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RESEARCH AGENDA 2016+

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The relationship between society and the Internet can be analysed from various perspectives. Research on the digital society is often limited to addressing specific issues and does not have a sufficient theoretical or conceptual basis and empirical evidence. HIIG aims to broaden both the theoretical and empirical foundation of future research on the digital society.

Throughout the process of digitalisation, societies are undergoing changes. Our conceptual frame of reference for identifying and assessing these changes is the relationship between innovation and governance. Innovation and governance interact in ambiguous ways; they may both mutually stimulate and even enable each other but they may also be constraining. Tensions and synergies emerging from this relationship can be found across all societal fields and organisations including the state, corporations and markets, from the local to the global level. While the relationship between innovation and governance is empirically gaining in relevance, analytically it is still under-researched. In addition, this focus promises to integrate the research interests and expertise of all groups at HIIG.

With this perspective, our research agenda will be structured based on research programmes. Research programmes are expected to stretch over a defined period of time and be driven by the broad research questions overarching the institute's departments. A senior researcher and at least one director will be responsible for developing and pursuing the specified research questions. Projects will contribute in various ways to addressing the research questions.

Research programmes will not function in a top-down fashion but create a structure that facilitates the research planning process. The programmes will be evaluated and – if necessary – re-calibrated on a regular basis depending on the research outcomes and new developments in the sphere of Internet and society. Several key topics have been identified that qualify as building blocks for a long-term research programme as shown in the graph:
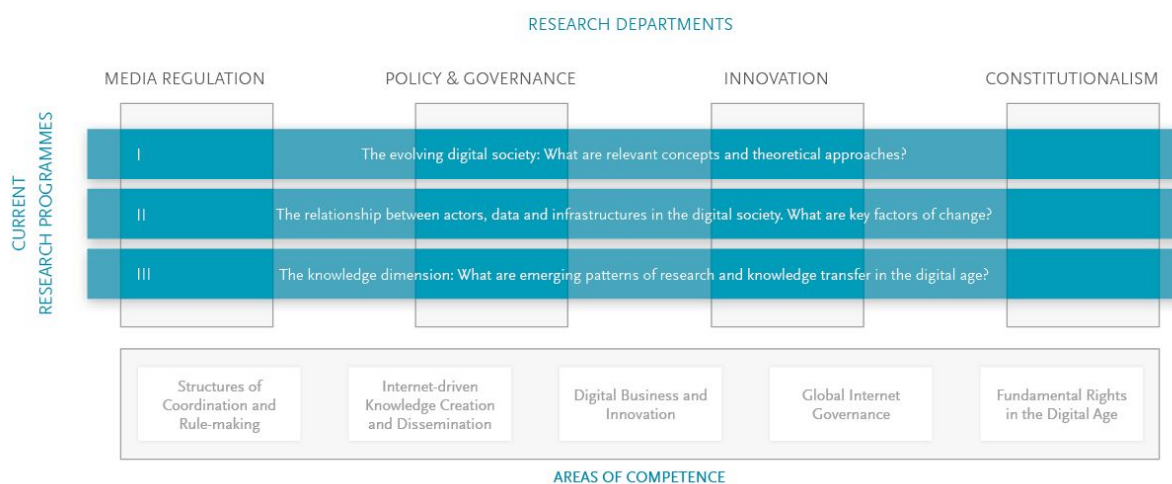
The programmes are based on HIIG's areas of competence which reflect internal expertise. They cover the long-term research interests, common methodological skill sets and theoretical inclinations of the institute's members, which the institute wants to highlight to stakeholders for potential partnerships independent of specific projects or programmes.

I. The evolving digital society: What are relevant concepts and theoretical approaches?

Current observations link the process of digitalisation to major transformations in society and economy. It has become common wisdom that digital technologies can be disruptive and that, as a result, modern societies are undergoing a period of permanent structural change. From an academic point of view, this raises the question of the consequences of the digital upheaval for contemporary theory development: Does the digital transformation also call into question our conceptual apparatus for investigating society, the economy, the state? Are there relevant new phenomena that cannot be adequately understood on the basis of existing theoretical assumptions? Are there new theoretical approaches emerging that aim to identify constitutional elements of the changes we observe?

While it may be too early to answer these questions,we are called upon to at least look at them. The institute provides the collaborative space to discuss the emerging concepts of digitalisation in an interdisciplinary manner. A lecture series focusing on new perspectives on the digital society will be the public starting point of this research programme. The lecture series will focus on *Critical Moments* and *Structural Shifts* as general reference points. Empirically, we will focus on the following transformative issues:

A. Transformation of privacy, intellectual property and informational self-determination
B. Emerging changes in power structures and norms
C. New forms of governance such as nudging
D. The globalisation of digital societies and its implications for the role of states and national law
E. Shifting boundaries of participation between professionals and laypeople
F. Structural change in administrative task implementation
G. The shifting division of labour between human and algorithmic decision-making
H. Datafication and economic value creation

II. The relationship between actors, data and infrastructures in the digital society: What are key factors of change?

Information technologies are based upon data and give data a key role in the digital society. Yet our understanding of the increasing relevance of data is far from complete. Better access to data, information, education and knowledge, transparency and networks empower the individual and bring about opportunities for the democratic model; they may profoundly change governance as well as relationships in the public and private sector. On the one hand, big-data-based analytics and predictive policies allow for more efficient business and public administration; on the other hand, new modes of surveillance challenge established relations in labour-, health-, insurance-, security systems and markets, and threaten individual freedoms and trust. The internet of things will multiply the amount of data. With innovative uses and analytics, they will have an increasing value in the digital society. Thus, we need to rethink our patterns of data ownership and flows, infrastructures and data security as well as our approaches to the protection of personal data and privacy, personal freedom and political participation in a globalised society.

A first step will be a critical analysis of the new EU regulation on data protection, including the transatlantic issues. This will lead to more in depth research on particular aspects of change that have become apparent from three angles: actors, relationships and regulation.

A. Actors: How are (big) data – its production, collection, communication, analysis – changing actors (individuals, undertakings, public authorities), and their behaviour, power and role in society?
B. Relationships: Are there different types of data ownership? How is data being traded? What business models are emerging? What types of infrastructure are being used to transport data? (structural dimension, research proposal: Assessors)
C. Governance:
   ○ How is data get assigned to individuals – in the case of IoT? Is confidence at risk and if so at what point in this process?
   ○ Does data protection and privacy serve as a test case for emerging regulatory structures at the global level? (global privacy governance)

The research actors, data and infrastructures are building upon a considerable amount of work already done at the institute, particularly regarding the EU reform of data protection legislation.

III. The knowledge dimension: What are emerging patterns of research and knowledge transfer in the digital age?

This research programme looks at central questions at the intersection of technology, research, and knowledge dissemination. New technologies are creating new premises for how knowledge is generated and disseminated. The Internet can be understood as the essential infrastructure for a type of society, the key resource of which is knowledge. Thus, generating, processing and "storing" knowledge is becoming a key factor for the private and the public sector alike. This programme will focus on organisational learning, since this can only be understood by combining innovation research and the analysis of governance structures. The research will focus on selected fields (e.g. the knowledge eco systems of parliaments.)

This also changes the role of organisations that are active in the field of academic knowledge production, like universities and research centres. This is demonstrated in the exchange of research data or technology-based citizen science, which is bringing about new modes of scientific collaboration. Through social media, scholars can communicate research content more quickly and directly (e.g. SciBlogs). At the same time, new teaching models such as MOOCs (Massive Open Online Courses) have come into being. These developments pose new challenges for science, whose classical understandings shape its own audience. A focus on academic knowledge production comes with the additional challenge that universities, to take an example, are in in the process of transformation as regards their own knowledge production, and, at the same time, face a change in their role as sources of knowledge for business and governments.

There are three aspects of the programmet:

A. How will knowledge be generated and processed in different areas? (e.g. government, parliaments, companies, other sectors and the role of the crowd)? (research proposal: Universitas 2020)

B. How have systems of knowledge come to be described? Who decides what does and does not constitute knowledge? (research proposal: Universitas 2020, Challenges of Knowledge Systems of Parliaments)

C. Is problem-oriented research a special case in knowledge production? What interfaces are there between science and other fields (e.g. political science, economics, etc.). Is there a need for new forms?

HIIG is already confronting digital change in science and research through its focus on open science. In the third research programme, these views will be supported and developed further within other areas of the institute. It is the scholarly engagement with perspective C in particular that requires a constant exchange between the level of individual practice and scientific reflection on these practices.