a new form of discrimination based not on price, but on access and relative ease of interaction.

In the private sector service, quality, customer service and handling of complaining customers correlate with socio-economic status. In the public sector the more service provision and customer complaint handling is market-like, the more it will end up reflecting citizens' status inequalities.

More generally, the perfunctory equivalence between citizens and customers places them in a special role, that of consumers described by rational choice theory. Whether this fiction works in actual markets or not is of secondary importance, given that the variety of roles played by citizens cannot be reduced to the one of consumers with clear preferences influenced by prices and quality. Public administration operates in areas where goals and preferences are ambiguous, and are difficult to identify and express. This is especially the case for those vulnerable citizens lacking scope for choice, as is often the case in economically less developed countries.

Customers making choices within a market context tend to be involved in transactions of a narrow scope and instantaneous nature. The market is a wonderful means to aggregate such spot encounters between demand and supply. However, the more a transaction is specific, sticky and long-term, the more markets tend to fail and must be governed by long term, integrative arrangements (Williamson, 1975). The citizen, a member of a democracy, a community or even a police state, is in a long-term relationship, which cannot be fully divided down into transaction bits to be aggregated. The expression of political, long-lasting obligations and the development of a polity are hard to obtain through purely aggregative relationships. Such processes only become possible in the context of a participatory democracy, where popular sovereignty matters more than consumer sovereignty. State governing bodies and administrative apparatuses are all part of the effort to "govern" the population (Dunleavy and O'Leary, 1987). They are the arms of politics, seen as the art of conflict resolution, but the latter is at odds with market segmentation and demand aggregation (Fountain, 2001b).

It is then not so obvious that by introducing more efficient electronic transactions, a bureaucratic or military administration will become more transparent, efficient and market-like. First, it will maintain its monopoly. Second, it will be compelled to standardize services so as to be able to offer them electronically. But such a standardization will entail stereotyping, segmenting, and privileging those segments of the population that can access the services more easily. Democracy will not be increased, nor competition: favouritisms and bribery might simply be offered to new intermediaries. Is it all about agencies as efficient e-service providers or political institutions as instruments of democracy? As shown in the DVLD case, the irony is that the two cannot be disentangled, and the provision of efficient e-service may require dramatic transformation in the governance of the population (an issue of governmentality, as Foucault would point out; see Burchell *et al.*, 1991).

In the case of the Jordanian public administration the e-government initiatives reveal the incongruence of some aspects of the organization and institutions, which are not conducive to the implicit tenets of the new models. We submit that e-government will further unveil the contradictions, already embedded in New Public Management, that being how the re-ordering of citizens as customers and the re-shaping of public administration as a firm operating on a market are bound to encounter institutional mismatches.

4. E-government and the minimal state

Our goal is an information and technology sector in Jordan in which the free market is given
the widest possible scope to contribute to the economic development of the country (Reach,
2001).

Looking more closely, technology puts into question the wider context and logic within
which it is being applied. Does the model of state enabled by e-government really
support development (Heeks, 2001)?

However, e-government is supposed to be conducive to development, by sustaining
good governance. In the strategies of the international organizations like the World
Bank and the IMF (gathered around the so called Washington and Monterey
consensuses) good governance is delivered by a specific model of "minimal" state, or
the service delivery model, of which the marketisation aspects analysed above are a
major feature (Kahn, 1997). The model is supposed to address state failures due to
governance breakdown, corruption, rent seeking, distortions in markets and the
absence of democracy. In particular, the service delivery state can provide law and
order, enforce property rights, and deliver public goods and services to the
customers/citizens. It is minimal, transparent and accountable. The model comes with
the idea that development is enabled by a well working market economy, where
contracts can be enforced, property rights are clear and stable, corruption is low, there
are few restrictions on competition (markets are rent free, with few monopolies, no
subsidies and ubiquitous access to information), and investors are confident because
property rights are stable (North, 1997).

To be sure, such a model of service-delivery, minimal state embeds the style of
governance present in advanced Western economies. E-government together with
other institutional reforms is aimed at helping nations to leapfrog underdevelopment
and attain a final governance configuration that is similar to the one of developed
countries.

Still, any e-government initiative should entail a due consideration of the problem of
governance and development, especially of their dynamic interaction.

Namely, (Kahn, 2002):

- the few states that actually have experienced a high-growth economy do not rank
  highly on the various dimensions of good governance (corruption, democracy,
  transparency, etc.); and
- the institutional reforms needed to transform the developing country into an
  advanced one portray only the end "state", but do not tell us anything on how to
  actually enact the transition from the initial to the end state.

In particular, it is hard to establish a clear correlation between the service-delivery
state and development (Kahn, 2002). Actually, the few high growth economies in Asia
show that their earlier decades were characterized by a much more interventionist role
of the state (Wade, 1990), for example with states actively manipulating property
rights (land reform) and allocating rents to growth enhancing activities and groups
(e.g. training entrepreneurs). Also, they had only slightly better governance quality
than many poorly performing countries. The same applies for corruption levels – not
significantly different and in some cases even worse than average (Thailand).

Furthermore, even if the service-delivery, minimal state is characterized by low transaction costs, the idea of such a state says nothing about the transition towards its attainment, how to manage the process and how to minimise the "transition" costs.

This is a drawback common to much new institutional economics *à la* Williamson (1975): in order to compete and survive, institutions and organizations need to lower transaction costs, but, unfortunately, this recommendation is not enough to explain why certain institutions or organizations are able to make such moves, while other are unable to implement them. Embedded in the new institutional economics are very naïve ideas about change, political transition costs and learning, since they are assumed to be frictionless processes (Ciborra, 1990).

In the detail of the DVLD case, it is apparent how an efficient model of delivering driving licences through the internet, as a notion, may clash with the entrenched ways of working of the administration, and in general, with the extant model of the state and the nature of the relationship between state and citizen. In other words, while focussing on good governance, the minimal state and e-government, the consensus policies tend to underestimate what it takes to imitate learn and implement new conducts, procedures and practices.

Looked at in this perspective, the role of ICT is less clear-cut, less significant and, most probably, irrelevant. First, what matters are transformation and learning capabilities, which are not necessarily supported by efficiency-enhancing applications (Fukuda-Parr *et al.*, 2002).

The distinction is subtle but of great importance. E-government for good governance is simply a description of the applications one could get in order for an efficient government to serve its "customers". The flaw is that this strategy may work where the state has already a typical advanced country configuration. It does not help the transition, or probably might even hinder it.

We can conclude that the present range of applications and systems, usually labelled e-government, is attached to a model of state, the service delivery one, which resembles closely the state form in advanced Western economies. However, there is the suspicion that such a model may be irrelevant to actually triggering development. At the limit, the reverse can be true: once an economy is fully developed, then the service delivery model makes sense and e-government can function, as some, but not all, applications of service delivery in the UK, the USA and other advanced countries show (Fountain, 2001a; Dunleavy *et al.*, 2001).

As the Jordan case points out, though in a very embryonic form, seeking the implementation of efficient service delivery will lead at best to the point where a radical transformation is required to make the applications function, but ICTs do not enable such changes *per se*: they presuppose them.

What then, about developing countries getting trapped in spending resources to push major reforms like e-government on the basis of models, which may not work in contexts that are significantly different from the advanced ones (Heeks, 2002)? The risks could be of more cynicism and disillusion, and investments in ICT could turn into some form of growth-reducing rents.

More specifically, why do countries like the Kingdom of Jordan get trapped in facing high enforcement costs of policies to renew the state through e-government and other new public management reforms? And why do donors and international agencies seem to be driven into the same tunnel vision, of promoting and supporting designs that are

unrealistic, since they tend to ignore the complex problems of transformation, and are linked to an idea of state, the e-service delivery one, that actually may not be conducive to development (Wade, 2002)? In sum, technology introduced to order the state apparatus according to a precise model and organization, which also entails the realignment of its functions and relationships with the outside markets, leads us to question whether the models inscribed in the technology of e-government will deliver economic and social development. In trying to address this puzzle, on the one hand we touch the limits of the e-government, good governance and service-delivery state consensus discourse, on the other these experiments with new technologies make reveal and make us reflect upon some important, implicit dimensions of the phenomenon, which now we try to interpret in a wider context (Avgerou, 2002).

5. On drift, aid and durable disorder

The trajectory of e-government in developing countries cannot be identified and understood by looking at the technological features only, or the dynamics of the local public administration in isolation, or development as a separate issue. Rather, it needs to be "reconstructed", bottom up, by observing the interplay between the various actors involved in the automation initiative. In the case of the Kingdom of Jordan, they are the various international agencies, foreign governments, consulting firms, software and hardware vendors, and so on. For example, with the assistance of the Amir Program (entirely funded by USAID), the MoICT plans to enable "build-own-operate" and "build-own-transfer" relationships between public and private sectors to introduce the new e-services (Ministry of ICT, 2001).

We have seen the inner contradictions and the limitations of the models and methodologies the main actors pursue, propose and deploy. To be sure, they invest into, and support on an ongoing basis, the idea of e-government. They are driven by the promises of the technical innovation, the key tenets of the new public management manifesto, and the marketisation of the state as the paramount means to achieve economic growth and social progress (United Nations, 2001; Kirkman *et al.*, 2002; G8 Digital Opportunity Task Force, 2002). But, we have observed, they seem to be blind: their blindness prevents them appreciating the risks and pitfalls of implementing the new models.

Here, we need to turn to the recommendation of those anthropologists who have studied the discrepancy between the development discourse and what happens on the ground (Ferguson, 1990): one needs to refocus the main object of enquiry on those underlying structures which seem to make a significant difference, namely "global flows of finance and investment, international markets and, of course, national and supra-national politics" (Gardner and Lewis, 2000).

Our analysis of the phenomenon of e-government initiatives for economically less developed countries needs, then, to place the specific tactics of the various actors into a broader, geopolitical framework able to offer a new interpretation to their projects, initiatives and concrete actions. We find the elements for a contextualized interpretation of the issues that have emerged so far in a document, the National Security Strategy of the USA (The White House, 2002), which summarizes the fundamental traits of the present world economic and political order. It is this meta-order which is set to frame the reforms such as e-government and envisages a

common model of national governance centred on the idea of the minimal state and free markets:

> ... the United States will use this moment of opportunity to extend the benefits of freedom across the globe. We will actively work to bring the hope of democracy, development, free markets, and free trade to every corner of the world. The events of September 11, 2001, taught us that weak states, like Afghanistan, can pose as great a danger to our national interests as strong states. Poverty does not make poor people into terrorists and murderers. Yet poverty, weak institutions, and corruption can make weak states vulnerable to terrorists networks and drug cartels within their borders.

In the National Security Strategy the link is established between the danger posed by "weak states" and what can happen within their borders, and the need for a countervailing influence, based on the ideas of free markets, trade, democracy and development, to be pushed across the globe, to every corner of the world. Throughout this document aid, reform of the state, and free markets are intimately connected with the issue of security (Duffield, 2001).

Let us, then, take the issue of security seriously, as the source of this White House document warrants, and look at the current efforts of e-government initiatives in developing countries according to this different, more global perspective.

Any successful technical and organizational innovation requires a stable alignment of the actors: the designers, the vendors, the users, the sponsors, etc. (Latour, 1993). The successful implementation of e-government is no exception. In this respect, what is striking for the Jordan case, as well as other cases of e-government in economically less developed countries (Bhatnagar, 2004), is that the implementation of the projects takes place through multiple interventions of ministries and departments, aid agencies, consulting firms, NGOs, multinational companies, multilateral financial bodies, foreign states, regional entrepreneurial associations, and a variety of alliances between them (Reach, 2001).

Note that many of these actors are private organizations, and a first, superficial reading of the alignment required today by e-government consists of complex and articulated forms of private-public partnerships, where the presence of powerful intermediaries like the computer vendors, or the global consulting firms, indicates that aid in this domain is more and more delivered by non-state entities (Sassen, 2004).

This would be yet another sign of globalisation: the weakening of the traditional influence of the national states, in favour of a more fragmented, overlapping set of private and public intermediaries. One could conclude that states are handing over, if not subcontracting outright, their tasks and resources in relation to aid to more specialised and professional agencies. This would be part of the increasing externalisation of activities traditionally performed by states, now delegated to multinationals and NGOs.

The US Security Strategy document is important in this respect because it suggests a different interpretation. The public-private networks and contractual regimes of aid practice are the new means by which "metropolitan states" want to achieve security on a global scale (Duffield, 2002). Under-development is now dangerous, not only for the people directly immersed into it but for us as well. Under the rubric of human security the concerns for stability of the metropolitan states have been made to merge with the social agenda of the aid agencies. If poverty and under-development encourage conflict and instability, then sustainable development, of which e-government initiatives are an

essential factor, can also play a security role. The networks of aid practice become the ways for the metropolitan states to cross the borders of the marginal, weak states and implement flexibly new forms of governance, both of the economy and the state (Duffield, 2002).

Typically, e-government and its counterpart, the self-regulating market, are technologies of control (Beninger, 1986) able to shape the networks and systems of opportunity within which economically less developed countries operate. In this way, control by the metropolitan states is not direct or centralized but flows through a network of open circuits that are non-hierarchical, but "rhizomatic" (Rose, 2000).

Note also that behind the notion of "good governance", as supported by e-government, a subtle shift has taken place: underdeveloped, potentially dangerous states are now monitored and regulated as a social body. Through free markets, accountability, transparency, and corruption-curbing policies, it is the very culture and conduct of people that needs to be impacted. In other words, through ICT and new public management visions what one tries to affect is the "governmentality" of the weak states, that is the way they think about their own functioning and reform, by providing a very specific approach to regulate the conduct of citizens, e.g. by transforming citizens into rational choice customers.

More generally, modern regulatory techniques create the possibility of modulating the behaviour of populations through controlling processes and networks, rather than disciplining individuals, as in the old colonialism. Further, this takes place at a distance or with little territorial presence (of experts and functionaries), rather than through territorial occupation (as it used to happen with colonialism).

Like the computer and network-based systems they end up implementing, such techniques involve continuous measurements of conduct, risk and readiness. You "invest" in aid where you get the fastest and most reliable return, so, you need to measure throughout. The same applies to the management of the projects and the comportment of the experts (Duffield, 2001). Information technology represents a driving force by allowing for the new way of accounting and risk analysis to take place (Power, 1997).

The new flexibility and accountability of the development aid practice are valued because of the changing geopolitical situation. We started with a political landscape made up of strong states facing each other, competing through political alliances, nuclear deterrence and arms superiority, and where aid was a means for strong states to seek alliances with weak, but strategically positioned states in the less developed parts of the world. Now we move to a landscape characterized by low intensity regional conflicts; "glocal" terrorism, where the old forms of alliance and deterrence are not effective any longer. The present situation has been described as one of "durable, endemic disorder".

We submit that e-government initiatives are part of that new portfolio of aid projects, for which "a new possibility of achieving security has emerged in which non state organisations now provide innovative forms of mobilisation, means of intervention [...] in the interest of global liberal governance. But far from solving in this way durable disorder, the latter continues to subsist as a side effect of the very way metropolitan states try to address the new security dilemmas and develop the new public-private systems of influence" (Duffield, 2002).

A number of elements seem to support this interpretation. First, there is the changing nature of war and security in the last few years and the well-known events happening in various parts of the globe. In the borderlands nations, conflict destroys the social fabric, widespread human rights abuse and the use of civilians as deliberate targets become organic components of the new style of war, "ethnic cleansing" provides a strong justification for intervention and a stronger than before "will to govern". Except then for extreme cases, like Afghanistan in the most recent past, this will to govern through reform cannot find an expression in a direct intervention. Rather, it becomes the engine animating the new style of governing at a distance through the public-private networks of aid and the reforms programmes such as e-government.

There is a strong parallel between modern technology as understood by Heidegger (see above) and development. Indeed, development has always involved some form of mobilisation for order and security (Escobar, 1995; Cowen and Shenton, 1995). Today, order is achieved by allowing the archetypal self-regulating process, the market, to install itself and expand, by creating and enacting those institutions that allow the free market to emerge. The minimal state, accompanied by new public management and e-government ideas, is the typical reform that the public-private network of aid practice seeks to deliver (Kahn, 2002). Such networks set up originally as short-term remedial interventions tend to become a permanent framework giving coherence and linking aid and political actors (United Nations Development Programme, 2002). In Jordan, for example, the public-private network includes such actors as UNDP and USAID, but also Cisco, Microsoft and EDS, besides the key ministries.

On the surface the issues raised by the G8-DOT Force (G8 Digital Opportunity Task Force, 2002) cover the relative e-readiness of a developing country, the digital divide, higher levels of efficiency through marketisation, and more transparency. However, the present study of e-government applications suggests that the G8 agenda may be a façade of what the phenomenon of e-government policies for developing countries is not. Below the surface, the driving forces are order and security in a new war context, the market as achieving self-regulating order without direct intervention, aid as a technology of control and ICT as a technology enabling such strategies.

Development, here understood as a technology for governance, a way of ordering the relationship between people and resources to produced desired outcomes, meets the paramount modern technology for control – ICT. The meeting is triggered by the dangers of the new war and the ensuing concerns for security. E-government is linked to the idea of good governance and thus the two projects converge within a framework that wishes to reduce the role of the state, to encourage non-state mechanisms of regulation through privatisation, markets, private enterprise and techniques of new public management. Development and e-government are two technologies for ensuring that order and control join forces to face the threats to security posed by the new war. Will this marriage deliver?

As shown in the case of sophisticated information infrastructures in large multinationals (Ciborra *et al.*, 2001) the deployment of ICT as a technology for control is never fully effective, and tends to generate a variety of side-effects and out-of-control dynamics that threaten the very management control strategy that dictated their introduction. We submit that the same may happen at the global, geo-political level (Walsham, 2001). The metropolitan states' wish to control at a distance the borderland

states, through reforms and new infrastructures implemented through the flexible network of private-public aid agencies, may fail. Their attempts backfire, leading to more systems unevenly distributed within administrative departments and agencies, knowledge spread unevenly in the population, more autonomy, and scattered resistance. The collateral effects of the new alliance may then contribute to exacerbate the durable world disorder, as well as corporate and administrative disorder, that is reinforcing a system of governance where systemic collapse is avoided through the constant crisis management and relentless introduction of sophisticated technologies, while at the same time not addressing root problems and creating new occasions for drifting of institutions, states and technical infrastructures (Duffield, 2002).

6. Further research and concluding remarks
A whole range of promising research topics related to e-government emerge from the last, more comprehensive, perspective. What follows is an initial selection.

6.1 ICT in actual development
Forget the dubious links between ICT in government, free markets and development. A new study of the role that ICT can play in developing countries should focus instead on the link with the "actual existing development" (Duffield, 2002). New scattered wars generate a variety of businesses: trans-regional supply and service chains transporting arms, people, documents and so on, and thus generate a shadow economy, opaque and non-territorial of impressive proportions, according to some observers. Organized, scattered violence generates an informal economy, labelled "the actually existing development". The latter has emerged not because of "official" development: it has arisen despite of it. There are no statistics about the extent and quality of the use of ICT in this shadow sector of the economy. But this deployment, whatever its extent, would be important evidence illustrating the multiple roles played by technologies for coordination and information in actual existing development.

6.2 Risk analysis and other technologies of ordering
The vast deployment of the new technologies of control and governance at a distance is supported by the systematic adoption of the new public management models, whereby professional experts are substituted by managers and administrators, and new extensive accounting systems and performance monitoring techniques are applied. In particular, consider the logic of risk analysis (Power, 1997), through which every aspect of a complex reality is ordered and made calculable so as to be amenable to control and governance, from the degree of danger of a war zone, or the hazard posed by a rogue state, up to the e-readiness of a nation, the chances of success of an aid intervention and the risks of a systems development project (Kirkman *et al.*, 2002). Risk analysis in itself is a technology aimed at ordering reality to set it up for calculation, uncertainty reduction and colonization of the future (Dean, 1999). But this way of proceeding creates new dangers, new ignorance, new uncertainties and thus new risks (Beck, 1992).

6.3 The new knowledge frontier
The increased ordering of resources and relationships made possible by such techniques as new public management, project management and quality control may

clash with the local, idiosyncratic knowledge which characterizes the scattered territories and communities in the new war (Avgerou, 2002). Frequent knowledge gaps are bound to appear whenever the two logics meet or, most probably, stumble upon each other (Grillo, 1997). These are the new zones of uncertainty, ignorance and hence risk (Hobart, 1993). These are the pockets that keep disorder alive and thriving; and where new knowledge is created, which flows outside the circuits of securitized development aid and e-states. What are the characteristics and dynamics of these knowledge flows? How are they managed? What innovations at the margins does it generate?

If this current analysis captures, at least in part, what is going on in this domain, it is highly likely that, in the world of durable disorder, institutions and organizations, both state and private, end up operating more and more as pasted up assemblages, despite, or rather because of, the relentless action of ordering, calculation, planning and control. They do deliver governance and knowledge, and they plan and influence the allocation of resources and the conduct of people, but with much less overall coherence and consistency. They resemble, as Foucault, and lately Rose (2000) remind us, a Tinguely's sculpture machine – full of parts that come from elsewhere, strange couplings, chance relations, cogs and levers that do not work as expected – but nevertheless produce policies, actions and social dynamics. Its precise mechanical components and its disordered assembly create multiple zones of uncertainty, platforms for imagining new combinations and enacting local improvisations. It is towards these interstices that attention should be given to identify those natural experiments, transgressive initiatives, and alternative practices in technology design and use (Ciborra, 2002; Heeks, 2002). These could represent the seeds of models alternative to those, based on the pursuit of order and control, being today deployed uniformly across the globe in private as well as public organizations, in economically developed as well as economically less developed countries.

In a more normative sense, one would need not only to understand how many of the present models, methods and solutions contribute to durable disorder in corporations and states, but also to find out, and actively cultivate, all those instances of alternative designs and approaches – present in the knowledge-intensive business within the metropolitan states and in the communities of the borderlands states – where new practices and models emerge daily.

Again, it was Heidegger (1978) who suggested, in discussing the danger represented by modern technology, that, where the greatest danger lies, the all encompassing ordering effect of *Gestell*, the same essence of technology, must harbour a "saving power".

Along the fragmented knowledge frontier traced by the advancing technologies of ordering and by the resisting idiosyncratic practices – a frontier that cuts across organizations, states and communities in advanced as well as in economically less developed countries – lies today the new laboratory for critical research on the dynamics of e-government, and, more in general, complex ICT infrastructures.

Note

1. This is part of a research project carried out within the Centre for the Analysis of Risk and Regulation at LSE, and funded by PricewaterhouseCoopers. The project investigates the multiple risks of implementing complex ICT infrastructures in a variety of large

organizations, both public and private. The case is based on more than 20 interviews carried out at all levels of the Jordan administration; the consulting firms; the systems integrators and the aid agencies. Many project documents were consulted. Data was gathered on the field during June 2001. The help of Diego Navarra is gratefully acknowledged. Further details of this project can be found in Ciborra and Navarra (2005).

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