Expectations and Austrian Linked Open Government Data

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This extended abstract outlines my work in progress to analyze the actors' expectations regarding (Linked) Open Government Data (OGD) in Austria. The agenda I am following is to elaborate on what moves a domain like this, which strives for sociotechnical change. Firstly, two signifiers are used to compass this domain. Then I focus on expectations as structuring element. In the last part I will ponder how this sociology of expectations can be combined with interpretive patterns.

A Network and two Signifiers

The terms "Open Government Data" and "Linked Open Government Data" are commonly referenced in this domain, network or community¹ surrounding this terms. They are pivot points of these sociotechnical phenomena and thus I also chose them as marker to determine the edges of my study. (Linked) Open Government Data is an international movement. The focus on Austria marks another edge, but international material has to be included in the analysis, when it is referenced by local actors. Currently two initiatives construct tangible entities: Open Government Data Austria² and Open3³. These signifiers are best introduced by these references used by the actors themselves. The following definition is commonly cited (Opendata-Network 2009):

"Government data shall be considered open if they are made public in a way that complies with the principles below:

- 1. Complete All public data are made available. Public data are data that are not subject to valid privacy, security or privilege limitations.
- 2. Primary Data are collected at the source, with the finest possible level of granularity, not in aggregate or modified forms.
- 3. Timely Data are made available as quickly as necessary to preserve the value of the data.
- 4. Accessible Data are available to the widest range of users for the wider range of purposes.
- 5. Machine processable Data are reasonably structured to allow automated processing.
- 6. Non-discriminatory Data are available to anyone, with no requirement of registration.

1

- 7. Non-proprietary Data are available in a format over which no entity has exclusive control.
- 8. License-free Date are not subject to any copyright, patent, trademark or trade secret regulation."

From these definitions one limitation is to be highlighted: open data do not infringe "valid" privacy and security concerns. Privacy and Security are emphasized to forestall cautionary concerns. Point three, "primary", requires the source thus the public actors have to be addressed, politics and administration. Currently the Viennese administration is actively participating in this domain (APA 2011).

The extended term Linked Open Government Data puts more emphasis on point four, "machine processable". It asks the government data to be formatted in a specific way. Linked data use formats from the "Semantic Web" to describe them in a way that data can concisely refer to other data on the World Wide Web. The two terms are evidence of at least two development histories intersecting at this domain. One is the history of Open Government Initiatives, which strive for transparency and can show various Freedom of Information Acts in the US and UK. For this history, the possibilities of electronics come as welcomed addition for their general aims. Another path, similar but slightly different is the domain around the signifier "eDemocracy", which explores ways to use electronic systems to improve democracy regarding e.g. participation. For this one Open Government Data is a partial aspect to be covered. The term Open Linked Data originates from a domain that uses "Semantic Web" as signifier. Already in the 1990s while the World Wide Web was just expanding its frontman, Tim Berners-Lee, announced the Web should not contain documents for humans to read, but data for machines to "understand" (process). This domain sees Government Data as one key aspect to fill its Data. In Austria this gathering is reflected by the duality of initiatives. Open Government Data Austria is initiated by persons arriving from the Semantic Web discourse, mainly the Semantic Web Company⁴, while the persons from Open3 pursuit the development of eGovernment.

A Rhizome of Expectations

What use is (Linked) Open Government Data? What does it mean to have (Linked) Open Government Data? These questions are not only asked by the newcomer, they are also constantly called upon from within the domain. This leads to the area of expectations, which play a significant role in the domains structure.



expect proof that offered data is beneficial

Figure 1: Expectations deadlock

In their groundbreaking paper Brown and Michael (2003) set up the sociology of expections from a Science and Technology Studies (STS) background. In this work they describe how scientists use reflections of past futures (retrospecting prospects) to construct expectations of new futures (prospecting retrospects). In the Austrian OGD discourse temporality plays a different role. Here the frame of reference is an international "race", where Austria has to take care to "not fall behind". Points of reference are mainly the UK and US.

Closest expectations are those of the effects of OGD. These are multiple as are the routes to OGD, which were shown in the last section. One expectation is increased transparency of administration, like detailed up-to-date budget figures. This expectation can be shared by citizens and politics. A reference is the UK initiative "where does my money go"⁵. The title already discloses the aim; a right to know how tax money is spent. Another expectation aims to be able to create extensions to services by an administration, like city maps⁶. Any data are being given value and expected to be a source of unthought-of utilization. For example one idea uttered is aggregated load of cell phone towers as indication for traffic jams and used for a traffic jam warning application. In the same vein the semantic web domain values any data that is provided or can easily be converted in its formats. The administration noticing the OGD initiatives in Austria expect possible savings in its scope of functions. It is not loathed to not have to develop and administer web services if they are taken care of by citizens.

On a next level these actors' expectations concentrate on each other. Since OGD is a common cause the actors originating from Open Government, eDemocracy and Semantic Web close on ranks. However, the key players – politics and administration – need to be included. The OGD domain expects them, what point one of the definition explicates: to put all possible data online that does not infringe valid privacy or security claims. Emphasis is on all. Administration and politics are for the time being reluctant. Concerns are the administrative costs to operate such data servers; worries about datasets not being correct and uncertainty about liability due to possible wrong data; loss of income for data traditionally

being sold by the public hand and the possibility of faulty interpretation of data by laymen. OGD activists also implied they fear that some summary claims might proof wrong, when detailed data is made available, e.g. "the elevators of the Viennese subway stations work 99% of the time". Administration and politics expect from the OGD citizen domain specification which data are requested and demonstrations that this data are going to be actually used in a way beneficial for the community. This is a deadlock as figure 1 illustrates.



Figure 2: Use of demonstrations to undo the knot

As a case study the website <u>http://www.ubahnaufzug.at</u> shows a way out of this deadlock by demonstration. It is a joint effort of previously mentioned Open3 and Bizeps⁷, a nonprofit organization to advise disabled persons. Ubahnaufzug.at is manually filled with data, which elevators are not operational at the moment, so persons not being able to take the stairs can plan alternative travel routes. Owner of the detailed data on the functionality of elevators are Wiener Linien, a public owned company. During office hours a voice service can be queried whether the elevators of a specific station are operational. This website is currently being filled by the users themselves when encountering a defective elevator. This case shows an example how the deadlock is tried to be undone. The website works in limited scope without direct data, but is a functional demonstration. Sheila Jasanoff (2005) called public demonstrations of scientific claims *civic epistemologies*. This includes demonstrations like the Agriculture Minister John Selwyn Gummer publicly feeding his daughter a beef burger to demonstrate his trust in British beef.

A Sociology of Expectations and Interpretive Patterns

In this last section, at the time being, I can only outline my plans of further development of my work. Expectations sure play a crucial role in contemporary, sociotechnical development, structuring the domain, setting agendas. Promises are also used to raise expectations. Harro

van Lente (1993) and his continued work shows e.g. the work of promises on membrane technologies. But why do some expectations/promises work in a domain and are successfully raised, while others possibly do not. There must be an underlying layer why expectations can work to be something desirable. To tackle this layer I plan to combine the sociology of expectations, originating from STS, with interpretive patterns, originating from the German tradition sociology of knowledge (Wissenssoziologie). These interpretive patterns can be brought out by hermeneutic analysis of core documents. These are documents that are constantly referred to within the domain.

One of these documents is Tim Berners-Lee (2009) speech on TED Talks. He prompts the audience to call its demand "Raw data now!" This request is constantly cited by persons from within this domain. This shows they have seen the video and put value in it. Concluding, I currently can only give two teasers. At 10m20s he says "so we are talking about making the world run better". This implies a mechanical ideal of a world operating better, instead of e.g. "making the world a better place". Or at 10m30s he show sympathy for the past behavior of administrations: "you hug your database; you don't let it go until you have made a beautiful website". On the one hand, it highlights a cooperative stance toward administration, instead of a conflictive accusing. To "hug data" is a very interesting notion on the value we give data, the way we treat it. Like a child that has to be taken care of, so it can grow up. I hope the next time I can tell you about this anthropomorphism and more.

Notes

- While the terms "community" and "network" can mostly be used synonymous, they raise quite different associations: "egalitarian collective" in the one case, the "marketed individual" in the other. To not lay prior emphasis on one way of perception, I will alternate between these approaches or use "domain" as a more neutral concept.
- 2. http://gov.opendata.at/
- 3. http://www.open3.at/
- 4. http://www.semantic-web.at/
- 5. http://wheredoesmymoneygo.org/
- 6. http://www.wien.gv.at/stadtplan/
- 7. <u>http://www.bizeps.or.at/</u>

Literature

APA (2011): Frauenberger: Wien sagt JA zu Open Government, <u>http://www.ots.at/presseaussendung/OTS_20110309_OTS0113/frauenberger-wien-sagt-ja-</u> <u>zu-open-government</u> [downloaded 26th April 2011] Berners-Lee, Tim (1994): W3 future directions, <u>http://www.w3.org/Talks/WWW94Tim/Overview.html</u> [downloaded 27th April 2011]

Berners-Lee, Tim (2009): Tim Berners-Lee on the next Web, TED Talks, <u>http://www.ted.com/talks/tim_berners_lee_on_the_next_web.html</u> [downloaded 28th April 2011]

Brown, Nik and Michael, Mike (2003): A Sociology of Expectations: Retrospecting Prospects and Prospecting Retrospects. *Technology Analysis and Strategic Management*, 15 (1), pp. 3-18.

Jasanoff, Sheila (2005): Designs on Nature. Science and Democracy in Europa and United States, Princeton: Princeton University Press, pp. 247-271

Lente, Harro van (1993): Promising Technology - Dynamics of Expectations in Technological Developments (Thesis), Twente University, Enschede, 1993

Opendata-Network (2009): Open Government Data Prinzipien, <u>http://opendata-network.org/2009/11/open-government-data-principles/</u> [downloaded 26. April 2011]