Modes of Governance in Digitally Networked Environments: A Workshop Report

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Over the past decade, researchers have become increasingly interested in the theoretical and practical issue of governance as it relates to information and communication technologies. However, while the field has grown with the proliferation and use of such technologies, its scope and focus are far from clear: what counts as governance in settings, in which people increasingly interact through networked digital media? How can we think about interaction, coordination and control in these environments? What is the role of technologies in creating and maintaining regimes of governance? And what methodologies and methods are appropriate for understanding them? This paper draws on an interdisciplinary workshop held at Oxford University to have a closer look at some of these issues. It suggests that a key to understanding the heterogeneity of workshop contributions is to attend to the performativity of governance and governance research, the analytic status of 'technology' and the conceptual and methodological devices we use to research it.

Introduction

Over the past decade, an increasing number of researchers have become interested in the theoretical and practical issue of governance as it relates to information and communication technologies. However, while the field has grown with the proliferation and use of such technologies, its scope and focus are far from clear: what counts as governance in settings, in which people increasingly interact through networked digital media? How can we think about interaction, coordination and control in these environments? What is the role of technologies in creating and maintaining regimes of governance? And what methodologies and methods are appropriate for understanding them?

These questions were at the heart of a workshop on *Modes of Governance in Digitally Networked Environments*, held at the Oxford Internet Institute (OII), University of Oxford on 26 March 2009. The interdisciplinary event brought together 15 junior scholars (nine PhD/DPhil candidates, six Post-Docs) from seven countries to share and discuss their empirical and theoretical work. The goal of the workshop was not to promote a specific notion or definition of governance or technology, but to open up the field, draw together a variety of approaches from different analytical traditions—and see what can be learned from this experiment.

The report is organised as follows. We start by documenting the background and motivation for the workshop by drawing together four recent strands of research at the intersection of governance and digital media. Based on this review, we introduce the original framing of the workshop around the notions of modes of governance, digitally networked environments and empirical grounding in an attempt to open up the field. After an extensive summary of the papers presented during the day, we conclude by trying to make sense of the resulting heterogeneity. Rather than establishing our own definition of governance in digitally networked environments to order and categorise the material and ideas, we identify a number of sensibilities that may be usefully employed in future research:

- Performativity of governance and governance research: how and to what extent do modes of governance perform the worlds in which they have their place?

- Technology and digitally networked environments: what do different understandings of technology, data and infrastructure do for different modes of governance?

- Methods and devices: what analytic, conceptual and methodological devices are appropriate for establishing and maintaining modes of governance?

The report concludes that researching governance in digitally networked environments can itself be understood as an ordering activity.

Background and Motivation for the Workshop

In recent years, the number of books, articles and reports dedicated to issues of governance and digital media has steadily increased. Drawing on our own experience, we made an attempt at summarising some of the most prominent strands of research. While such a cursory review cannot do justice to specific contributions, it helped to put the workshop into context and develop its focus.

Recent Approaches to Governance in, of and through Digital Media

A first strand of research gained currency under the label of **Internet Governance**. When networked computing became accessible to a broader audience during the 1990s and words like "web" and "internet" entered the dictionaries, both policy-makers and researchers started wondering about the nature of public order in these environments. The emerging internet was conceived of as a global network of information flows that transcended geographical boundaries and challenged ideas of state sovereignty and understandings of regulation that were based on the possibility of legitimate physical coercion (cf. Castells 1996). While this has led some to suggest the existence of a space largely independent from existing governance arrangements (Barlow 1996; Johnson and Post 1995), others emphasised the ongoing role and importance of nation states and their governments (Goldsmith 1998; Goldsmith and Wu 2006).

A major focus of these early debates was on the management of technical standards and protocols under the auspices of old and new organisational arrangements like the International Telecommunications Union (ITU), the Internet Engineering Task Force (IETF) or the World Wide Web Consortium (W3C) (see Cave et al. 2008 for a comprehensive overview). Especially the management and control of the Domain Name System became a fiercely contested issue (cf. Mueller 2002: 109), which —among other things—resulted in the creation of the Internet Corporation of Assigned Names and Numbers (ICANN) and a series of experiments with new and "democratic" forms of participation (cf. Johnson et al. 2004). At the national level, lawyers and government officials were discussing how existing regulatory frameworks needed to be adjusted. Over time, these debates extended to new arenas like the World Summit of the Information Society (WSIS) or the Internet Governance Forum (IGF), which aimed to include a variety of governmental and non-governmental stakeholders in the governance of the internet (Dutton and Peltu 2007; Mayer-Schönberger and Ziewitz 2007). Issues like child protection, privacy or the digital divide dominated the agendas.

Not surprisingly, Internet Governance research has been closely tied to policy discourses and developed a corresponding focus on the role of more or less institutionalised stakeholders at the national or transnational level. Governance is often thought of as the more or less targeted attempts of states and other regulatory bodies to advance the common good by implementing and enforcing policies. Digital technologies tend to be perceived as a challenge to existing arrangements, posing new questions about the legitimacy and efficacy of rule and regulation. As Jeanette Hofmann wrote, Internet Governance can be understood as "an open-ended, collective process of searching, which aims to fill a global 'regulatory void' both conceptually and institutionally in a legitimate way" (Hofmann 2005: 2).

A second strand of research can be summarised under the label of **cyberlaw**. While mostly originating from U.S. law schools in the late 1990s, it is not exclusively doctrinal in focus but draws on disciplines like economics, computer science and political science to complement legal (and often normative) analysis. Unlike the Internet Governance tradition, cyberlawyers have not so much been concerned with large-scale technical infrastructure, but with a new and metaphorical "cyberspace" that provoked new ways of thinking about governance.

A key idea in these debates was that not just law, but also code and physical architecture played an important role in "governing" human behaviour. While Joel Reidenberg discussed the emergence of a new *lex informatica* (Reidenberg 1997), Lawrence Lessig suggested that increasingly ubiquitous computer hardware and software can be regarded as a new modality of regulation (Lessig 1999). Technology (or "architecture") came to be understood as both a constraint on and enabler of individual liberties and freedom. As a consequence, many traditional concerns about the accountability, transparency and legitimacy of governance institutions were applied to software code. If code is law, then who controls the code-makers? What are the merits of "open" vs. "closed" code with regard to transparency and choice? How can the design of technological infrastructure be used to afford certain forms of behaviour while preventing others?

While cyberlaw research shifted the focus from the management and control of large-scale network infrastructures through national and international actors to the political implications of technological design for the actions of individual users, it remained firmly grounded in a view of governance as a solution to preconceived public problems. It extended the analysis to private actors and especially big software companies and their business models, which were assumed to have substantial regulatory effects. In this line of research, it is often assumed that different configurations of technology have normative implications and political qualities, embody social norms and give effect to different values. Similar to the Internet Governance community, also cyberlawyers developed their arguments in close connection with public policy debates, focusing on issues like privacy, spam or copyright and categorising solutions as either social, legal, technical or economic (e.g., Bambauer 2005). At times adopting a strong normative perspective, there is an emphasis on exploring alternative institutional and technological designs, often illustrated with empirical examples and future scenarios (cf. Zittrain 2009).

A third strand of research took a more traditional perspective, wondering how government services would be provided in view of increasingly networked information technologies. Much of this work was concerned with the organisation of government at the national level and became known as **electronic government**, following the example of "electronic commerce" (cf. OECD 2003; Silcock 2001; West 2005). Initially, the focus was on translating offline administrative procedures and interactions into online ones, substituting paper trails and face-to-face meetings with web-based services and interfaces. Many consulting and benchmarking studies at that time recommended creating online platforms, through which citizens could interact with public servants and engage with public administration in novel ways. The transformation of the public sector was usually depicted in a number of stages, centred around a technological interface, connecting citizens and government. Thus, this early view of "e-government" was largely transaction-based, focusing on transposing administrative procedures into online settings via web-based interfaces (Mayer-Schönberger and Lazer 2007: 4).

More recently, it has been suggested to go beyond this transaction-based approach and cast the net much wider (cf. Fountain 2001; Peters 2001). Based on an understanding of electronic government as the logical extension of other technologies of representation and information processing, digitally networked information technologies were increasingly thought to allow fundamentally new forms of public administration. Electronic government was regarded as a way to improve government not just in citizen-government relations, but also within the administration. As such, it is closely related to new forms of public management and the goal of achieving public policy objectives in a fair and cost-efficient way. The analytic focus consequently shifts to ideas of governance beyond government in the context of broader theoretical frameworks like institutional change or hierarchical organisations. As a consequence, some authors have proposed more comprehensive terms like "digital era governance" to capture this phenomenon (Dunleavy and Margetts 2006). A central idea here is that government needs to reclaim the long-outsourced expertise in IT matters by "reintegrating functions into the governmental sphere, adopting holistic and needs-oriented structures, and progressing digitalisation of administrative processes" (Dunleavy et al. 2006: 467).

The latest efforts in this area concern the role of the internet in processes of democratic deliberation and representation more generally. The focus here is on participation and deliberation in the "networked public sphere" (Benkler 2006: 212 ff.). While the state is still the main point of reference, the emphasis shifts to citizen involvement in policy-making and more generally civic engagement (cf. Bimber 2000). Important questions are, for example, how digitally networked technologies can be used to improve citizen participation in government and policymaking or how new technologies may deepen or overcome existing biases and divides (Norris 2001). This approach to electronic government has gained currency over the past five years with the advent of web 2.0 applications and attempts to make them useful for the public sector (see, e.g., mySociety 2010).

Finally, a fourth and more recent line of research focuses on governance as an emergent phenomenon in online communities rather than a targeted intervention by some public or private entity. A key interest is in understanding how governance regimes develop through decentralised interactions in the shadow or the absence of the law. Users are often regarded as autonomous agents that organise themselves and engage in patterns of action, which in turn are interpreted as governance arrangements that are highly specific to the contexts in which they occur.

Analyses in this area are often grounded in case studies of specific platforms or online communities that are characterised by a high degree of computer-mediated interaction, tracing the organisation and the emergence of rules and norms (cf. Dutton 2008). These processes are sometimes called **online self-governance**, suggesting that order does not necessarily depend on the intervention of a regulatory authority, which somehow stands outside social activities. Instead, researchers in this tradition tend to emphasise the attempts of individual actors to establish and maintain coordination among themselves. Often mentioned examples of such "private ordering" include the eBay marketplace (Baron 2002), virtual worlds like Lambda MOO or Second Life (Dibbell 1998; Noveck 2006), newsgroups (Baym 1999), free/open source software projects (e.g., Markus 2007; Weber 2004) or the online encyclopaedia Wikipedia (e.g., Forte et al. 2009; Loubser and Pentzold 2009; Ziewitz 2007).

These approaches mobilise a range of analytic perspectives and combine different models of coordination from hierarchical authority to voluntary commitment. In doing so, they sometimes blur the line between forms of internal, self-sustained ordering and external interventions. For example, in his attempt to explain internet-based cooperation as "commons-based peer production", Yochai Benkler captures the multitude of possible means to order interaction by arguing that "cooperation in peer-production processes is usually maintained by some combination of technical architecture, social norms, legal rules, and a technically backed hierarchy that is validated by social norms" (2006: 105). Hence, governance is constructed as coordinated cooperation, afforded by software architectures as sets of "design levers" (Benkler 2010) that can be strategically manipulated to promote or constrain desired or undesired actions.

In sum, Internet Governance scholars first pointed to the highly political nature of technical infrastructure and conceptualised governance as more or less institutionalised interventions by more or less institutionalised actors. Cyberlawyers followed this lead from a legal perspective, but emphasised the role of code as an important factor in constraining individual behaviour as a complement to law, social norms and markets as well as pointing to the normative implications of technological design choices. Work on "e-government" or "digital era governance" revolved around the changing role of public administration, moving from state institutions to more citizen-centred approaches. More recent research on (self-) governance in online communities started to look into the dynamics and significance of technologically mediated interactions.

Adjusting the Focus: Modes of Governance, Digitally Networked Environments, Empirical Grounding

While these strands of research are necessarily rough caricatures, they can provide some insights into early approaches to researching governance in, of and through networked digital media. Perhaps most notably, these activities have largely taken place within a small number of disciplines, mostly political science, law and economics. More recently, however, the field has gotten a lot more confusing. Notions of governance are increasingly mobilised in disciplines, which tackle similar questions with a different analytic, theoretical and methodological repertoire. Examples are ethnographic investigations into communications infrastructures (Star 2002), inquiries into the politics of search engines in media and

communications studies (Roehle 2009), or practice-based approaches to online governance in science and technology studies (Cheniti 2010). Taking into account these new developments provides the opportunity to challenge some of the existing frameworks and puts at stake the utility of notions of governance and technology as currently practiced in different areas.

In order to explore these issues and open up the field to related disciplines and approaches, we decided to frame the workshop around three ideas: modes of governance, digitally networked environments and empirical grounding (see Call for Participation, Appendix A). These themes are best understood as heuristics for inquiry.

Modes of Governance: While there is a comprehensive and confusingly diverse literature on the notion of "governance", we started with an understanding of governance as a rather loose concept denoting different forms of ordering while leaving open for the moment how this ordering comes about and what exactly it refers to. In a sense, we wanted to resist a definition in order to provide space for contributions that each pursue a different approach to governance and digital media. Specifically, we did not simply want to use the term to stress a change from hierarchical chains of command toward networked forms of adjusting autonomous actions (e.g., Rosenau and Czempiel 1992) or try to come up with any comprehensive taxonomies of governance (see, e.g., Treib et al. 2007). Rather, the qualifier "modes" was chosen to allow for patterns that can be usefully observed in social activities—regardless of whether the actors themselves see what they do as governance or not. Besides more conventional approaches that focus on deliberate and targeted interventions of entities to which we ascribe the quality of "government", this explicitly included also non-obvious dynamics and activities like classification or the design of technological artefacts. In other words, the move to "modes of governance" allowed us to open up the workshop to challenge and explore the boundaries and uses of the concept without declaring any specific version irrelevant upfront.

Digitally Networked Environments: A similar approach was pursued with regard to the analytic status and role of technology. As mentioned above, most previous work resorted to vague and reified notions of technology like "the Internet" or spatial metaphors like "cyberspace". These rhetorical strategies often result in reasoning that conceptualises technology as a constraint or affordance in line with other institutions like law or social norms. Instead, we borrowed the term of "digitally networked environments", which according to Benkler "begins to displace mass media and telephones, its salient communications characteristics provide new dimensions to thicken existing social relations, while also providing new capabilities for looser and more fluid, but still meaningful social networks" (Benkler 2006: 357). However, in contrast to Benkler, we did not conceive of digitally networked environments as information environments as the basis for individual decision-making, but as environments in the more general sense of settings, in which various socio-material activities take place. Of particular interest to us was not the technical infrastructure in the sense of a telecommunications network, but the role of digital information technologies in creating and maintaining modes of governance. We hoped to open up the analysis and take as a starting point environments, in which relations are established and maintained through digitally networked information technologies. This also meant that the common distinction between "online" and "offline" settings, which is often taken for granted, looses much of its significance.

Empirical Grounding: A final preference was expressed for contributions that developed their insights and theory hand in hand with empirical research. This was intended to avoid the tendency in the current governance literature to operate in predefined conceptual worlds of "stakeholders", "states" and "institutions", which are only successively illustrated with examples. The hope was that a preference for empirical grounding could offer some novel insights and perspectives. In addition, we hoped that a focus on empirical cases would facilitate discussion across disciplinary boundaries. While the workshop theme would be more likely to appeal to some scholars than to others, we found that it would not be possible to limit the event to certain disciplines. Empirical observations and case studies were

therefore intended to provide a suitable entry point into the discussion and facilitate interdisciplinary exchange.

In sum, the workshop intended to open up discussions about governance and digital media by emphasising the ideas of modes of governance, digitally networked environments and empirical grounding. The hope was that by opening up the field, we could explore our initial questions: what counts as governance in digitally networked environments? How do researchers and analysts conceptualise technology? What is the utility of these approaches and how do they relate to each other—if at all?

The Workshop Contributions

The thirteen contributions accepted were grouped into six different sessions. As the open and exploratory format of the workshop suggests, this grouping did not follow any theoretical master plan—not least because at the time the programme was drafted only titles and abstracts were available. Rather, we sorted submissions according to perceived similarities and contrasts between thematic foci, theoretical approaches and methodologies.

The **first session** centred on local governance in three different field sites: a survey-based quantitative analysis of political representation and communication in the United States, a case study of a new e-consultation procedure for the Camargue Natural Park in France and an anthropological field study of local politics in a Kuala Lumpur suburb in Malaysia. The **second session** featured two presentations which dealt with organising activities in two different online settings. While one explored the emergence of "reluctant governance" on a scholarly mailing list, the other looked at the phenomenon of netlabels and their role in organising the "free music scene". The **third session** consisted of papers, which mobilised Foucauldian ideas for studying modes of governance in digitally networked environments. The empirical contexts included the social networking site Facebook and the recursive dynamics of consumer modelling in search engines.

The topic of web-based cooperation in larger collectives was the focus of two presentations in the **fourth session**. Although the case studies analysed quite different projects, namely the bug fixing process in the Firefox web browser community and self-organisation in the online encyclopaedia Wikipedia, both highlighted the utility of notions of hierarchy and closing mechanisms in dealing with the platform's openness. Situated in similar empirical settings, the **fifth session** addressed the dynamics of status differentiation and authority in online projects. While the first presentation employed the anthropological concept of tribes and developed a novel understanding of authority in the context of various online communities, the second invoked the notion of heterarchy to understand the complex dynamics of status formation and loss on the blogging platform Daily Kos.

The workshop finished with the **sixth session**, which explored versions of governance that tried to avoid pre-existing theoretical concepts. While the first paper used the example of Wikipedia's "ignore all rules" policy to argue for a study of governance beyond rule-based ordering mechanisms, the second paper juxtaposed ethnographies of Second Life and the Internet Governance Forum (IGF) to show how governance can be understood as an everyday practice of "governanc-ing" rather than an exogenously imposed system of organisation and structure.

The following paragraphs summarise the main findings of each of these contributions, focusing specifically on how participants conceptualised modes of governance and the status of technology. While we could draw on audio recordings of the presentations in addition to the abstracts, the interpretation of each contribution is entirely ours and should not be attributed to the participant without consulting the original work.

Local Politics in the United States, Kuala Lumpur and Southern France

Two modes of governance, one social field: digital media and residential affairs in a Kuala Lumpur suburb
John Postill

Representation as communication: population, information and communication technology, and representation in local government
Mike Jensen

The emerging "locally involved stakeholder" mode of local planning governance
Nicolas Desquinabo

The first session brought together three very different approaches to studying modes of governance in the context of local policy-making in different parts of the world. While John Postill engaged in anthropological fieldwork to understand local governance in a Kuala Lumpur suburb, Mike Jensen employed the tools of survey research and mathematical political science to analyse the role of information technology for the work of local government officials in the United States. Nicolas Desquinabo chose a case study approach to examine the implications of an electronically mediated local planning process in a regional park in France.

In the first contribution, John Postill reported on his anthropological fieldwork, examining the media practices of local leaders in the Subang Jaya and USJ suburbs of Kuala Lumpur in Malaysia. Having lived with and interviewed local activists and government officials over a period of twelve months, Postill combined a field and a network approach to develop the concept of a "field of residential affairs." This "total field of social relations", he suggested, encompasses all the agents (politicians, councillors, businesspeople, journalists, residents, etc.) and social formations (parties, lobbies, cliques, factions, residents' groups, mosques, etc.), which compete and cooperate over local matters of concern. In doing so, the actors were found to employ a diverse range of practices, ideals and technologies.

Although he identified one social field, Postill distinguished two different modes of governance. On the one hand, there is the traditional top-down three-tiered (federal, state, and local) system of government with elected politicians. On the other hand, there is the non-governmental sector of bottom-up initiatives led by prominent residents of the suburb and activists. Postill suggested that these two subfields struggle over local and rather mundane issues like traffic congestion, waste disposal, schools and local crime. He argued that the ethnic boundaries between the Chinese majority and other groups (Malaysian, Indian, etc.) in this largely middle-class suburb were not as important as one might have thought. Instead, residents were united in their "banal activism" to campaign for mundane issues. For example, maintaining a green and save environment was of crucial importance to young suburban parents, whose main concern was with raising their families (Postill 2008).

Postill further suggested that digital media played an important role as a site for the struggle over residential affairs between activists and officials as well as among residents. Both activists and local government officials were found to use a variety of digital information technologies like e-mail, personal websites, blogs and digital cameras to document their activities and community service. Postill interpreted these personal media practices as a way of demonstrating skills and abilities. Especially the non-governmental subfield abides by a "law of selfless volunteerism", according to which activists gain symbolic capital by documenting and communicating their engagement, assuring their peers that they spend their time as volunteers rather than paid workers. Similar patterns were identified in the sub-field of local government, where officials equally use digital media. According to Postill, officials followed the *turun padang*, another fundamental law of Malaysian society, which emphasises the importance of being present "on the ground". Residents expect their politicians and councillors to spend time in the suburb in order to understand and solve the local problems. Again, the actors used the spectrum of personal, collective and mass media to publicly display their activities.

While approaching the topic from the quite different methodological angle of mathematical sociology, also Michael Jensen's study of local government officials in the United States distinguished between different arenas of governance, understanding governance as "recursive communicative interactions" (cf. Bang 2003; Crozier 2007, 2008). The theoretical background for this analysis was provided by Taagepera's (1972) cube root law, according to which assembly size is approximately the cube root of the country's population. This is based on the assumption that the primary function of parliaments and other legislative assemblies is not to produce legislation, but to maximise efficient communication among constituents and legislators. For example, in a parliament with just one member, the only representative would have to maintain channels with every single actor outside the assembly. Conversely, if every citizen was a representative, there would be no channels to outside actors but just communication among all fellow members. Taagepera's model describes the most efficient communication network of population-apportioned assemblies.

In his own analysis, Jensen set out to examine whether and how the proliferation of digital media might affect this reasoning by investigating the communication environment of elected local government officials. Taking Taagepera's "cube root law" as a baseline explanation, he analysed the diversity of actors with which elected officials communicate in the policy process and the extent to which the internet and especially email play a role in that. Based on a survey of 348 officials, Jensen showed that the use of digital communications technologies positively influences the range of groups officials communicate with such as state officials, national government officials, resident associations, business people and NGOs. Moreover, an official's internet use was found to play a significant role in the volume of information consulted, which influence decision-making processes. Jensen argued that despite these findings, the use of internet technologies did not seem to challenge the dominant impact of face-to-face contacts on local policy-making.

Interactions between local government officials and activists were also central to the work of Nicolas Desquinabo, who conducted a case study of a local planning process for the Camargue Natural Park in France. Coming from a political science background, Desquinabo looked in detail at the creation of a management plan, which was supposed to define the goals and policies for the protection of a regional park. Such plans are conventionally drafted by a small number of elected representatives from the governmental field. Other local stakeholders such as local government officials, business people, environmental activists or academics are consulted at various stages of the process to contribute their views in a series of meetings on specific aspects of the plan. Eventually, however, the plan must be ratified by regional and national governments to become legally binding.

This procedure was modified recently with a so-called "e-consultation". In addition to the thematic meetings, a web-based discussion forum was introduced to solicit feedback from a slightly larger number of stakeholders. A total of 90 stakeholders from local associations, local governments and state agencies were invited to comment and propose any changes. The analysis showed that only 20 of these 90 newly invited participants used the forum to post ideas and comments. Out of these 20 participants, six users contributed 60 % of the 650 posts. Most of the annotations were minor corrections or formal edits of the text as well as limited substantial additions. According to Desquinabo, only about 25 % of these edits could be considered controversial.

Organising the Free Music Scene and an Academic Mailing List

Netlabels: organizing the "free music" scene
Patryk Galuszka

Reluctant governance, outsourced responsibility: The organization of the Civil Wars
Study Group in Greece
Kostas Gemenis

The second session featured two presentations that focused on the organising activities of netlabels and the members of an academic discussion list. Patryk Galuszka presented an analysis of the internet-based netlabel scene from a sociological perspective. He proposed a definition of netlabels as "a record label that distributes its music primarily through digital audio formats … over the Internet". According to Galuszka, a characteristic of netlabels like Jahtari, FOEM or Mandorla is that they distribute recordings for free, often under equally "free" licenses that encourage works to be shared. Galuszka suggested that netlabels emerged as new gatekeepers in a world abundant in music available at almost zero marginal costs which took on the task of organising, rating and filtering the supply (Figure 1).
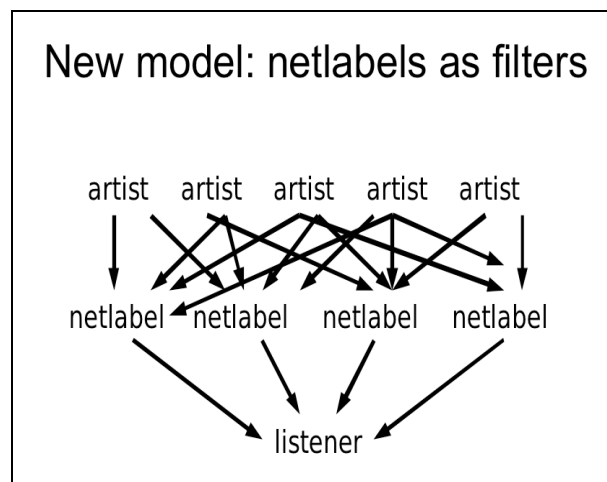
**Figure 1: The role of netlabels in organising the free music scene
(Source: Galuszka, presentation slide)**

To explain the emergence and growth of the currently about 650 active netlabels, Galuszka drew on Bourdieu's (1986) ideas of symbolic capital and prestige. Based on a series of interviews with and a survey of netlabel managers, he suggested that the importance of a netlabel is based on its prestige among listeners. Prestige, he argued, is gained by releasing "good music" and practicing a "non-commercial" approach. Netlabels therefore compete for users, who judge both the quality of the music and the openness of the platform, such as to what extent the music is legally or technically restricted.

Galuszka suggested that governance in the free music scene does not rely on any formalised rules and their enforcement. Rather, in competing for prestige and listeners, netlabels conform and give effect to loosely defined values and principles like "free culture". Galuszka interpreted user choice as an expression of trust derived from an individual's experience with a specific netlabel. This trust, he argued, functions as a mode of governance because the netlabel is interested in justifying its trustworthiness and growing its user base. Galuszka further suggested that, in doing so, netlabels can turn into "supernodes" and even become commercially successful. The more attention they receive, the more interesting and valuable they become as a publishing platform for musicians. Ironically, it were these supernodes that ran the highest risk of loosing their prestige, e.g., by taking advantage of their power to shape the field to the dismay of their user base.

Galuszka concluded that "[w]hile the music may be distributed without mediation of netlabels, some artists prefer to release their works with the help of netlabels, as it gives them recognition and immediate access to communities of listeners. On the other hand, although listeners can easily find music on the Internet without netlabels, some of them prefer to download tracks which are 'officially released' by netlabels, because it saves them time, they would otherwise have to spend to find good music."

The importance of modes of governance that do not rely upon formalisation or structural hierarchies was also evident in Kostas Gemenis' online survey of the subscribers to the Civil Wars Study Group (CWSG) mailing list. The list was established in 2000 in order to bring together researchers working on the Greek civil war in the 1940s. There are about 200 subscribers, most of them historians and social scientists in Greece and abroad. Gemenis suggested that this group is interesting from a governance perspective because it managed to come up with a number of major achievements like annual conferences, several edited books and special journal issues without having developed any formal leadership or explicit organisational structure. For example, Gemenis observed that subscribers do not technically join the study group, but sign up to the mailing without explicit membership categories, fee structures or formal representation like an executive committee or board. Gemenis argued that the only formal position of authority rests with the list moderator, who restricts himself to "technical issues" of maintaining the list.

Gemenis argued that the group was not governed by any particular individual or leader but a couple of organising principles. As far as inclusion and exclusion were concerned, Gemenis suggested that people became *de facto* members of the group by signing up to the list. Activities were organised on an ad-hoc basis, following the ideal of consensus-based decision-making as known from internet standard-setting bodies like the IETF with its focus on "rough consensus and running code". Finally, Gemenis observed that the group tended to outsource responsibility. As an example, he mentioned the management of conference expenses, which was delegated to another organisation. In his survey, Gemenis found that members were reluctant toward any kind of formalisation of the group. He argued that the features and configuration of the mailing list played a key role in facilitating this "informal" mode of governance. It allowed effective communication among members and fostered a sense of community among an otherwise loosely knit group of people.

Foucauldian Analyses of Social Networking and Search Engines

Socio-cyber ties as a manifestation of power in Online Social Networking Sites
Asma Vranaki

Predictive Consumer Modelling as a Mode of Governance
Theo Roehle

The third session brought together two studies that mobilised Foucauldian ideas of governance for the analysis of social networking sites and search engines. In the first part, Asma Vranaki reported on her work in progress on the role of socio-cyber ties as a manifestation of power in social networking sites. The presentation focused on the theoretical underpinnings of an empirical case study of the social networking site Facebook.

Broadly based in socio-legal studies, Vranaki started by clarifying her understanding of online social networking sites, which she defined as "web-based social communities of users with shared interests or affiliations which enable its members to do any or all of the following depending on its technological tools: share data, images, photos, videos, films and sounds; text messages, instant messages and multimedia messages; interact with other users by using virtual actions; create and display personal profiles with other users and create and display a list of contacts." She used the example of Facebook to illustrate her definition and

show how social networking sites bring together users with an element of commonality, facilitate interaction as well as create and maintain relations between members.

Vranaki suggested that the concept of "socio-cyber ties" could be usefully employed as a lens for understanding power effects in the context of social networking sites. In developing the idea, she drew on Foucauldian notions of power and knowledge (Foucault 1980) and also referenced methodological approaches that used network metaphors like social network analysis and actor-network theory. According to her analysis, socio-cyber ties can be characterised as the relations which connect users of social networking sites and which are developed through various types of virtual interactions, such as instant messaging, exchanging photographs or participating in virtual games. These socio-cyber ties, Vranaki argued, constitute a mode of governance because they have power effects, acting as both constraining and productive forces on the actions of users. On the one hand, socio-cyber ties serve as powerful vehicles for the diffusion of various types of information about actors in their social network and beyond. This is made possible through a technical infrastructure that facilitates, for instance, the recording, distribution, connection and retrieval of personal information. On the other hand, the very same relations accomplished through the constant, automatic and up-to-date diffusion of personal information constitute a form of surveillance and discipline that control individual behaviour. Power effects are therefore generated through the interplay between social actions and technical innovations.

Also Theo Roehle drew on Foucauldian ideas of power and governance, but did so in a different setting with a different emphasis. Roehle is interested in the phenomenon of search engines and how they collect, process and reuse the information generated as part of their operations. He showed how search engine and online advertising providers like Microsoft, Google and Yahoo! developed sophisticated strategies to model consumers and predict their consumption behaviour. While part of the data is collected "on the go" like IP-addresses, search queries, browser settings or click streams, other information is volunteered by users themselves like ZIP codes, postal addresses or interests expressed in comments, personal profiles or surveys. In the case of Yahoo!, for example, such information is used to develop models of user behaviour that indicate the likelihood of a response to (i.e. click on) a given online ad. Yahoo! users are matched and scored for their "fit" with these categories on a daily basis. Such predictive consumer modelling, Roehle suggested, is supposed to allow advertising customers to target their ads to those who get the highest score in their category.

In order to make sense of these practices as a mode of governance, Roehle introduced the metaphor of a "menu", which was originally developed by Korczynski and Ott (2006):

> For management, the genius of the menu is that it offers to the customer the image of sovereignty through autonomous choice, while at the same time constraining that choice. ... The menu can offer calculability, predictability, and control by channelling customers in prescribed directions.

Applying this idea to the phenomenon of predictive consumer modelling in digitally networked environments, Roehle followed Korczynski and Ott (2006) and suggested that we ask a couple of questions: what is not on the menu? Who writes the menu? How does the menu creates us as individuals? Does the menu serve to shield one social sphere from another, and if so, with what consequences? Roehle argued that the issue of who controls and manages what aspect of the process is particularly important in this context because users do not always have access to the data collected from their actions. On the contrary, often these repositories are controlled by administrators who collect, process and group the data for commercial interests under the protection of trade secrets.

Roehle also addressed the implications of such models for how consumers perceive of themselves. As an example, he pointed to Google's "Network Node Ad Targeting", a system that ranks members of an online social network according to their influence. Advertisers can place their commercial messages on the profile pages of the most influential members, thereby increasing the effectiveness of their campaign. In exchange, the influential members

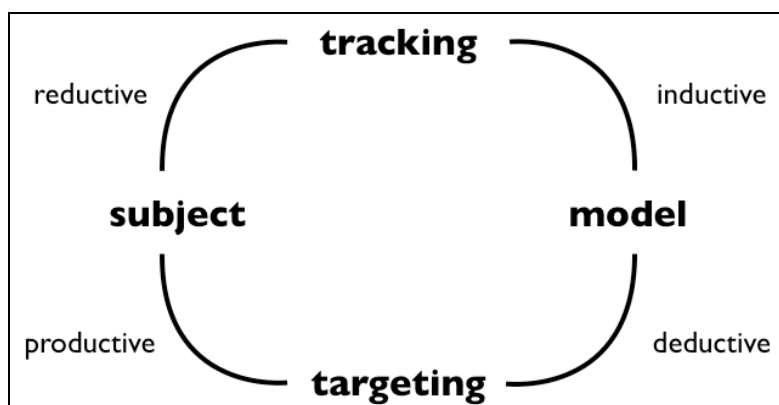receive a financial incentive and are thus encouraged to strengthen their position within the community.

**Figure 2: Predictive Consumer Modelling in web search
(Source: Roehle, presentation slide)**

To summarise his argument, Roehle himself developed a model of the modelling process (Figure 2). This model suggests that the data subject and its model mutually construct each other in a recursive process of tracking and targeting, passing through moments of reduction (collection of user data), induction (development of consumer model), deduction (targeting of consumers based on model) and production (consumers engage with targeted ads). Roehle suggests that Foucault's notion of governmentality "can help to understand the link between external control and internal conduct involved in the increasingly commercial framing of subjectivisation processes."

Hierarchies and Influence in Wikipedia and Bugzilla

Wikipedia governance: Are administrators a 'big deal'?
Max Loubser

Of bugs and buggers: How priorities are set for the development of Firefox, the Internet browser
Matthijs den Besten

The fourth session featured empirical studies of two projects that depend on large-scale computer-mediated cooperation: Wikipedia, the online encyclopaedia that "anyone can edit", and the open-source web browser Firefox, which is maintained by a large number of coders and users.

Max Loubser tackled the question of "Wikipedia governance" and asked specifically how big a deal administrators actually are. On Wikipedia, administrator status is granted to editors upon request and community consensus. This group of authors has access to a number of tools which give them extended rights in editorial matters (e.g., in cases of page deletion, page protection, user blocking and unblocking) as well as to functions of the software. Moreover, administrators are able to grant and remove further user rights. As such, they are often assumed to function as mere janitors, who do boring but necessary maintenance work like identifying and reverting alleged acts of vandalism. For example, Jimmy Wales, the founder of Wikipedia, is quoted saying that administrators are not "a big deal".

Loubser's research challenged these ideas. In order to better understand the role of administrators in Wikipedia, he collected all administrator actions from the MediaWiki Software into a data set, covering the period from 23 December 2004 to 3 January 2008. He

then conducted a series of statistical analyses on that data, specifically looking at the development of articles in terms of numbers of changes and active users. Loubser decided to focus on a specific policy that is conventionally enforced by administrators. He chose to focus on the protection policy which limits the range of editors, who can edit a certain page. While full protection restricts any editing to administrators, semi-protection also allows users with a user account older than four days to change the article.

Loubser started with some summary statistics, showing that 1,300 out of the 1,518 administrators (85.6 %) protected a page in their career, the mean number of protections per administrator being 95. During the examined period, he counted a total number of 48,383 protections on the site. Although only 16,045 of the 2,179,265 Wikipedia articles (0.74 %) have been protected, this small set accounts for 14.95 % of all the edits to article pages because these are comparatively heavily edited. Considering the correlation between the number of edits and the quality of articles (Wilkinson and Huberman 2007), which shows that the entries elected as "featured article" also feature an above-average number of changes, the enforcement of the protection policy affects a critical part of the project because protected pages generally have more edits than pages that have never been protected.

According to Loubser, the data further suggested that—contrary to the project founder Jimmy Wales' understanding of administrators as mere "janitors"—administrators do have a significant influence. Not only does protection negatively affect the volatility of pages by reducing the number of changes and result in a decrease in the number of anonymous and registered users, it also affects the content of an article. Investigating the reasons provided by the administrators when protecting a page, Loubser found that 25 % of all protections are made to prevent the recreation of deleted articles (i.e. protection of a deleted page). As far as full protections are concerned, even 46 % are administered to prevent the recreation of deleted articles.

These actions do not always adhere to standards of "community control" that are assumed to govern administrators' actions. Hence, although they should be accountable for their actions which are supposed to be monitored by other editors, the high volume of tasks and the speed with which administrator are expected to deal with them make it impossible to account for every action. Although their functions are not seen as a "big deal", they take a crucial role in the project's development.

Loubser concluded that the mode of governance in Wikipedia is "a novel hybrid": some mechanisms are clearly unlike traditional modes of governance and involve relying on the cooperation and good faith of peers while others are more recognisable from traditional organisations. Of the latter, the most important is the formation of a hierarchy backed by Wikipedia's constantly adapted software. The software gives a small group of participants, the administrators, power over almost all others. This mix of old and new has made the task of understanding Wikipedia's mode of governance fraught with confusing middle ground.

In the second presentation, Matthjis den Besten examined the open-source bug tracking system Bugzilla and its use in the Mozilla Foundation's Firefox web browser development community. According to its website, Bugzilla is basically a server software that allows individuals or groups of developers to keep track of and resolve flaws in their software. This includes tracking bugs and code changes, communicating with team mates, submitting and reviewing patches and managing quality assurance.

Den Besten focused on the bug resolution process. He used the so-called "onion model" of open source software organisations to illustrate the layered constitution of most mature open source projects. According to this model, a group of core developers contribute most of the code and oversee the design and evolution of the project, while a large periphery of decreasingly active users takes on smaller tasks like testing or bug reporting (cf. Crowston and Howison 2005). Using content analysis and related data mining techniques, den Besten analysed the interactions between these two groups.

Den Besten suggested that the attention developers devoted to reports and requests was influenced by several factors. A first observation was that "other things being equal, reports and requests from outsiders increasingly tend to be ignored. While such behaviour may have helped to shield Firefox from the 'alpha geek power user' in the early stages of development, it also makes it difficult for 'mom and dad' to let their voice be heard." Accordingly, den Besten found that core members seem to engage more frequently with the periphery when the latter proposes a patch, i.e. a technical solution to a bug problem. He concluded that Alan Cox' dictum "show me the code", perhaps even more than Linus' law "Given enough eyeballs, all bugs are shallow", seems to be the dominant rule that governs the development of software like Firefox.

Power Dynamics in Online Tribal Bureaucracies and Daily Kos

Governance challenges and opportunities in Online Tribal Bureaucracies
Mathieu O'Neil

"Heterarchy" as a mode of networked community governance
Aaron Shaw

The fifth session elaborated further on notions of hierarchies and status differentiation in online communities. Mathieu O'Neil presented some of his recent work on "online tribal bureaucracies" (2009) grounded in a series of case studies of different large-scale online projects like Debian, Wikipedia and Daily Kos.

Starting from the questions of "who governs?" and "why is there mass participation in online projects?", O'Neil argued that internet-based peer production projects constituted a new form of organisation, structured around autonomy and the distribution of authority. In particular, he suggested that participants in distributed projects could rapidly attain powerful positions of authority if they managed to justify these vis-à-vis other members. Building on this premise, O'Neil distinguished two types of online authority. Sovereign authority, on the one hand, is based on a clear separation of role and person. Project leaders in the Debian community, for example, derive their authority from a bureaucratic regime of rules, release schedules and written records. Charismatic authority, on the other hand, links roles back to persons. According to O'Neil, it is affective, tied to personal qualities such as the brilliance of a great founder or the position of a great node. As examples of charismatic authority, O'Neil mentioned Jimmy Wales as Wikipedia's "benevolent dictator" or Linus Torvalds for the Linux project. In addition, O'Neil observed a type of archaic power in the form of trolls and vandals, attacking others or starting flame wars in open forums.

O'Neil suggested that these different forms of authority do not necessarily result in successful projects. Rather, both the distribution of authority and the frictions between different authority orders might trigger conflicts. These conflicts usually drain resources and compromise the stability of the project, which might ultimately result in a fork. However, as O'Neil observed in his case studies, conflicts can also have a unifying effect. Leaders have to integrate contributions and adjudicate conflicts in order to maintain a meaningful relationship between their roles and the structure of the project.

In order to account for this situation, O'Neil developed the concept of "online tribal bureaucracy", which he defined as a hybrid form used by autonomous groups and characterised by the cooperative production of free content, overlapping orders of authority where bureaucratic traits are mixed with collective and charismatic (or "tribal") traits, the prevalence of conflict and deliberative procedures. O'Neil concluded by identifying a number of governance challenges for online tribal bureaucracies. He distinguished between minor conflicts that slow down the project and major conflicts that consume it. He noted that it is hard to punish loners effectively since even the enforcement of centralised decisions depends on the approval of individual members. Finally, he sketched some problems with

deliberative procedures, such as path dependence, speed, a lack of due process and the disappearance of the surprising, thus attractive, quality of decisions attained through voting.

Also Aaron Shaw's contribution engaged with the social organisation of power in online projects. Shaw reviewed several sociological theories of power around discipline, structuration, fields and networks, but ultimately settled for the concept of heterarchy, which in his opinion best suited the distinctive characteristics of privately ordered digital domains.

The concept of heterarchy has been developed in a number of contexts, ranging from mathematical biology (McCulloch 1945), ant colonies (Wilson and Hoelldobler 1988) and multinational corporations (Hedlund 1986, 1993) to new media firms (Girard and Stark 2003). Drawing on this strand of research, Shaw developed a formal definition of heterarchy as a modality of power, which exhibits certain structural characteristics and mechanisms of regulations: (1) chains of command and dense "horizontal" networks, (2) "castes" of nodes, (3) feedback loops of information and influence, (4) dominance of normative coercion and control and (5) the establishment and preservation of norms by central nodes. Heterarchies can thus be regarded as hierarchies in flux with feedback loops between the information on performed actions and the amount of influence and the position in a hierarchy.

Shaw continued by testing this concept of heterarchy through a case study of the political blogging platform Daily Kos, where he spent time as a participant observer. Shaw described the architecture of the platform, where the visibility of blog posts is correlated with the number of recommendations they received from other users. Thus, highly rated posts have a higher chance of appearing on the front page and being more widely read than lowly rated posts. However, this position of power, Shaw suggested, is unstable and does not automatically extend to other posts. Positions of power are not generally sustainable. Yet, Shaw noted that there are also stabilising factors. The visibility and prominence of a post could result in increased attention and popularity for the contributor, who might have accumulated further positive recommendations for other entries. Shaw concluded that heterarchies are characterised by both dynamism and stability.

Governance beyond Governance: "Ignore All Rules" and "Governancing"

Watch over inalienable possessions
Han-Teng Liao

Internet Governanc-ing
Tarek Cheniti

The last two presentations of the workshop adopted yet another approach to governance. Rather than relying on the conventional vocabulary of organisation and structure, the contributors explored alternative ways of thinking about modes of governance in digitally networked environments.

Han-Teng Liao started with a paradox he observed when researching the online encyclopaedia Wikipedia. While there is a growing number and ongoing diversification of rules and policies, Wikipedia also features the oxymoronic invitation to "ignore all rules". The explanation offered on the site is as brief as concise: "If a rule prevents you from improving or maintaining Wikipedia, ignore it."[1]

Liao regarded this policy as an expression of actors' awareness that codifications of norms usually entail some form of gaming-the-system behaviour. The moment members of the project formally define a rule, he argued, others will try to circumvent or game it. Any attempt to avoid this dynamic would inevitably lead to an "arms race between loopholes and laws". In

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[1] *See* Wikipedia, *Ignore all rules*, http://en.wikipedia.org/wiki/Wikipedia:Ignore_all_rules (last visited November 23, 2009).

Liao's interpretation, the "ignore all rules" rule addresses the self-defeating circle of rule creation, rule breaking, rule enforcement and, again, rule updating.

Liao explained this peculiarity by resorting to the anthropological concept of "inalienable wealth", which has been developed to denote cultural objects that remained attached to their original owners even when they are circulated among other people (Weiner 1985). Traditionally, inalienable wealth is understood as a possession that is imbued with affective qualities expressing the value of these objects when kept by their owners and inherited within the same family or group. Inalienable possessions are not for sale, as Liao suggested. They could be passed on, but retain a strong connection to their creators or original owners—the paradox of keeping while giving. As an example of this principle in action, Liao mentioned the copyleft licenses that govern the use of the content of Wikipedia. Similar to the concept of inalienable wealth, he suggested that "the contributors of a piece of software code or artwork … keep their copyright, but they give away the content with some strings attached." Liao further argued that such forms of circulating inalienable possessions could benefit the emergence of a sense of community among the actors producing and sharing their work.

Liao concluded that governance here is not so much centred on expanding laws and regulations, but on trial-and-error forms of apprenticeship as well as vigilante practices exercised by concerned individuals. According to Liao's observations, governance is learnt through routine practices, novices are socialised into the appropriate conduct and ethical agendas, and in doing so they get to know their kin: "Governance can be built around inalienable wealth where contributors, by participating in the practice of keeping-while-giving, begin to have a sense of 'we are in this together'."

Also Tarek Cheniti adopted an approach that challenged existing understandings of governance. Putting the notion of governance itself on the spot, Cheniti suggested that current thinking on governance is dominated by a focus on historical developments, procedures, structures and definitions. Debates on governance were usually focused on high-level and institutionalised actors with only little attention to what happens at the level of individual users. Cheniti criticised these perspectives as ontologically indifferent. For example, the existence and character of stakeholders as representatives of business, government and civil society were usually taken for granted while the messy, uncertain and non-structural aspects of governance were ignored. Cheniti suggested to focus on the mundane, benign issues which bear on global internet governance and asked what it practically takes to govern the internet: what is the relationship between policy and everyday use?

Cheniti developed these ideas in two ethnographies he conducted over the course of two years. In the first study, he worked as a consultant to the UN at the Internet Governance Forum (IGF), an international multi-stakeholder forum for policy dialogue on issues of internet governance. In the second study, he participated as the virtual persona "Hanibal" in the virtual world Second Life and actively engaged in the day-to-day governance practices as a security guard on a Japanese entertainment island. While the two settings are often regarded as fundamentally opposed, Cheniti emphasised their similarities: both claim to be global, multi-stakeholder, democratic, inclusive and accountable to millions of users.

In Second Life, Cheniti argued, doing governance is a "laborious affair, involving practical negotiations of behavioural standards in a world that promises its citizens freedom from the physical constraints of First Life". He found that participants are involved in bringing governance into being in mundane, everyday interactions. For example, Cheniti visited a virtual ballroom and was promptly informed by another guest that his casual dress was not considered appropriate to the venue. When asked where this strict dress code came from, the person responded that the owner of the island had established a rule, but admits that he had never seen the rule in writing nor had he actually met the owner. Thus, what the rule is is performed in mundane day-to-day interactions. Cheniti made a parallel observation when analysing interactions at IGF meetings. In one session, a representative of the Chinese government was asked by a moderator to comment on human rights violations and internet

censorship in China. When he responded that he could not comment on something that did not exist, he earned laughter from the audience. Cheniti suggested that this episode can be seen as an illustration of the ontological politics at work in governance, i.e. the ongoing struggle for accomplishing a coherent reality.

Thus, in both settings, governance emerged as the upshot of mundane practices. Rules and identities are invoked as discursive resources rather than straightforward guidelines for behaviour as it is often suggested. Cheniti concluded that "governance does not have to come about as a deliberative procedure, but is invariably enacted as a practical mode of ordering in both lives. In other words, we should start thinking about governance as a verb, not a noun."

Looking forward: Some Sensibilities for Future Research

One of the most puzzling observations from the workshop concerned the diversity of topics and approaches. While field sites ranged from local communities on different continents to mailing lists, large-scale online cooperation projects and intergovernmental forums, disciplinary backgrounds were equally diverse, including anthropology, political science, sociology, computer science, socio-legal studies, media and communication studies as well as science and technology studies. The resulting accounts of governance were heterogeneous and revealed a confusing—and sometimes conflicting—range of assumptions, emphases and conceptualisations. And still, all researchers somehow identified their work with "governance" in the context of information and communication technologies.

This brought up the question of how to make sense of this conglomeration. What is the utility of drawing together these approaches as "modes of governance in digitally networked environments"? Is it just bad workshop design, featuring inconsistent contributions? Is it mixing up disciplines that do not have much to say to each other? Or is there a different way of understanding this diversity? In this final section, we will draw on the workshop discussions and our own analysis to identify a number of sensibilities that may be usefully explored in future research. In doing so, we will also address the three key concerns that motivated the workshop in the first place.

Performativity of Governance and Governance Research

A first sensibility from the workshop was that there are different ways of dealing with the heterogeneity of approaches. One option would be to simply accept the idea of governance as a catch-all phrase with no coherent or consistent meaning. For example, it has been argued that "governance is now everywhere and appears to mean anything and nothing" (Frederickson 2005: 285). Others noted that "because the term has strong intuitive appeal, precise definitions are seldom thought to be necessary by those who use it" (Lynn et al. 2000). In this view, the concept of governance may be a useful placeholder, but would be of no particular relevance as an analytic concept. Another option would to be to try and come up with a definition of governance that would claim more universal currency. Such a definition could be used to subsume as many approaches as possible and exclude those that do not fit. Some have tried to advocate a more coherent notion of governance (see, e.g., Lessig 1998; Mayntz 2003; Rhodes 1997) or even map modes of governance in various frameworks and models (cf. Treib et al. 2007). Yet, while this approach allows a clear and

relative positioning of different theories, it would not so much *explain* the phenomenon of heterogeneity of approaches, but rather *explain it away*.

In contrast to these extreme positions, it seems that there could be another way of thinking about governance that would be closer to the original motivation of the workshop. So instead of either capitulating in the face of heterogeneity or trying to homogenise it into a single authoritative theory, it is possible to turn the phenomenon itself into a topic for research. Rather than taking the existence of more or less coherent versions of governance for granted, the analytic focus could shift to understanding *how* and *under what circumstances* particular modes of governance are achieved. Specifically, it seems that what is accomplished in each contribution is not just a specific notion of governance, but also a version of the world in which this notion of governance has its place. Already a cursory look at the material reveals how different authors presume and work with different conceptions of actors and identities, causal relationships and agency, problem definitions and thematic foci that make possible claims about who, which or what governs what, which or whom. In other words, the accounts of governance in digitally networked environments presented at the workshop can be viewed as *performative* in that they both implicate and are implicated in creating the worlds in which a mode of governance makes sense. What looks like a highly specific notion of governance turns out to be embedded in a conceptually mediated description of the entities that are made to matter, realities enacted in articles, books, slides and oral presentations.

While it is beyond the scope of this report to offer a detailed analysis of the workshop data, a short illustration may suffice. Virtually all participants used a combination of text, visualizations and spoken commentary to establish their respective governance worlds in interaction with the other workshop participants. To pick just one example, Jensen set the scene with only a small number of entities to make an argument about local government: "officials" make up "parliament" or an "assembly", which corresponds to a "constituency", operating in an "external environment" next to "mass media". In addition to the initial abstract, a presentation slide was used to illustrate this arrangement with a pentagon of labelled circles connected by arrows, a bold headline and a small picture of a hand drawing a mathematical formula on a board (Figure 3).
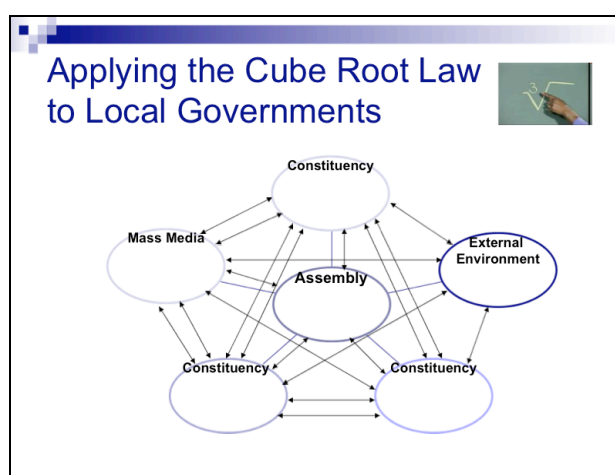

Figure 3: Sample Presentation Slide

This set-up allowed the author to advance a theory of representation as communication, suggesting that parliaments are designed to maximize efficient communication rather than produce legislation ("the communication paradigm"). Consequently, the problem of governance could be portrayed as one of managing information flows and communication among these entities—a setting in which now also "the Internet" could play a key role. Using methods that allowed him to attach numerical values to these entities and their relations,

Jensen's account of governance convincingly concluded that "Internet use plays a significant role in the diversity of groups officials' communicate with" and that "Internet use plays a significant role in the diversity of sources that actually influence the decision-making process" (Jensen, Presentation Slide 6).

Going through the contributions in this way, it becomes obvious that Jensen's presentation was by no means a special case. All authors, regardless of their theoretical and methodological inclinations, engaged in the task of writing, talking and visualising their respective modes of governance into being. As a consequence, governance was varyingly conceptualised as collective decision-making on matters of public concern in a world of stakeholders, procedures and political organisation in local government; as organising and drawing together a field of action in a world of loosely-coupled members of a mailing list or an emerging industry of netlabels; as creating the conditions for people to think of themselves in a certain way and act accordingly in a world of subtle subjectivation through social networking sites and search engines; as shifting hierarchies and status differentiation in a world of autonomous Wikipedians, bloggers and programmers in search of technologically mediated institutions; and as what people practically do on a mundane, day-to-day basis when convening a policy forum or visiting a virtual ballroom. Each of these accounts comes with its own a baggage of assumptions about what constitutes a subject and object of governance, what mechanisms are at work, what issues are at stake and which consequences should be drawn for design and intervention. In other words, different modes of governance *perform* realities. Or as Schatzki (2006: 1864) put it in his work on social practices: "Governance … happens with performance".

Finally, to say that governance research is performative does not necessarily mean that "anything goes". As John Law suggests, "[w]e do, as a matter of fact, distinguish between fantasy and knowledge. … There's a gradient between the two, the gradient to do with ordering, rather than some kind of absolute rupture. But, most of the time we don't find difficulty in distinguishing between them in practice" (Law 1994: 84). In other words, while there may be multiple versions of governance enacted, these are not arbitrary, but themselves embedded in heterogeneous networks, in which both researchers and analysts operate. Governance, in this sense, is "more than one but less than many" (cf. Mol 2002).

Overall, the idea of performativity may provide an alternative starting point for making sense of the heterogeneity of contributions encountered in the workshop. Future research could explore how and to what extent analyses of governance perform the realities they claim to order, how this relates to recent theoretical work in different areas (cf. Barad 2003; Butler 1997; Callon 2006), and what the implications are for the practice of governance.

From Technology to Digitally Networked Environments

A second sensibility relates to our initial concern with technology and "the digital" in the context of governance. As we framed the workshop along the idea of digitally networked environments, it does not come as a surprise that all contributions are linked by that theme. However, when asking how technology has been conceptualised and incorporated into different modes of governance, we get a fairly diverse picture.

Some contributors took the status of "the Internet" for granted and treated it as a fixed entity at the centre of causal relationships. According to this approach, spaces were characterised by the presence (or absence) of digital media, thus performing a sharp distinction between online and offline as was the case in Loubser's and den Besten's work on the dynamics of online production. It was interesting to observe that although—or perhaps because—they chose a rather specific notion of technology as a point of departure, it tended to become a blind spot in their analyses. This led to the somewhat paradoxical insight that the moment the analytic status of technology is taken for granted, it vanishes as an object of inquiry and tends to present itself as unproblematic. This would suggest that analysts need to be careful

not to loose sight of the role and status of information and communication technologies, precisely *because* they permeate settings and situations. In times of the "mediation of everything" (Livingstone 2009) an analysis taking the presence of digital technologies for granted runs the risk of ignoring them—technology then becomes the proverbial elephant in the room.

Other contributions built their perspectives on assumptions about particular qualities of information and communication technologies. For example, some contributions invoked the idea of an "open internet". While Postill examined the ways in which technologies foster change in political processes, Gemenis and Galuszka employed the internet's alleged openness as a starting point for their studies of changing work routines and the disassembling and re-assembling of markets, respectively. However, openness is not the only "political quality" (Winner 1980) that can be attributed to these technologies. It is equally possible to do this with other features (cf. also Castells 2001). In surveillance studies, for example, the internet has been portrayed as a panopticon and institution of control (Galloway 2004). Against this backdrop, some contributors like Roehle tried to combine seemingly opposing properties when talking about the internet technology's power effects in constraining *and* enabling user activities.

With different approaches stressing different qualities of technology, the question remains how useful such conceptualizations are for understanding the role of networked digital media in modes of governance. One critique emerging at the workshop was that blanket descriptors like "open", "closed", "emancipatory", "coercive", "productive" tend to gloss over the rich details of a technology's meanings, positions and functions in the environments studied. Specifically, it remained unclear whether and to what extent such qualities were inert properties or depended on contextual attributions and handlings. To use Brian Rappert's (2003: 571) words of warning: "To talk about the 'actual' characteristics of the technology as if they were known and could simply be agreed upon is problematic." Turning these observations into a sensibility, one may suggest that reflections on a technology's qualities are not necessarily given and easy to grasp. Instead, it may be useful to attend to the "much more complicated matters about how and to what extent technologies could be said to constrain, enable, facilitate or resist certain actions and interpretations" (Rappert, 2003, p. 574).

A way of addressing the complex interweaving of socio-material practices head-on was offered by contributions that mobilized the symmetries introduced by some versions of actor-network theory (cf. Callon 1986; Latour 1992; Law and Hassard 1999). Vranaki, for example, suggested a radically different view of people and things as being permanently constituted in heterogeneous networks. A related body of theories comes from the emerging field of social practices, which proposes to think of social phenomena as a "bundle of practices and material arrangements" (Schatzki 2006: 1863). Practices are regarded as structured actions that are always carried out in arrangements, i.e. assemblages of material objects. Hence, governance is not studied by examining structuring elements like knowledge, rules or technology, but by looking at their enactment in practices.

Future research in this area could take a closer look at these issues and ask: what is the status and relation of humans and material artefacts and what are the theoretical and methodological devices to develop such an understanding? How could governance research that is aware of its performativity account for the multifaceted, convergent media environments and constant switch between different media configurations?

Doing Governance Research: Methods and Devices

A final sensibility has to do with the observation that the boundaries between researchers and their objects turned out to be much more blurry than expected. Looking back at the workshop, one of the initial themes set out in the Call for Participation was to ground

theoretical claims in empirical observation. Yet, the contributions made clear that this "grounding" can take very different forms, each predicated on a number of conceptual, analytic and methodological devices. For example, while some participants used statistical techniques to establish (cor-)relations between largely independently defined actors, others tried to avoid antecedent notions of stakeholders or processes. In both cases, methods do not come as neutral instruments but active agents in the practice of governance research.

If one accepts that analyses of governance inevitably perform their own concepts and assumptions, then *how* we do the research matters. At first sight, this appears to be a rather trivial insight. Most research settles on specific questions, makes assumptions, chooses analytical strategies and makes sense of data in one way or another. Yet, especially in a field where practice and research are so closely intertwined, the interactivity between the process of observation and the phenomenon to be observed is critical. Given the role of governance research in rationalizing, justifying and legitimating political interventions, methods cannot be viewed as neutral instruments. As mentioned above, every approach to studying governance can be seen to not just privileging certain methods, but also establishing the very objects of analysis. This would suggest that governance research cannot assume that there is governance out there that can be understood through different tools. Rather, what counts as governance crucially rests on how it is approached.

Our initial reasoning had emphasised the benefits of "empirical grounding". By starting from empirical work, we had hoped to generate novel insights, concepts and perspectives that could enrich or counter existing theories. In practice, however, it turned out to be difficult to discern which elements derived from observation and which were actually "imposed". As one colleague remarked: "When you say 'empirical grounding', is this a preference for inductive or deductive research?" The answer is probably neither-nor. Understanding governance as continuously co-constructed would move beyond the logic of a strict deductive vs. inductive dichotomy. As a consequence, there is no privileged way of engaging with governance as a research topic.

These questions seem especially important in the context of digital media. There appears to be a growing interest in "data", vast amounts of which can easily be acquired on the internet. In view of new ways of compiling and analysing large-scale data sets, some have gone as far as claiming that the scientific method has become obsolete in view of an abundance of "real-time data" about human behaviour (cf. Anderson 2008). Others have heralded the advent of a new mode of "computational social science" (Lazer et al. 2009) or proposed to reconceive empirical sociology by taking a new interest in the "politics of method" (Savage and Burrows 2007). However, as the workshop discussions suggested, more data may not necessarily mean better research. On the contrary, one would need to ask what counts as "data" in any given context and critically attend to how the configuration of devices used to generate data implicates and perpetuates the realities it is said to represent. So an interesting question would be to ask how and to what extent different methodologies (and especially "digital methods", Rogers 2009) are implicated in the creation and maintenance of certain modes of governance, and vice versa.

Finally, the question emerges: if we take the idea of performativity in governance and governance research seriously, how are we to cope with it in practice? After all, also this report performs a version of governance. By organising the text and figures in the way we did, we wrote the idea of modes of governance into being and inevitably engaged in governance ourselves—an attempt to order the "field of governance research" based on the contributions to the workshop. However, we hope that this report has shown that it is possible to account for performativity without loosing analytic focus. This may be thorny territory and require us to leave our disciplinary comfort zones, but opens up a range of new questions: what are the analytical, theoretical and methodological devices that can help us turn these issues into productive topics for inquiry? How can we think of performativity as a feature, not a bug?

Conclusions

The workshop showcased an impressive range of approaches to governance in digitally networked environments. Starting from a review of the literature on governance in the context of information and communication technologies, including Internet Governance, e-government, cyberlaw and online self-governance, the report explained the background and motivation for the workshop and emphasised the need to open up the field to accommodate approaches in related areas. Guided by the three ideas of modes of governance, digitally networked environments and empirical grounding, we provided a summary of the workshop contributions, which covered a variety of topics, problems and disciplines.

In order to make sense of the resulting heterogeneity, we sketched three sensibilities that may usefully be employed in future research. First, we introduced the idea of performativity of governance and governance research and speculated how our analyses might change if all accounts of modes of governance would necessarily enact the worlds in which they had their places. Second, we reviewed how technology and "the digital" had been conceptualized in the contributions and discussed the pitfalls of too static understandings of technology and material artefacts. Third, we drew attention to the role of methods not just as neutral instruments for "discovering" governance regimes, but as devices for performing modes of governance in digitally networked environments.

If anything, this report has shown that doing governance research is itself an ordering activity. When we ask in any given context "who, which or what governs what, which or whom?", researchers are inevitably part of the equation. Again, this does not mean that any attempt at analysing governance in digitally networked environments would be arbitrary and capricious. Rather, being aware of and reflecting on the inevitable limitations of different modes of governance may generate new insights and questions that could help us move beyond the current dualisms, boundaries and orthodoxies. Eventually, paying attention to how governance research performs the objects of its study may enable us to become more critical users of governance—and governance research.

Acknowledgements

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Appendix A: Call for Participation

Modes of Governance in Digitally Networked Environments

Interdisciplinary Workshop
Oxford Internet Institute – Oxford University
Thursday, March 26, 2009 – 9am-6pm

Over the past decades, a variety of new technologies have reconfigured the ways in which we initiate and maintain social and economic relations. Today, millions of people around the globe buy goods from people they have never met in person, edit the online encyclopedia Wikipedia without monetary rewards, use e-mail and SMS to organize political protest, stay in contact with friends via social networking sites, or look for a new partner via online dating services. In short, an increasing part of our lives is taking place in digitally networked environments. Powered by information and communication technologies built on cheap and interconnected processors with considerable computing capacity, these environments are characterized by novel forms of interaction.

Digitally networked environments are often assumed to magically govern themselves. Especially when traditional modes of governance like law and centralized regulations fail, researchers tend to resort to rather vague ideas like "self-regulation," "decentralization," "liberalization," or "peer production" to describe the complex interactions and mechanisms that take place in large-scale, loose-knit socio-technical networks. Moreover, the network itself is often contrasted with markets or hierarchies as a new mode of governance in its own right.

This workshop will adopt a different approach and take a closer look at new and non-obvious modes of governance in digitally networked environments. Specifically, we would like to explore what these modes are, how they work, and who or what controls them. Questions might be, but are not limited to: What is the role of calculation, measurement, classification, trust, accountability, or reputation? How can we understand leadership and authority under these conditions? Which role does the technical infrastructure play? Is there evidence for a new form of network governance? Overall, the goal of the workshop is to generate a deeper conceptual, empirical, and normative understanding of these new modes of governance through open and creative discussion.

Format: We are planning on having a one-day workshop with several sessions, focusing on one mode of governance each. A session will be kicked off by a presenter and a respondent, preferably grounding their arguments in empirical analysis. At the end of the day, we hope to wrap up the workshop and summarize the findings in a brief report.

Participation: The workshop is open to a maximum of 16 postgraduates and post-docs from all departments and universities. If you would like to participate, please send a brief abstract (300 words) including your name, affiliation, and contact details to malte.ziewitz@oii.ox.ac.uk by Feb. 20, 2009. Priority will be given to those who commit to introducing a mode of governance of their choice for discussion. Refreshments, lunch, and challenging ideas will be provided. A limited amount of travel funding is available.

Contact: Christian Pentzold (christian.pentzold@oii.ox.ac.uk)
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                Oxford Internet Institute – Oxford University
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                http://www.oii.ox.ac.uk/events/

Appendix B: List of Participants and Presentations

Internet Governancing
  Tarek Cheniti, Oxford Institute for Science, Innovation and Society, University of Oxford, UK

Of bugs and buggers: How priorities are set for the development of Firefox, the Internet browser
  Matthijs den Besten, Ecole Polytechnique, Paris, France

The emerging "locally involved stakeholder" mode of local planning governance
  Nicolas Desquinabo, Université de Montepellier – Cemagref, France

Netlabels: organizing "free music" scene
  Patryk Galuszka, Academy of Humanities and Economics, Lodz, Poland

Reluctant governance, outsourced responsibility: The organization of the Civil Wars Study Group in Greece
  Kostas Gemenis, Keele University, UK

Representation as communication: population, information and communication technology, and representation in local government
  Mike Jensen, University of California – Irvine, USA

Watch Over Inalienable Possessions
  Han-Teng Liao, Oxford Internet Institute, University of Oxford, UK

Wikipedia governance: Are administrators a 'big deal'?
  Max Loubser, Oxford Internet Institute, University of Oxford, UK and Google Inc., Zurich

Governance challenges and opportunities in online tribal bureaucracies
  Mathieu O'Neil, Australian National University, Canberra, Australia

Two modes of governance, one social field: digital media and residential affairs in a Kuala Lumpur suburb
  John Postill, Sheffield Hallam University, UK

Predictive consumer modelling as a mode of governance
  Theo Roehle, Paderborn University, Germany

"Heterarchy" as a mode of networked community governance
  Aaron Shaw, University of California – Berkeley / Harvard University, USA

The role of socio-cyber ties, as a modality of power, in protecting privacy interests in Online Social Networking Sites
  Asma Vranaki, Centre for Socio-Legal Studies, University of Oxford, UK