RESEARCH AGENDA AND PROJECTS

INTRODUCTION

The Alexander von Humboldt Institute for Internet and Society (HIIG) was founded by the Humboldt Universität zu Berlin, the Berlin University of Arts and the Social Science Research Centre Berlin (WZB) in conjunction with the Hamburg-based Hans Bredow Institute (HBI) by way of an integrated collaborative partner. The overall goal of the Institute is to explore the dynamic interdependence between society and the Internet and accordingly contribute to a growing international field of research from various disciplinary perspectives.

The Research Agenda emphasises the increasing interpenetration of digital network infrastructures and everyday life. It is our common goal to study the unique dynamics of innovation on the Internet as an interplay between socio-cultural, technical and legal norms without privileging any one of these sources of ordering. All of our research projects share an interdisciplinary approach linking backgrounds and expertise in various disciplines. To achieve this objective, most research projects span at least two research areas and are supervised by at least two research directors. Research projects at the HIIG generally focus on structural features and collective practices rather than on individual behaviour and situational contexts.

The research conducted by the HIIG is organised in four research areas:

- Internet & Media Regulation

- Internet Policy & Governance

- Internet-enabled Innovation

- Global Constitutionalism and the Internet

JOINT RESEARCH TOPICS AND PERSPECTIVES

Each of the four research areas has identified one lead project designed to shape the profile of the respective research area and generate further research questions. In addition, the HIIG has identified two overarching research topics as being relevant for all research areas. Overlapping topics and perspectives not only link the various research projects and areas but also stimulate interdisciplinary theoretical input. Apart from this, they form important building blocks for the evolving profile of the HIIG within the nascent global network of Internet research institutes of which we are a founding partner. As our research programme evolves, we expect to develop more cross-cutting topics and concepts.

Joint Research Topics encompass:

- Online Participation

- Structures of Coordination and Rule-Making

The extent to which a project contributes to these joint research questions is one of the main criteria in developing the Research Agenda.
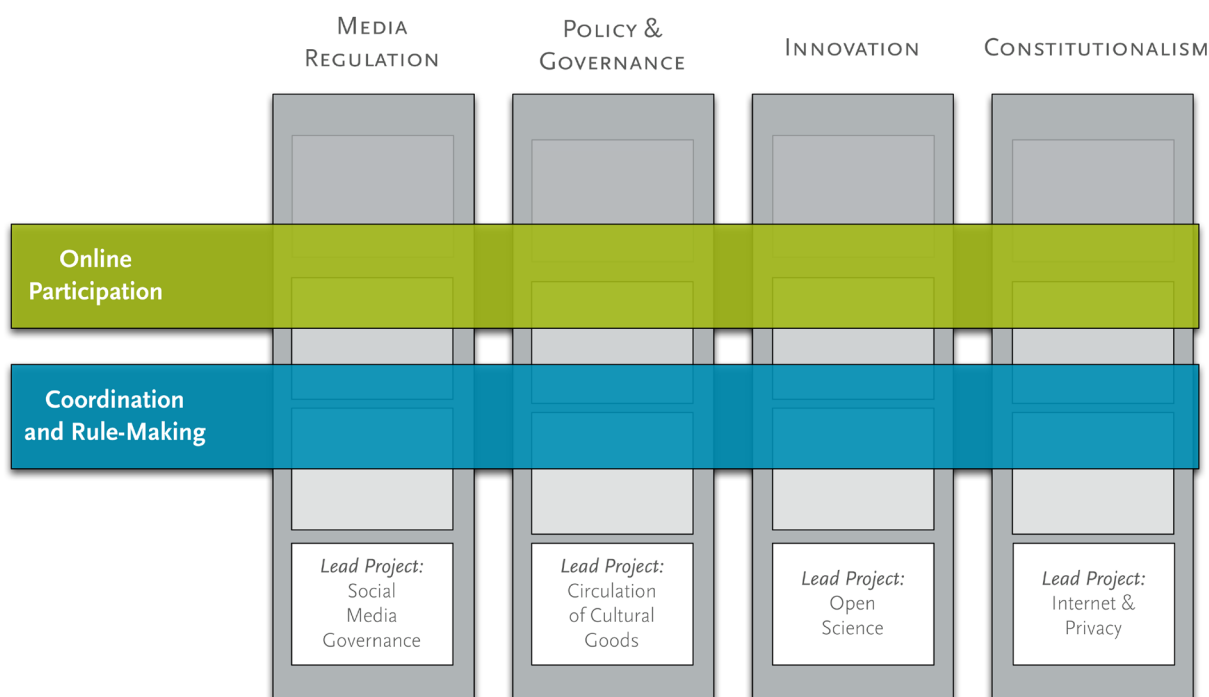

Figure: Research Areas and Joint Research Topics

ONLINE PARTICIPATION

The Internet is associated with the promise of individual and collective empowerment, especially in terms of policy-making and customer integration, though not restricted to these contexts.

Online participation is a core aspect in understanding the interplay between the Internet and society, for the following reasons:

- People engage in various forms of participation on many levels of society ranging from political decision-making and consensus-seeking to customer integration and co-creation in business.

- As a communication infrastructure, the Internet combines the reach of mass media with the capability of bidirectional communication. Thus, in n:n communication innumerable linkages between previously unlinked knowledge become possible. Because innovations are often new combinations of existing knowledge, the Internet is very attractive for applications in innovation management.

- Boundaries of organisations are being redefined with a tendency towards more transparency and higher levels of participation on the part of stakeholders.

- By convening, sharing their views and pooling their opinions, stakeholders are empowered. At the same time, the Internet has not managed so far to pervasively transform the relationships between organisations and stakeholders in the anticipated ways.

We plan to address the overarching topic of online participation through smaller sub-projects with a manageable smaller reach (like the "Motivation for Online Participation" project) that contribute to a joint understanding of the wider theme. We begin this joint approach in all four research areas of the HIIG with a transdisciplinary literature review to identify existing arguments and research streams.

The Institute seeks to understand:

- Prerequisites and antecedents of online participation

- Processes and conditions during online participation

- Consequences that online participation entails

The "Motivation for Online Participation" project (see below) is part of our approach to understand the prerequisites and antecedents of online participation (i.e. which tasks are suitable for online participation or how we need to split tasks to make them suitable). During the course of the next twelve month, we intend to focus on the process of online participation (by researching and comparing the managerial capabilities required in political organisations and companies, for instance) and the consequences of online participation (by investigating and contrasting its transformative scope in terms of the balance of power, hierarchies and social practices in both political and commercial organisations).

Alongside this project on motivations for online participation, the institute is carrying out a number of other projects that also contribute to this overarching theme: online participation plays an important role in the Open Science research project, for example, since one aspect of Open Science is the collective generation of knowledge. In the projects relating to Internet & Privacy and Orphan Works in Digital Libraries, we ask to what extent the general public can influence and shape legal initiatives at the supranational level by means of online participation. Finally, there are plans for a workshop to address specific legal issues arising from crowd-sourcing processes.

STRUCTURES OF COORDINATION AND RULE-MAKING IN THE DIGITAL AGE

A second overarching perspective concerns forms of coordination and rule-making in digital environments. Recent literature on governance arrangements has accentuated the plurality of origins, venues and resources of rule-setting activities. Legal research has also paid increasing attention to the relationship between social norms and the law as well as between public and private ordering. As the debate on copyright infringement on the Internet shows, social and legal norms can mutually reinforce but also undermine each other. However, the Internet also provides ample evidence for the relevance of technical norms as a means of private ordering in digital space. Lawrence Lessig's "code is law" reflects the popular assumption that, in the digital realm, technical settings may govern social interaction in similar ways as legal norms do.

While the Internet has made both the co-existence and the enabling or restricting impact of social, legal and technical rules a common experience, this dynamic interplay of regulating the digital world is only gradually finding its way into research approaches. However, the more the Internet penetrates all areas of social and economic life, the more evident this decentralised rule-making authority is likely to become. What is still lacking across the various disciplines involved in Internet research is a systematic appreciation of the interdependence and the ongoing shifting process between legal, technical and social sources of rule-making in technically mediated environments.

Several projects at the HIIG explicitly centre on the interaction between social, technical and legal norms (Social Media Governance, Circulation of Cultural Goods, Internet & Privacy, Orphan Works in Digital Libraries, Freedom of Expression in the Quasi-Public Sphere). Heterogeneous ordering processes of this kind are also of relevance for several other projects (such as Open Science, the Digital Administrative State). By elevating this issue to the status of an overarching topic, we aim to build an interdisciplinary bridge between the four research areas while simultaneously creating the prerequisites for comparable contributions to various research fields dealing with processes of binding rule-making.

RESEARCH AREAS

INTERNET & MEDIA REGULATION

The Internet has become a universal technical platform that – among many other effects – shapes public communication. Research in the area of "Internet & Media Regulation" derives from questions revolving around the normative structure of this new ecology.

We can observe that intermediaries – new ones as well as established information brokers – play an important role in that structure. In fact, traditional media intermediaries are also participating as mediators in the field of Internet communication. In this context, we are particularly interested in developing configurations, investigating the impact these structures have on the production and selection of content and, finally, what this means for normative structures and governance concepts.

Lastly, we are interested in users' behaviour on social media platforms. What determines how we interact with other users on these platforms? What is the most important factor (legal regulations, informal social norms or software design) and how do they interact? Research in this area can be of assistance in creating more adequate and, consequently, more effective regulation in this field. The main goal, however, is to understand the evolving normative structures better.

The research area Internet & Media Regulation draws on law and policy studies, conducting transdisciplinary projects on "Social Media Governance", "Notions of Public Spheres in Information Law", "Legal Aspects of Crowd-Sourcing" and "When Data becomes News".

Lead Project: Social Media Governance

Lead: Wolfgang Schulz, Co-Lead: Thomas Schildhauer

Recent tools of online communication such as blogs, wikis, social network sites or video and mobile platforms have substantially lowered the barriers for user-generated content and the articulation of personal relations, i.e. the social graph. As "social media", they have a profound impact on value-related aspects such as informational privacy or our understanding of ownership of content.

The project examines the emerging governance structure which shapes the use of social media for a certain social networking service with respect to informational privacy. The goal is to draw a picture of the normative background of user behaviour in social media, which also contributes to the joint research question of "structures of coordination and rule-making in the digital age" (see above).

Recent research on social media still stops at disciplinary boundaries and consequently focuses solely on certain regulatory aspects such as interface design, relative standards, communication

regulations or legal norms. To get the whole picture, the project will combine these insights in an interdisciplinary approach underlying a wider understanding of "governance".

The analytical framework accordingly identifies four governance factors: (state) law, contracts, software design and social norms.

The project's initial output will be to provide methodological groundwork for the analysis of these four aspects of governance in social media by (a) collecting and summarising existing academic knowledge; (b) identifying abstract categories or levels of analysis within or between the four factors; (c) extracting or re-formulating empirical indicators for each of these four factors with particular emphasis on the field of informational privacy. The anticipated outcome of this project will include instruments (such as sets of survey scales and measurements, codebooks and categories, etc), which can be employed in the empirical examination of particular social media platforms, practices or phenomena.

By applying these methodological tools in two waves of functional and structural analyses and social surveys in Germany and Israel, the project will furthermore not only analytically map the existing governance framework of informational privacy in social networks, but will also provide an internationally comparative perspective and insights into developments and trends in terms of the interdependencies between the four governance aspects.

Notions of Public Spheres in Information Law

Internet-based communication has changed the fundamental dynamics of the public sphere. The public sphere has traditionally been analytically constructed from the point of view of the function of mass media. Nowadays, many areas can be described as 'private-public spheres' (the most common examples being social networks). The first goal of this project is to obtain a better understanding of the "new public spheres" and try to find plausible terms to describe them.

The aforementioned opportunities present numerous legal problems including basic questions regarding the impact these developments have on the self-conception of society and democratic processes. Law courts, moreover, have to deal with those problems on a day-to-day basis: the challenges are conspicuous – for example, regulations regarding privacy rights were created and have evolved within the normative and legal structures of the traditional media. Are these regulations adequate legal instruments for resolving issues related to comments written by students about their teachers on Internet platforms, to cite one typical issue area? The project intends to analyse existing legal terms and distinctions made between the private sphere and various, differently defined forms of public sphere to discover clues as to how best to handle these new public sphere models.

Legal Aspects of Crowd-Sourcing

One emerging field of interest refers to normative structures for specific new practices that have been made possible by Internet communication. Crowd-sourcing serves as a prominent example. For many companies, crowd-sourcing offers attractive possibilities for gaining both knowledge and (human) resources free of charge. So far, issues in this field have gone largely unnoticed in the legal debate. There are plans for a workshop in which representatives of affected business will be questioned with a view to obtaining insights into specific legal problems that may arise with crowd-sourcing processes. The aim of the project is to gain a better understanding of how affected individuals solve their respective problems, to analyse the framework created by the applicable laws and, where possible, to come forward with regulatory ideas and concepts for overcoming existing obstacles. This project is related to the overarching research questions in the area of online participation (see above).

When Data become News

Understanding the promise, peril and cultural meaning of "big data" is one of the primary theoretical and methodological challenges when it comes to investigating the impact of Internet-enabled communication on society. The new knowledge-generating practices also include those that make up the field of journalism, for which the phenomenon of big data has a double relevance: firstly, it is a topic that needs to be covered (critically) with respect to its different implications for society and secondly, it is already facilitating a new journalistic 'coverage pattern', a novel way to identify and tell stories. Indeed, the field of journalism is now beginning to grapple with the big data phenomenon, creating a sub-field known as "computational" or "data" journalism.

This particular project is at an early stage, and as such is predominantly concerned with mapping the lay of the land, categorising discourse currently associated with computational journalism (both academic and professional), and classifying project goals. We do this by identifying the relevant body of academic literature in the field of journalistic research and beyond, by mapping the field of data journalism in the US and Germany ("Who is doing computational journalism, and how do they fit into news organisations?"), by analysing interviews with data journalists and others working with algorithms in news organisations ("How do these new journalists see their roles, how are these roles defined, what are these workers actually doing, what kind of educational background do they have?" etc.), and by looking at the output of data journalism ("What topics are covered by the means of data journalism?").

INTERNET POLICY & GOVERNANCE

The Internet Policy & Governance research area addresses processes of public and private ordering on the Internet from a social science perspective. We conceptualise practices of ordering as an interplay between socio-cultural, technical and legal norms. Such norms become visible wherever they are involved in negotiations and conflicts between various stakeholders who are involved in norm-setting processes. In this broad context, we are particularly interested in ordering processes whose regulatory outcomes are likely to affect the further development of the Internet in a general way. Examples of such issues are copyright law and its implementation or freedom of speech in social media (see below).

The conceptual approach draws on, and seeks to combine two schools of research in an innovative manner: governance studies and the 'science, technology and society' approach (STS) that grew out of science studies. The analytical strength of the governance approach lies in its ability to "decenter" rule-setting authority within a given regime. Instead of privileging ex ante the legislator and statutory norms, it aims to take all relevant actors and means of regulation into account, including, for instance, technical standards. STS studies emphasise the social character of science and technology development. Instead of treating scientific and technological achievements as black boxes, STS conceptualises them as "society made durable" (Latour). Studies of governance arrangements tend to look at technology as a subject but less so as a means of ordering processes. STS studies, on the other hand, show a sharp understanding of the links and shifts between the technical and the social but, as yet, without any clear notion of their political and regulatory dimension. Our approach is based on the assumption that, due to the socio-technical nature of ordering processes on the Internet, the study of Internet governance would benefit from a combination of both schools.

All of the current research projects in the field of Internet Policy & Governance share a focus on technology-related ordering processes, implying that technology is both the subject and means of regulation. Hence, technology is understood neither as a dependent nor an independent variable but as part of a dynamic governance arrangement. Our lead project deals empirically with the circulation of cultural goods and the role of copyright therein. We would like to extent this focus in the near future to include the development of the Internet architecture and to study how new services affect fundamental network principles and vice versa.

Lead Project: Circulation of Cultural Goods

Lead: Jeanette Hofmann, Co-Lead: Wolfgang Schulz

The debate about copyright law and its effect on cultural production, innovation and social welfare has been dominated so far by normative arguments expressed within a legal frame of reference. Still new to this research area, the social sciences seek to contribute to this debate by studying actual practices of exchanging cultural goods. Unlike the highly investigated field of patents, there is still a lack of empirical research into the significance and effects of copyright on the distribution of cultural goods.

 This research project addresses the rules, norms and practices governing the circulation of digi-

tal goods – thus contributing to the joint research question regarding structures of coordination and rule-making. Its overall goal is to study the role and significance of copyright law in relation to other social and technical norms based on case studies. The theoretical background of the project reflects recent governance research approaches which suggest a "de-centering" of political authority. Rule-making powers, according to these approaches, are divided among various actors and include both public and private means of regulation. One major question concerns the theory of market failure for information products: "Does this theory apply for all information goods and markets or are there markets that evolve without strong property rights?" Another question refers to the entirety of the norms and rules that shape the exchange of information goods: "Is it possible to detect differences in the constellations of governing rules across different countries, sectors or markets?"

An initial, explorative case study focuses on the creation and international trading of online TV formats. TV formats seem to be an appropriate case due to the complicated nature of their legal protection. As configurations of ideas, processes and operational recipes rather than clear-cut products they are difficult to define or grasp from a legal point of view. Nor do all the components qualify for copyright protection. Despite the uncertainty surrounding the copyright status of TV formats and the constant danger of "copycats", the international market for trading format licences has continued to grow steadily over the past decade. The case study focuses on the development of innovative TV formats for the Internet, particularly YouTube channels, while taking a look at the effects for established business and trading models. Being part of an emerging cooperation with UFA, a major German TV production company, we have been able to gain crucial field access.

The next step will be to develop a comparative perspective on the rules governing the circulation of cultural goods by taking up further case studies.

Freedom of Expression in the Quasi-Public Sphere

The emerging publics on the Internet rely heavily on the infrastructure and platforms provided by private entities such as Facebook, Twitter, Apple App Store, or Google. Previous research, predominantly in the form of case studies, has revealed that online platforms not only facilitate but also limit freedom of speech in certain contexts. These apparently contradictory results reflect the hybrid status of "quasi-public spheres", which are not only governed by general laws ("public ordering"), but also by rules set out by private corporations ("private ordering"), for instance in the form of terms and conditions, or by technical architectures.

This project addresses the nexus of public and private forms of ordering by investigating how legally protected interests are balanced on privately-owned platforms and infrastructures. Is the balancing of human rights, developed in democracies over the course of centuries, challenged by privately-owned and operated platforms implementing their own regulatory and transparency mechanisms - represented legally in their terms of use, technically in the design of their platform and socially in the form of reporting practices? In an initial case study, we seek to identify and evaluate regulatory and transparency mechanisms employed on social media platforms. We plan to extend this research frame to include points of control within the infrastructures of the mobile Internet (networks, operating systems, app stores).

Data and the City

Whereas the first two projects investigate processes of public and private ordering in various regulatory fields, the project "Data and the City" approaches the intricacies of technology-related ordering processes from a different angle. One of the founding myths of the Internet claims that territorial spaces and borders have become irrelevant on the net. In recent years, however, we have observed a growing relevance of location and boundaries in online contexts ranging from location-based services to business models and regulations. Against the backdrop of these trends towards a territorialisation of the Internet and the digitisation of urban spaces, this project area intends to study such spatial ordering processes. By including a spatial dimension, this approach complements our projects on regulatory fields with an important aspect often neglected in Internet governance research.

Our first step is to focus our research activities on cities and their changing patterns of mobility. We seek to investigate how developments in ubiquitous computing, mobile Internet and the emerging "Internet of Things" interweave with the urban social fabric of the city. Recently, urban mobilities have undergone a transformation in driving and 'passengering' practices due to the incorporation of urban information applications such as GPS-based car-sharing or car-on-demand services. From the analytical perspective of media geography and STS, such applications incorporate a 'secondary agency' expressing specific spatial politics and agendas of the provider, programmer, politician or user (the "primary agents"). In the context of our overarching questions on the relationship between private and public ordering, this research project aims to make explicit and analyze the secondary agency of mobility services. The second goal of the project will be to develop instruments and guidelines for the implementation of mobility services between the poles of urban policy and corporate product agenda.

Digital Policy Radar

A joint project that has been embarked upon in collaboration with the research area "Internet & Media Regulation" addresses the field of Internet regulation at large. As part of the Institute's role as an intermediary facilitating the dialogue between academia, politics, industry and the public, we intend to develop a news and research service under the working title "Digital Policy Radar". With this service we aim to establish a European digital platform as a resource for different stakeholders ranging from public policy, Internet industries and civil society to academia.

One major goal of the project is to link current regulatory developments with existing research and relevant studies. Having developed the concept and a prototype for the platform, we are currently seeking funding to launch and operate the news site. In a second stage, we intend to experiment with new publication formats in the area of regulation and governance research, as discussed in the context of "Open Science". At present, we are drafting a grant proposal for virtual research environments to be submitted to the German Research Foundation (Deutsche Forschungsgemeinschaft - DFG).

INTERNET-ENABLED INNOVATION

Far from being yet another innovation, the Internet is a novel way of solving problems while supporting creativity and communication. In the field of Internet-enabled Innovation, we explore how the Internet enables new forms of corporate, cultural, artistic, creative or knowledge-based goods and interaction between consumers, stakeholders, companies and the general public.

We are currently witnessing a change in the behaviour of individuals, corporations and institutions in terms of how they cooperate online. This not only means new forms of employment and new job opportunities but also new technologies and new business models. It is our goal to focus our research on this changing environment while grounding our efforts on three themes:

- **Structure:** Our aim is to structure the vast array of new and innovative efforts in the field of Internet-enabled Innovation in a way that makes it more accessible.

- **Extend:** After structuring we are interested in pinpointing the aspects of our research topic that seem wanting for a deeper analysis such as the topics Open Science, Participation online and through the Outernet, Internet-enabled business models and the index of Internet-enabled innovation. Here we want to extend the existing knowledge base.

- **Involve:** Thirdly, we intend to include other researchers in our work, obtain feedback from outside sources as early as possible and provide information to those interested in the topic.

Internet-enabled Innovation is a theme that goes beyond corporate technology management. We wish to study it from a broader perspective. As such, we are interested in questions like how can the Internet change knowledge creation, how is online participation organised, or how can online participation reach beyond the means of web browsers? The following five topics mark the research topics we want to focus on during this academic year.

Lead Project: Open Science

Lead: Thomas Schildhauer, Co-Lead: Ingolf Pernice

The Internet dramatically changes the way knowledge creation works. Textbooks must no longer be printed, journals must no longer be physically published, feedback from other researchers can be obtained in a matter of moments, social networks allow access to experts from virtually anywhere in the world... Against this background, we want to study the changes the Internet brings to knowledge creation and how to speed up the publication of results. We use the umbrella term "Open Science" in order to describe the phenomenon. At first, we are specifically interested in structuring the "meta-discipline" Open Science, with its many projects and practitioners in different research areas, in order to make it accessible to interested researchers.

The modification of the scientific process is a phenomenon we can study in all areas of science. Here, it is our goal to deepen the understanding of overarching patterns. We are particularly interested in the following questions:

- How can the speed of knowledge creation be accelerated by open communication and interaction tools?

- How can scientific data best be structured in order to be found, referenced and reused? Is there a chance to describe/use a meta-data-model, specifically for research results?

- What are Open Science tools and how can scientists make best use of them?

- What role does intellectual property play in scientific publishing?

Our Open Science project has two major goals. Firstly, as in all research projects, it is our aim to widen knowledge on the subject. Secondly, we are interested in informing scientists about the new possibilities provided by the Open Science movement. To this end, we are currently setting up an online platform that will host information, review current news and discussions on the topic and aims to provide an appealing starting-point for all those who are interested in the topic. We are also working on a book on Open Science (to be published under an open access licence in early 2013). During the last 12 months we were able to initiate several collaborations with other researchers in order to expand our view on the topic. We are currently working with the following organisations: University of St.Gallen (Prof. Gassmann), University of Heidelberg (Dr. Sönke Bartling), Gottfried Wilhelm Leibniz Scientific Community, Research Gate, RatSWD. We are also planning to extend our collaborative efforts while studying this phenomenon.

Motivation for Online Participation

As active contribution to various platforms on the Internet becomes a widespread activity, public and private organisations seek to leverage participatory interaction in decision-making processes. The success of online participation depends largely upon the ability of the organisers to motivate an adequate group of participants to engage in the given task. Organisers of participatory projects often struggle to motivate enough participants. With this research project we seek to understand the underlying prerequisites of a successful integration of citizens, volunteers or customers. To carry out the research in a transdisciplinary manner we developed a working definition of online participation that reflects all four disciplines at the HIIG.

We have so far identified a set of motivational aspects that are common to a large number of studies on the antecedents of online participation as a basis for comparing private firms' and political organisations' approach to online participation. Given that the private and the public sector adopt very different approaches to participatory projects, we expect the comparison to provide lessons across organisations in both the industrial and the public sector. The direct output of this project will consist of separate literature reviews for each research area at the HIIG and a joint conceptual paper that introduces the central issues of motivation for online participation among the general public and in business.

Future research questions that arise from our work include how information stemming from online participation can be managed inside the organisation, how participation influences hierarchies and how participatory projects can be compared from the point of view of success or intensity of participation.

Participating through the Outernet

Due to the recent price decline and technological progress in display technology, we believe that we will soon have access to "display wallpaper" that can be bought by the meter. This will technically enable any surface in urban spaces to become digital. In the long run, we might live "inside" the Internet, surrounded by interactive and digital surfaces. We feel that this new infrastructure (the "Outernet") has considerable potential – not only in the advertising domain but also in terms of citizen participation. It is accessible without the need for any technical device on the part of the user, thus providing an opportunity to boost citizen participation by lowering barriers and enabling simple participation "in passing".

The overarching research question of this project is how the Outernet can be used for low-barrier citizen participation of this kind. From a methodological point of view, we aim to illustrate this in the form of a small actual problem, to solve this problem using a technological artefact, to investigate user reaction to the artefact by means of laboratory and field studies and then to extrapolate the results to the general problem. To this end, we set up urban screens at public locations and observe the reaction of passers-by. Research questions revolve around the twofold problem of enabling passers-by to execute very simple interactive tasks with urban screens like touch and mid-air gestures and of presenting the content to passers-by with a view to facilitating low-barrier interaction. On a more general level, we investigate how technology can support citizens' interaction with their city, and what aspects of cities are meaningful to them. Based on these results, we will launch two deployments exemplifying the potential of the Outernet for citizen participation. The first deployment (most probably at Bebelplatz in Berlin) will enable low-barrier political participation for passers-by. It is intended to spark reflection and communication on political issues among people who are based at the same location. The second deployment will show the potential of the Outernet by enabling people passing screens at different locations (possibly deployed in different European capitals) to interact with one another. This would serve to bridge the spatial separation between countries and create a global "Urban Media Space". This project is designed as a more technology-focused counterpart to the "Data and the City" project, which investigates similar issues from a social-science angle.

Index of Internet-enabled Innovation

How does Internet-enabled communication relate to the field of innovation management? Which drivers can be identified on a regional, national and international level? To what extent does the use of the Internet influence the innovative capacity and performance of corporations? Innovative practices such as distributing open questions to an unknown group of problem-solvers are now

available for use. This not only changes the way work flows are organised but also emphasises the growing importance of inter-company cooperations. The Internet-enabled innovation index has been conceived to represent how sectors, regions and companies use the Internet when developing new products and services. We are also interested in pinpointing which Internet-related parameters influence innovativeness.

We have drawn up a set of complementary factors together with their empirical indicators that are - in conjunction with ICT use – antecedents of Internet-enabled innovation. A large-scale empirical study depends on external funding which we and our research partners are now seeking. The project is being carried out together with Prof. Blind from the Technical University of Berlin and Gero Stenke who is leading the Statistical unit of the Foundation for German Science (Stifterverband). The in-house transdisciplinary research partner for this project is Wolfgang Schulz. Together we want to investigate the interplay of regulatory interventions such as broadband policies and Internet-enabled innovation.

Business Models

A business model means the way a corporation promotes its products, how its management thinks the customer wants that product and how that product serves a customer need. During the course of the past 15 years we have watched a multitude of industries adapt their business models to the online world. At the same time, we have also seen a degree of previously unheard of volatility. Multi-billion dollar corporations were only founded years ago and successful firms are left struggling just a few months later. There is certain dynamic to online business models that make this field particularly in need of research.

In our research we are currently focusing on two aspects. Firstly, we are a research partner concerned with "online business models" in the defining phase of a large-scale research grant that focuses on the digital movie production in Babelsberg. The film and television industry is currently undergoing significant changes while asking themselves if their established business models are still up-to-date. This project provides us with a profound inside view of how film studios and television producers function. Secondly, we are interested in establishing a visualisation like the DNA for business models that allows for the comparability of firms, particularly with regard to their use of the Internet. With the aid of this visualisation approach we wish to highlight certain successful mechanisms in online business models and accordingly help young firms to set up their own business model. We are currently endeavouring to raise funds in order to implement this aspect of the "Business Models DNA" project.

GLOBAL CONSTITUTIONALISM AND THE INTERNET

Since the last decade of the last century the debate on the constitutionalisation of international law and global constitutionalism has advanced dynamically on the basis of very diverse approaches. A number of global challenges, such as terrorism, climate change or demography call for action and response across national borders, just as the effective regulation of global financial markets or the protection of privacy or intellectual property rights in the age of the Internet require normative frameworks at the global level. The question is: How are democratically legitimate norm-setting processes, which are set up to meet these challenges, actually organised in the emerging system of global governance, and how can they be conceptualised to be more effective in the future, using the Internet with all the opportunities it offers for communication, collective action and participation in discourse and decision-making? Studying modes of individual participation in the new public sphere (cf. supra: Notions of Public Spheres in Information Law) is of fundamental interest, but the establishment of a "toolbox" of rules – social norms, agreements, technical codes, legislation – with the respective normative procedures as well (cf. supra: Internet Policy & Governance) – is at least equally important. Based upon the conceptual underpinnings of multilevel constitutionalism, the research will include the entire range of terms and conditions under which such normative processes can be established: fundamental rights, including the freedom of information and speech, free access to the Internet and net neutrality, the rule of law and other constitutional rights such as equal participation in democratic processes of political decision-making. To begin with, three exploratory studies will be conducted in reference fields that are of considerable importance for ordering the Internet itself, as well as its impact on the traditional notions and role of public authority, state and administration.

"Internet & Privacy" has been chosen as the lead project. It makes it possible to study an ongoing, supra-national legislative process and political debate around the proposed EU Regulation of January 2012. Empirical research into the behaviour of users is just as important in this study as technical knowledge, legal theory and political science appear to be. The same applies to the second reference project: "Orphan Works in Digital Libraries". The regulation of orphan works reflects tensions between property rights and claims to access in the digital age. It also emerges as an example for how traditional norm-setting procedures are challenged by new technologies and new stakeholders that have recently arrived on the scene. The third project: "The Digital Administrative State" will adopt a different angle. Beyond open government, social media and liquid democracy, the state and public authority as administrative authority is challenged by new data-processing and data-mining tools. How does this impact the concept and function of public authority and its relationship to the individual?

Lead Project: Internet & Privacy

Lead: Ingolf Pernice, Co-Lead: Jeanette Hofmann

The development of the Internet and its diverse applications in business, social networks and public policies presents an increasing challenge to the protection of personal data and privacy, both from the point of view of fundamental rights and of the functioning of the social system. The

technology permits data collection and processing in unknown dimensions by public and private operators. Data tracks of our daily behaviour are stored permanently, and it seems impossible to erase data completely from the Internet. So-called "big data" and deep data-mining make it possible to record a personal profile of everybody without him or her knowing. With the Internet and, in particular, cloud computing, national borders become meaningless - and so, apparently, do national approaches to protect privacy in the Internet. There also seems to be a change in the attitudes and expectations of the users: high awareness of the problem, low readiness to take responsibility and measures, even where possible, for one's own protection.

What are the conditions and procedures for data protection in the 21st century? With the proposal of a new EU Regulation on data protection, the European Commission has opened up a new debate on the principles and values to be defended. In this context, questions of substance arise regarding principles and rules as to what method of protection is required – and technically possible – and what data-processing might be treated as inoffensive, what technical devices may ensure that data are not used for other purposes than those authorised by the issuer and how data might be given a limited life circle. Questions of procedure will be studied from the point of view of legislation and supervision. In particular: Establishing how – and with whose participation – political will is or may by formed across the EU for 27 countries with diverse cultural and political traditions by means of an organised public discourse, through free participation in the Internet, and by institutions at all levels, is of importance - not only with regard to the specific privacy issue but maybe more generally as a model for global norm-setting procedures, too.

The study will be conducted by an interdisciplinary team under the lead of Ingolf Pernice and Jeanette Hofmann (HIIG) in conjunction with Martin Eifert, Anna Bettina Kaiser (law), Wolfgang Coy and J.-C. Freytag (Informatics), Hanna Krasnova (Economics), Ben Scott (former IT-advisor US government), and Agata Królikowski (Innovation Incubator, Leuphana University). The research proposal will be guided by the results of an international conference to be held in October 2012. Empirical studies on the needs and behaviour of the users will inform and guide the research. Apart from papers to be published throughout the research period of approximately three years, the results of the study will be published both online and in a peer-reviewed book on Data Protection in the 21st Century.

The Digital Administrative State

Internet observers are currently monitoring the interplay between Big Data and cloud computing as an informational revolution. Against this backdrop, this project asks whether and to what extent the administrative state is facing transformative pressures as a result of these tools. Departing from dominant approaches that focus on state communication (such as e-government), we take a look at the new possibilities for decision-making that the public administration can avail itself of today. New computing models based on the three V's (volume, velocity and variety) can turn mountains of once useless data into meaningful information that can trigger specific administrative action. Computer scientists suggest that this means progressing from automatisation to intelligent processes. For this reason, and borrowing concepts from organisational and business studies, our working hypothesis is that the technological environment produced by the Internet

today enables the emergence of an administrative intelligence that deviates qualitatively from current administrative possibilities for action, and that existing administrative procedures are progressively being supported – if not replaced – by data-driven processes. Administrative law will be necessarily affected because ordinary tasks like surveillance and fraud detection, risk modeling and regulation of complex markets, interpretation and prediction of social trends and the subsequent modeling of adequate social policies will change radically. Measures and policies that are grounded on such analytical tools will also be examined from the point of view of constitutional principles and, in particular, of the fundamental rights of the individuals, their participation in legitimate decision-making and legal review of the new methods of digital administration in these intelligent processes.

The research will follow Schmidt-Assman's systems approach (Systemdenken), according to which constitutional and administrative law should be understood as one system, and the study will accordingly identify and tackle the problem of normative inconsistencies between both areas regarding administrative intelligence. The final output will be a comprehensive postdoctoral thesis, as well as one or more articles addressing specific issues arising within the topic.

ORPHAN WORKS IN DIGITAL LIBRARIES

Orphan works are copyrighted works, the rights holders of which are unknown or cannot be traced. The question of how to deal with such works has become increasingly important since books can be digitalised and made available on the Internet. Since it is impossible to negotiate a licence agreement with an unknown rights holder, a considerable percentage of world literature is currently banned from digitisation and online availability. Not only public libraries but also private companies, and potentially authors and the general public at large, have an interest in the setting up of rules that allow for orphan works to be used. Several different ways of doing so are being debated by legislative bodies around the world. In Europe, the European Commission has proposed the enactment of an orphan works directive. Given the global reach of the Internet, even a European solution might not be sufficient. Ultimately, a global solution would be desirable.

To begin with, the project will focus on a comparative study of the definition of orphan works and the regulative solutions chosen in Germany, the EU and the USA. We will analyse current attempts to deal with the problem as well as discussions regarding adequate legislation in the future. Most importantly, the procedures of negotiation among key stakeholders will be examined. Past as well as processes that are already under way will be studied in order to determine the extent to which new stakeholders and, in particular, the users of the Internet, are included in such debates and negotiations.

In preparation of this project, an interdisciplinary team of researchers, with support from the HIIG and the Humboldt University, will prepare a research proposal to be submitted to the German Research Foundation (DFG). An international conference on the issue will be held by the end of the second year of research. The results of this conference and of the conclusions of the research are to be published both online and in the form of edited volumes. Some of the interim findings may be published in academic journals.

CONCLUDING REMARKS

In order to delineate its overall profile, the HIIG has initiated a large number of research projects during the course of its founding year. We have simultaneously sought to establish collaborative relationships with other research institutes and potential funding organisations. The next steps will include the raising of external research funds from both public and private sources. The focus on third-party funding is also in line with the HIIG's board of trustees who recommended that we broaden our funding base.

It is our medium-term goal to consolidate the research agenda so that each research area consists of a lead project and two additional projects. The ability to secure external funding is regarded as one of the vital selection criteria that will help us to make the research agenda sufficiently coherent.

This research agenda reflects the current status of our planning. In order to create more synergies with research activities in Berlin and, in particular of the Humboldt University, we are in the process of identifying fields suitable for cooperation. One of the options under discussion is setting up a project on "Cultures of Knowledge", with the potential of becoming one of the cross-cutting topics.