Providing, guarding, shielding: Open Government Data in Spain and Germany
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Abstract
The trend to publish public sector information (PSI) openly on the Internet has grasped attention worldwide under the term open data. However, despite its global reach and claim of some of the movement's activists, the national and local results of the phenomenon differ considerably. These differences have so far not been sufficiently explained. This article understands open data projects as techno-scientific artefacts negotiated within a network of various actants following vested interests. Building on Latour's theory of actor-networks this article conceptualises open data projects as co-created phenomena transcending the social-technical distinction. This helps us to understand both the particularities of single projects, as well as the continuities specific administrative systems imprint on the formation of open data regimes. This research investigates the situation of open data in Germany and Spain, thereby focusing on national level as well as local level projects. Methodologically it is build on qualitative empirical data collected through document analysis and more than 30 in-depth interviews with experts from the public sector as well as users and open data advocates from outside the public sector.

Introduction
The trend to publish public sector information (PSI) openly on the Internet has grasped attention worldwide under the term open data (Bizer, Heath, & Berners-Lee, 2009; Ganapati & Reddick, 2012). The open data phenomenon seems surrounded by an air of benevolence and often regarded as a self-explanatory endeavour. Activists from private sector and civil society as well as within public administration promote the idea with a heavily techno-optimistic impetus, revealing some technological determinism in its assumed impact and transformative power. Nevertheless, compared to the suggested opportunities and potentials, tangible impact so far remains scarce (Huijboom & van den Broek, 2011). As a reason, several “barriers” (Barry & Bannister, 2013) or “impediments” (Zuiderwijk, Janssen, Choenni, Meijer, & Alibaks, 2012) of an implicit open data ideal have been identified, although also the versatile aspects e.g. of transparency have been discussed in the literature (Bannister & Connolly, 2011) and the complexities of open data illustrated (Meijer, de Hoog, Van Twist, van der Steen, & Scherpenisse, 2014).

Reducing complexities to technicalities, open data process models mostly “describe a consecutive, one-dimensional arrangement of [the operational day-to-day] activities that an unspecified set of actors repeatedly undertake in order to provide a formerly unexposed amount of data to an abstract general public.” (Hunnius & Krieger, 2014) To understand how open data is taken up and shaped by the various actors, a broader perspective at the processes around open data, at the policy-making-level as well as at the implementation process is necessary (see e.g., Blakemore & Craglia, 2006; Courmont, 2012; Heimstädt, Saunderson, & Heath, 2014; Zuiderwijk & Janssen, 2014). With regard to policy-making content-related analyses illustrate considerably different emphases (Huijboom & van den Broek, 2011),
however with little regard to stakeholders involved and the role they might play (see Huijboom & van den Broek, 2011; Zuiderwijk & Janssen, 2014). With special reference to the European level, Blakemore and Craglia (2006) point out the role the European Commission, in particular its Directorate General responsible for the information market, plays in the shaping of the understanding and regulation of public sector information, as well as the national governments represented in the Council of Ministers. The latter largely act as advocates of PSI producers who in general favour a restrictive understanding of PSI and want to preserve their rights to demand a charge for the dissemination of data (Janssen & Dumortier, 2003). Due to the limited authority the EC can exert in this area, the national government largely retained their autonomy to decide how to disseminate data. Merely in regard to geospatial data has a wider agreement been reached that also involves conventions about standards (quality, data and metadata harmonization) (Blakemore & Craglia, 2006). Here, the inclusive approach also involved domain experts and various online public consultations (Blakemore & Craglia, 2006). Thus, while the EC is lacking far-reaching legal authority, it shapes the discussion by influencing the agenda and reaching various stakeholders.

Critically looking at who these actors are especially in the PSI re-use industry, Bates (2012) distinguishes between multi-national corporations and conglomerates from various industries, SMEs, micro enterprises, independent developers and voluntary civic hackers (see also Mayer-Schönberger & Zappia, 2011). This distinction is largely based on size, only the latter category taking into account the different motives. Nevertheless, Bates draws a distinction between benevolent and naïve transparency activists and profit-seeking and exploitive corporations (Bates, 2012). Similar distinctions are sometimes drawn between transparency and accountability advocacy on the one hand and commercial re-use on the other (Janssen, 2012; Yu & Robinson, 2012). In regards to open data, the two groups' interests largely overlap, but also show significant differences in terms of contents, shape and rights of use of the data. Regarding the content of data “for innovation and economic growth this generally includes geographic data, postcodes, transport data, corporate data and other business information whereas accountability advocates will rather be interested in budget and spending data, legal information, and procedural items such as meeting minutes and reports” (Janssen, 2012). Regarding the shape of the data, the role of technology has become more prominent in open data compared to freedom of information, stressing issues like machine-readability, formats etc. (Yu & Robinson, 2012). Open data activists also tend to be more technology-savvy than traditional transparency advocates (Janssen, 2012). The most pronounced difference between the transparency and re-use is the rights-debate: Whereas transparency is about access rights in the context of freedom of information, re-use of PSI puts stronger emphasis on rights of use in terms of licensing (commercial vs. non-commercial, liabilities etc.).

The political nature of decisions during the implementation of open data (portals) has been discussed by Courmont (2012) who focuses on the politics of legal, economic and technical decisions. The actors involved are not at the centre of the article and only cursorily mentioned, such as open data infrastructure providers (e.g. Socrata) and advocacy groups from civil society. Courmont states that these political choices are rarely discussed and often “imposed by public authorities without any debate” (Courmont, 2012), thereby treating them as a monolithic bloc. With some more detail, a distinction between the policy-level and the government agencies actually owning the data is sometimes made (see e.g. Huijboom & van den Broek, 2011; van den Broek, van Veenstra, & Folmer,
However, a more fine-grained understanding of the actors involved in specific cases seems necessary to comprehend the shaping of open data.

Comprehensive conceptualisations of the “system of people, practices, values, and technologies” (Nardi & O’Day, 1999, p. 49) around open data have gained some recognition recently as open data ecosystems (Harrison, Pardo, & Cook, 2012; Heimstädt et al., 2014). The (information) ecology metaphor points to the symbiotic relationships between actors and how they are embedded in a specific ecology. Looking at the current technical open data landscape with its diverse sources of data, scattered hubs, various formats for data and meta data not to speak of data structures and vocabularies it becomes evident that the landscape is still fractured (Mayer-Schönberger & Zappia, 2011). Certain actors seem to withstand initiatives which aimed for consolidation or at least systematisation.

**Actor Networks**

As open data is still a rather recent phenomenon there does not exist an established practice that all parties involved in the production, dissemination and / or usage refer to as a standard. While the idea itself constitutes a conceptual spill-over of phenomena as diverse and as similar as open source software, collaborative content production and copyleft activism (Lindman & Nyman, 2014), the movement’s origin itself can be located at the techno-political margins of different interest groups in a variety of local contexts. While there are indeed similarities to open source software production, Kuk and Davies (2011) have hinted to the differences, particularly concerning licensing aspects of re-usage of the data. Open source software has a clear cut distinction of what is proprietary code and what belongs to the realm of open source. Such discrimination has not yet taken place in open data. While a variety of activist groups such as the Open Knowledge Foundation or the Open Data Institute refer to a particular definition of openness, guaranteeing the rights of access, usage, re-usage and redistribution ([www.opendefinition.org](http://www.opendefinition.org)) there is not yet a compliance to these principles by other players such as data publishers in the public administration. Also on the seemingly more technical side of the phenomenon there has so far not been an agreement on such issues as formats, meta data and data structures.

As academics we do have a whole set of theoretical options to delineate the vested interests in political processes. For the purpose of this paper we opt for the employment of actor network theory. Open data as a movement in general, but open data projects in particular have not yet reached what Callon (1986) coined the “obligatory passage point” at which a network of actors has to converge in order to fulfil the potential of the techno-scientific artefact. We investigate open data projects that are according to Latour (1987) in the phase of “science in the making” rather than in the phase of “ready made science”. The idea behind is that during this phase before an actual closure has taken place the constructive processes of negotiating interests are most visible and principles of a phenomenon can therefor be best analysed.

Even though open data is a phenomenon mainly placed inside public administrative contexts, it constitutes nevertheless a series of technical developments that promises to converge into a standardised process of gathering, storing and providing data to the general public that formerly was not available. Open data projects can therefore best be interpreted as techno-scientific artefacts constructed through a network of agents aligning their vested interests. The research question therefore investigates the structural similarities and differences in the networks weaved around the various agents
in open data projects. Following Latour (1987, 1999, 2005) we thereby do not limit agency to intentional activities carried out by human beings. Rather do we ascribe the potential to act also to non-human actants that cause effects to other – human or non-human – actants placed in a network set up to dissolve a particular techno-political endeavour. As open data projects researched for this paper are situated in the context of existing technical systems within the respective public administration we focus on the constitution and configurations of these systems.

Method

In order to analyse this exploratory question, a qualitative research strategy appears adequate, because of its ‘thickness’ and conceptual openness to the phenomenon. Thereby, numerous potentially relevant aspects, like actor’s perceptions and constructions, as well as institutional aspects can be apprehended. The research goal is to gain a deeper understanding of the processes around open data within public administration. Thus, the empirical data collected and analysed for this article are interviews and policy documents.

For this research effort about 30 semi-structured interviews were carried out with public administrators involved with open data as well as open data users, advocates and consultants. In order to grasp open data as a broader, multi-governmental and multinational phenomenon interviewees from two continental European countries (Spain and Germany) were selected. In order to reflect the whole spectrum of governmental levels, we interviewed participants working in municipalities, at the regional and at the national level. The interviews lasted around one hour each and included three topics: (1) perception of open data, (2) governance structure around open data and (3) actual processes of data publication and usage. The interviews were recorded, coded and analysed with the help of the qualitative data analysis software Nvivo. The transcripts were coded based on a coding scheme derived from the relevant literature on the topic which was integrated into the interview guideline. This coding scheme was refined during the coding process considering the empirical data.

In addition, policy documents specifically about open data and the governance structure around open data or ICT in general were collected from parliamentary data bases and executive web pages. These documents were analysed to trace deliberations and double check some statements from interviews.

Constructing Open Data

On the inter- and supra-national level, associations such as the G8 passed projects like the Open Data Charta or the Open Government Partnership (Bates, 2012). Involved in deliberations at the international level is also the ICT industry that promotes the topic in general, sometimes through associations such as the PSI Alliance (Bates, 2012). Focussing on the economic potential of open data, they differ quite significantly from civic advocacy groups such as the Open Knowledge Foundation who are strongly influenced by the transparency tradition, putting government under scrutiny and unearthing troves of administrative data. Furthermore, media outlets engage as advocates for open data (see Arthur & Cross, 2006).

While these initiatives significantly add publicity to the subject they often prove a lack of legal commitment by actual players in the public sector of both national countries, as well as the European
Union. At the European level, the European Commission has pressed to facilitate PSI re-use by attempting to pass general rules about licensing, terms of re-use and pricing. However, lacking a clear legal mandate and with consensus infeasible, the EU Member States have largely retained their influential role\(^1\) (Janssen & Dumortier, 2003; Janssen, 2011). In 2003 the Public Sector Information Directive 2003/98/EC passed that requires member states to implement PSI re-use regulation into national law. While the obligations regarding the actual content are rather feeble, the directive nevertheless shifted the topic on the national political agendas. Indeed this appears to have caused effects at least in some member states:

“The directive was the starting point, without the directive it would have been difficult to start this topic.” (senior executive, national level Spain)

In Germany, the PSI-Directive was transposed into national law in 2006. Due to the rules of concurrent legislation, which allow the national level to decide single-handedly on norms concerning economic activities in Germany, the Federal Ministry for Economic Affairs and Energy drafted and to implemented the law, without approval necessary by the second chamber of Parliament representing the states, i.e. Länder (Püschel, 2006). The PSI law does not regulate access to public sector information, as this is regulated by each state and the federal level individually through FOI legislation (“Informationsfreiheitsgesetze”).

Spain adopted the European directive into national law late in 2007 more than two years after the established deadline (Garcia & Soriano Maldonado, 2012).\(^2\) The law goes beyond the pure transposition of the directive, e.g. requiring public administrations to provide electronically accessible catalogues of the available data. It is seen as a general framework for open data, which is, however, not specific and action-oriented enough, since it leaves the burden to request largely on the potential re-user.

In order to overcome some of the barriers open data in Spain faced (see Garcia & Soriano Maldonado, 2012), a royal decree was issued. It contains general provisions regarding licensing, conditions for re-use, requires every government organisation to establish some sort of open data officer, prescribes measures for the operative open data process and contains a soft open by default-clause. Furthermore, it mandates all national government organisations to list their data in a central PSI catalogue. The royal decree only applies to the national level, however.

Spain

On the national level the Ministry for Industry, Energy and Tourism (MINETUR) in coordination with the Ministry of Finance and Public Administration (MINHAP) initiated and launched the Aporta project in 2008 (Garcia & Soriano Maldonado, 2012) that initially focused on promoting the topic of open data, especially in the central government, organised community engagement and fostered studies estimating the economic impact of PSI and open data reuse (see Proyecto Aporta, 2011, 2012). Furthermore, this project also published an initial PSI catalogue early in 2010.

Red.es, a public enterprise under supervision of MINETUR, is one of the major players within the

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1. The directive indicates the minimal compromise, stating that it „establishes a minimum set of rules governing the re-use and the practical means of facilitating re-use of existing documents held by public sector bodies of the Member States”. (European Parliament & Council of the European Union, 2013)
2. For a discussion of preceding legislation on public sector information re-use in Spain see Cerrillo-i-Martínez (2011).
Spanish open data landscape. It implemented the Aporta project and runs the national ISP / open data portal for Spain (datos.gob.es). Together with the two involved ministries, it holds regular events with business associations during which these express their needs in regard to PSI re-use and also request specific kinds of data. During an annual forum for people engaged with open data in Spain Red.es attempts to further an ecosystem around open data. The organisational affiliation to the Ministry of Industry is emblematic for how open data is taken up in Spain at the national level: Open data is perceived and implemented as an industry topic, its main goals being innovation, growth and job creation. Transparency legislation in regard to open data only followed subsequently in late 2013. Transparency is thus seen as a sub-topic, by some even considered a distraction.

“Our role is to develop the information society. [...] Open data was a real opportunity for developing an information society. Not considering the role of open data in transparency, but the potentiality of open data in developing of new business. [...] Now I think there is a bit of confusion between transparency and open data. This is a serious problem.” (ICT strategy unit, national level Spain)

Red.es is relatively well-resourced which puts it in a special position within Spanish administration. This gives it the means to pursue and push a topic as well as to incentivise others. Thus, although decision rights are diffused in the quasi-federal Spanish political system, influential actors at the national level took up the topic, framed it from a specific perspective on growth and pushed regulation to facilitate open data throughout the Spanish administration. Thus, coordinating bodies around ICT and e-government massively shape open data implementation in Spain, by not only putting the topic on the political agenda throughout the country, but also making detailed provisions for how to implement it.

The variety of technical systems employed by the different sections of the public administration does play a significant role in the way open data is published in Spain. Some public authorities have developed their own tools or updated existing applications by adding functionalities to extract, clean, prepare and publish data automatically. For this, vendors need to be commissioned, because most applications appear not to be open data-ready. By default ICT systems in the Spanish public administration are designed hermetically to keep data from leaving them. Therefore to automatically open up existing systems is technically not the standard. Thus, the data has to a large extent be manually extracted. As a consequence, mostly data that is readily available are published.

“We have now published many data that we had in a structured way. So we didn’t have to clean so much and didn’t have to prepare many data because it was data we had previously.” (open data officer of a national ministry, Spain)

Other agencies do not fiddle around with their existing systems, but purchase new systems that automatically are able to export data in various forms, as one of our informants, a Spanish open data user mentions. For him, this is also a question of size:

“I think it depends on the size of the city [...] and also [...] the technological level that the city has. There are cities; they don’t have a very systematic view on the data they use. So you find a lot of people that have something or they bought a system, but they don’t know how to use it [...] While in other cities, everything is very technology oriented and they have it ready-made to integrate all the data, they have a very clear model of their data and the use.” (open data researcher and user, Spain)
One interviewee working for a national ministry emphasises that timing is crucial, particularly in order to make technical systems interoperable:

“The technical interoperability work didn't have big problems to be accepted. They [regions and municipalities] didn't know how to do it, they were starting. Maybe the problem is to arrive too late. Once they have developed and made decisions it is more difficult to change things. [...] If you do it in the earliest stages they are very much open to accept everything.” (senior executive, national ministry, Spain)

Considering the role of existing and newly purchased technical systems that are responsible to collect, store, clean and export or guard data seems to be highly decisive in the question of whether or not and if yes, which data should be opened up to the public.

In order to resolve problems with technical standards, a cross-level technical working group is set up specifically for this purpose. Here, enthusiasm for the topic appears to be rather unequally distributed. For instance the responsible regional public authority for the working group forgot to keep it running. It needed to be prompted by the national level, which is driven to fulfil its obligations in the law and keep up with its reporting duties towards the European Commission. Although some regions and municipalities already started in open data, the practically blank slate enabled the far-reaching agreement, because few vested interests were affected.

On other technical issues, expertise is included in further working groups from associations such as W3C, from universities and Red.es. The Spanish W3C chapter, an applied research centre, was commissioned to develop and draft the open data-related standards which were subsequently negotiated in the cross-level working groups and finally incorporated into the National Interoperability Framework (NIF).

According to Spanish regulation, every public administration at the national level needs a part on its web page where it publishes open data that is also federated to datos.gob.es. However, by some reports, public administrators pay only lip service to the royal decree, but do not take its spirit serious:

“The royal decree says that every public administration should publish four important data sets with a high value. At the end, many public administrations think now they have more than four so they are fulfilling the royal decree.” (open data officer of a national ministry, Spain)

Furthermore, the regulation forces all organisations to develop an open data strategy and establish a designated unit within each ministry in charge of open data, thereby creating a spread out network of “advocates” for open data. However, these 'open data officers' do not have any decision making power over which data to publish. These decisions remain with the specific departments within the ministries that generate the data in their regular work. Referring to the policies, as it seems, does not necessarily convince those departments to provide the data, as one of our interviewees made clear:

“You tell them: 'There is a Spanish regulation that says this'. They try to tell you that there are other rules that apply in a more appropriate way, so in the end, you cannot say: 'You have to publish.' There are no chances.” (open data officer national ministry, Spain)

Another interviewee analyses this not on the policy, but on the implementation level:

“The regulation says that, but the enforcement part is weak. [...] There is no open data police to tell you in which way to do that.” (open data advocate and consultant, Spain)
What we actually experience here is a conflict within the public administration itself. On the one hand, there are employees whose job is to actively push the topic of open data. On the other hand there are those employees of operational departments who ultimately have factual decisive power over the data that is supposed to be provided. Often their intention is to shield valuable, sensitive data. Heimstädt describes this problem as one of unequally distributed benefits that relates to the characteristics of the data (Heimstädt et al., 2014). Controlling the possible usage of the data is on the one hand undertaken to shield politically sensitive data, as one of our interviewees points out.

“Basic public services: education, health, security – these kinds of data are more sensitive, because they have a political component and are really important. The other is the weather: The politicians cannot change the weather.” (open data strategy unit, Spain)

On the other hand shielding data has something to do with covering up the poor quality of the data itself, as another informant, an open data consultant points out:

“Data quality is also an important issue, because many times when [...] they do not want to share them, they do not want to share the data in the quality it actually has. [...] They know that is incorrect [...] so they cover it.” (open data researcher and consultant, Spain)

The situation then arises that “you can have an open data catalog with thousands of data sets, it looks pretty good, lots of data are available, but if you start to work with one single data set you see that you just have rubbish.” (open data advocate and consultant, Spain). Without satisfying neither the initial political idea of open data, nor potential users, this practice nevertheless provides open data officers and strategists some kind of legitimacy, as well as retains control of the data to those public servants who always used to have it.

Germany

The German federal government started to pursue open data only after a number of German states and cities already had. First steps were announced in the government program “linked and transparent public administration” in August 2010. Henceforth, it was the declared aim of the German government to publish any data that the public administration collects – as long as it is legally possible and appropriate. Even though issues such as transparency, participation, and collaboration played an important role, the government program also emphasized the economic advantages of open data: to strengthen Germany as an innovation hub, to increase the competitiveness of German enterprises and to support the public administration in fulfilling its tasks. Hence, both transparency and economic considerations appeared prominent in the government programme. After the government program was adopted, the Federal Ministry of the Interior was formally in charge to draft a concept on how to implement open data. However, from the outset the program prescribed a coordinated approach across different governmental levels.

In 2009, the German parliament had passed several amendments to the Grundgesetz pertaining to the relation between the federal and the state level. Amongst others, the parliament incorporated Article 91c which stipulates that the federal and the state level should collaborate and cooperate closely in the field of IT. In order to implement the requirements, the federal level and the states signed a state treaty, which mandated (1) to set up a nationwide IT Planning Council and (2) to lie down ground rules for
collaboration in IT.

In 2010, the newly formed IT Planning Council passed a National E-Government Strategy (NEGS) which also includes a clause that relevant information by the government and the public administration should be accessible for the public. Thereupon, late in 2011 the IT Planning Council installed a project “Promotion of Open Government”, which dealt directly with the opening of Government Data on all levels of the public administration. It assigned the Federal Ministry of the Interior together with one state to lead the project management. The project commissioned and published a feasibility study about open government data in Germany in the summer of 2012. A Fraunhofer Institute, an applied research centre, that had conducted the study was subsequently charged with developing a prototype of an open data platform. It had previously done the same for its native state government in Berlin. Also a number of other state governments and especially city governments had already running open data portals, when early in 2013, GovData – The Data Portal for Germany went online as a public beta version.

The city of Munich was initially one of the early adopters when its central ICT strategy unit took up open data in 2009. As a part of a citizen’s e-participation initiative it also hosted a programming contest for which it made available a limited number of data sets.

“Those were simply data sets that the statistical office published anyways.” (then ICT strategy unit, municipal level, Germany)

Because it was one of the first open data attempts in Germany, it received nation-wide media attention and won an e-government award. Also, the city council came on board and all factions filed motions in support of the idea. The project had initially received a far-reaching exemptions from ICT-related rules in the city, to set up a separate infrastructure (server, wiki), even though reservations existed.

“It became clear early on that for most people it was unclear, what it [open data] is, what its point is, what the benefits are. And naturally all kinds of risks were seen.” (then strategy unit, municipal level, Germany)

However, a subsequent attempt to formalise the process of data publication, establish an open data catalogue and involve all city departments came to nothing. Firstly, administrative departments faced the idea of open data with reservations right from the outset;

“The financial department for one never said officially ‘no’, but it was simply arduous. ‘The data, who knows what happens if they are interpreted wrongly, these are financial data, and all the effort to prepare all this’. It was very arduous, yes.” (then strategy unit, municipal level, Germany)

Furthermore, the initial project had a budget of only about 25k€. When the follow-up project requested an additional 125k€, discussions dragged on. In addition, various extensive legal reservations were raised by legal experts in the departments and the central legal department. These legal discussions, around liabilities, third-party copyrights and licenses, subsequently dominated and halted the project.

“The legal experts said ‘If it has City of Munich on the cover, it needs to fulfil the requirements of official data’. “ (then strategy unit, municipal level, Germany)

An additional distraction was caused by a comprehensive IT-reorganisation programme in the city administration to centralise infrastructure and reorganise departmental ICT tasks, what absorbed resources and attention. Nevertheless, the city’s central IT strategy and controlling unit, STRAC,
pressed on and finally, in 2013, received the nod when it included open data as part of a resolution on e-government and open data.

Subsequently, STRAC entrusted a private technology consultancy to develop a functional specification and later on set up a platform. Lacking a national framework or nationwide established practice, the project started from scratch when proposing a meta data model and licenses, describing roles and designing processes. These far-reaching specifications were largely decided autonomously within the project and are currently not yet generally agreed upon. So far these seemingly technical decisions do not appear to cause major discussions, as seen elsewhere (see Courmont, 2012). It remains unclear whether the implications for the other actors are fully understood or simply do not affect their interests.

“Regarding the licenses this is a first proposal one can argue about. This topic really doesn't interest the departments, well, it does interest them, but they are not aware there is a problem.”

(Formerly ICT strategy unit, municipal level, Germany)

Over all three subsequent open data projects in Munich, the decision whether to publish, which parts to publish and how to publish data is left to the administrative departments that generate the data in the cause of fulfilling their public task. These departments have very few incentives to publish data as open data. There never was a strong demand from the political level to publish open data, barely holding out the prospect for praise when making their data available. Rather, they take a number of risks when publishing open data.

“Sure, from a global perspective the benefits are clear, but from my worm's eye view: why?”

(Formerly ICT strategy unit, municipal level, Germany)

"In general, it is the availability of potential data. This is still a point that data are selected based on how easy it can be made available and less based on its usefulness" (Interview participant, municipal level Germany)

The risks involve the above mentioned liabilities, if the data includes copyrighted third-party content as well as possible flaws in the data. These also pose a potential embarrassment for public administrations who generally have a low tolerance of mistakes.

“Then we saw that some data are so old, they are not relevant for open street maps anyway.”

(Formerly ICT strategy unit, municipal level, Germany)

Furthermore, fear is prominent that transparency might force politicians’ and administration’s hands to tackle societal problems that are either hard to solve or require massive financial expenses. These consequences might arise from a clearer picture of a current situation as well as different appreciations of the problem and interpretation of the data.

Also open data users have so far not proven or even aroused the perception that they are capable to deliver meaningful results.

“That first hackday was grotesque. Basically, only his circle of friends was there. That's why a lot people unfortunately said, we couldn't put a lot of effort into this, when it leads to such results.”

(Administrative department, municipal level, Germany)

What remains is the promise of sophisticated and powerful ICT capable of processing, mashing up and
analysing large amounts of different kinds of data. These systems demand open data. However, they are preconditionally dependent on high quality data, in open formats, a uniformly structured and described way. ICT systems in public administration on the other hand are mostly programmed to be closed systems, shielding data from data theft, protecting privacy rights and safeguarding their performance to support administrative processes from outside attacks. Furthermore, proprietary formats strengthen their manufacturers position to create a lock-in effect and secure their market position.

The opposite can be seen with those parts of public administration that are more used to publishing their data, though not necessarily to the general public or for free. Nevertheless around these administrations a number of associations emerged between data users. Here ICT systems are ready-made to prepare and share data, e.g. geographic and meteorological data. Also, there is a history of standardisation across administrations and jurisdictions that lead to nation-wide or even European standards, e.g. the INSPIRE directive for geographical data.

“Certain standardisations came naturally because of the software that a number of public administrations use.” (data owner and vendor of geographic data, municipal level, Germany)

However, these administrations often rely on their data as a source of revenue that would need to be compensated. Furthermore, there is staff in those departments that prepares data and handles the distribution and financial transaction processes. These positions might become redundant, when data is completely made available as open data. Thus, efficiency gains are not accepted as an argument.

“The argument was then, that the city employs people with low educational levels who nowadays fulfil these tasks. If citizens start doing that then these people become unemployed.” (formerly ICT strategy unit, municipal level, Germany)

Therefore, benefits – if feasible at all – are unequally distributed. Nevertheless, open data is perceived as a noble endeavour that lends the appearance of modernity.

“Munich as a city presents itself to the citizens, shows itself as a service provider; [...] as attractive and thus modernity always plays a role. E-participation is also a topic – everywhere en vogue – [...] around the elections. A topic that you can catch attention with.” (ICT consultant, Germany)

Thus, politicians pay lip-service to open data without establishing a framework in which it can truly thrive. As a consequence, window-dressing strategies currently best align actor’s interests: Administrative departments provide data that is available in a structured format, at a fairly good quality level, not obviously sensitive, requires little maintenance and thus little effort to be published. This precludes that data will not be harmonised.

**Conflicts around open data**

Technology matters. ICT systems undertaking the collection, cleaning, storage and distribution / safeguarding data do play a significant role in the process determining the provision of open data to the public. Many of the systems employed in Spain or Germany are designed to keep data from leakage to the public, a design feature that makes sense in a world where data being public means belonging to the public authorities that collected, processed, analysed and interpreted this citizens’ or businesses’ data. The data presented in the paper suggests that authorities most successful in the provision of data to the
public were supported by ICT systems that were purposefully designed to export data in machine readable and open formats. The involved technologies therefore assume the role of an actor in a Latourian sense holding either an interest to provide or shield data.

In general, notwithstanding any general open data paradigm, the decision whether or not to publish a data set is left to the administration that “owns” the data, which means generates and stores it in the course of its public task. Which organisation this is happens to be strongly influenced by the overall state structure as well as political decisions not related in any way to open data. Thus it can be stated, that who is the data owner is an arbitrary assignment in regard to open data. As a consequence, highly decentralised, diversified, federal states will, all else being equal, find it more difficult to act jointly and swiftly in regard to open data, because coherent action requires intensive negotiations and compromises, sometimes called the “joint-decision trap” (Scharpf, 1988, 2005). Implementing European regulations, such as the PSI directive, in countries like Germany and Spain thus involves several levels of government and negotiations of the administrative levels with various policy fields each. During this process, what is considered public sector information and open data is shaped by the various stakeholders involved, as has been shown.

In Germany, more pronounced legal discussions can be observed which might be attributable to its administrative culture and/or that in Spain general rules largely took these topics off the table. The 2007 law and royal decree solve issues that data owners might raise as a barrier, for example by clarifying liabilities and licenses. Since these issues are largely unresolved in Germany, they can be used as a counter-argument to open data.

Apart from the larger argument what open data actually is about - transparency vs. economic growth - there are other general disputes about costs and licenses. “confidentiality, risk avoidance and fear of political escalation prevent government practitioners from publishing datasets” (Huijboom & van den Broek, 2011). It appears that the core conflict is between the ICT strategy units and the so-called data owners, the administrative departments who generate the data in the course of fulfilling their public task. While data owners have little incentive to publish open data, ICT strategy units are often in charge of open data projects and measured by a project’s success. Thus, they pocket the praise, but seem to have little means to actually achieve good results. One such means is a general policy with a strong and extensive open data mandate/open by default-clause. However, few such policies exist and there remains quite an amount of leverage of data owners, since policies are often discretionary and not mandatory (see Shkabatur, 2012).

The data presented in this paper demonstrates that data owners actually do comply with the respective policies and legislations that often were set up - one might suspect - in order grab media attention due to the aura of modernity with regards to technology and transparency. However, this compliance often is by name only, providing data that is (a) already available, (b) not relevant in terms of financial revenue for the owner and (c) is not politically sensitive.

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3 Despite prominent and high-voiced advocacy at the international level, the legal framework around open data is largely national. Here, the legal framework allocates the mandate in regard to open data, or it does not, but leaves it an open question. The role of the political-administrative system, e.g. state structure (federal/unitary; centralised/decentralised) or administrative culture (public interest/legal state) has been highlighted in regard to other reform waves (Pollitt & Bouckaert, 2011). Assumptions can be made that these factors as well as e.g. the role of the individual in relation to the state and the history of freedom of information (FOI) and transparency legislation do play a role in open data too and the superior results in anglo-saxon countries suggest an influence. However, this has not been systematically researched so far.
Conclusion

The findings in this article point to three kinds of relevant actors in the context of open data within the public administration in Germany and Spain that we identified as data owners, open data strategists and ICT systems. Their incentive structures are set up differently and in many respects collide. While the first group is mainly concerned with guarding the rights conventionally associated with ownership, the second group’s job performance is measured according to the success to provide open data to the public. ICT systems are mainly set up to shield data from their export to the public.

The involved actors align their diverging interests within the public administration by following a data availability approach, i.e. by providing data which is already existent and which is technically easy to publish. Thereby they follow the strategy to publish as many data sets as possible in comparatively poor quality that neither are politically sensitive, nor used to be sold to interested citizens or businesses. This leads to catalogues that are cluttered with uninteresting and incoherent (measures, vocabulary, structure etc.) data which is of little use to the actual users. We therefore argue that despite regularly achieving this alignment of interests inside the public administration the open data phenomenon currently does not manage to overcome Callon’s obligatory passage point as it currently fails to integrate actors outside the public authorities: the users.

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References


