

An aerial, wide-angle photograph of a city, likely Berlin, showing a dense urban landscape with various buildings and green spaces. The image is overlaid with a grid of small, semi-transparent red and white text elements, including the hashtag #DigiKon15. A large, white, stylized hashtag #DigiKon15 is prominently displayed in the upper left quadrant, curving across the sky.

#DigiKon15

#DigiKon15

The Digital Society

Impulses for the
Digitalisation Congress

a good society –
social democracy
#2017 plus

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STIFTUNG

a good society – social democracy #2017 plus

A PROJECT BY THE FRIEDRICH-EBERT-STIFTUNG
2015–2017

What is a Good Society? For us this includes social justice, environmental sustainability, an innovative and successful economy and an active participatory democracy. The Good Society is supported by the fundamental values of freedom, justice and solidarity.

We need new ideas and concepts to ensure that the Good Society will become reality. For these reasons the Friedrich-Ebert-Stiftung is developing specific policy recommendations for the coming years. The focus rests on the following topics:

- A debate about the fundamental values: freedom, justice and solidarity;
- Democracy and democratic participation;
- New growth and a proactive economic and financial policy;
- Decent work and social progress.

The Good Society does not simply evolve; it has to be continuously shaped by all of us. For this project the Friedrich Ebert Stiftung uses its international network with the intention to combine German, European and international perspectives. With numerous publications and events between 2015 and 2017 the Friedrich-Ebert-Stiftung will concentrate on the task of outlining the way to a Good Society.

For more information on the project:

www.fes-2017plus.de

Friedrich-Ebert-Stiftung

The Friedrich-Ebert-Stiftung (FES) is the oldest political foundation in Germany with a rich tradition dating back to its foundation in 1925. Today, it remains loyal to the legacy of its namesake and campaigns for the core ideas and values of social democracy: freedom, justice and solidarity. It has a close connection to social democracy and free trade unions. FES promotes the advancement of social democracy, in particular by:

- Political educational work to strengthen civil society
- Think Tanks
- International cooperation with our international network of offices in more than 100 countries
- Support for talented young people
- Maintaining the collective memory of social democracy with archives, libraries and more.

About the authors

All the contributions to this collection of essays are based on presentations the authors gave at the Digitalisation Congress, #DigiKon15, held by the Friedrich-Ebert-Stiftung on 24/25 November 2015. You can find more information on the congress and programme plus videos of the presentations and reports on our website: www.fes.de/de/digikon15/

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#DigiKon15

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FOREWORD

Digitalisation now pervades all areas of our lives as individuals and communities. It may make our lives better – but it may also make them worse. Currently, the nodes of the networked society are still in the hands of a few private companies. Matters that affect everyone and are hence public are increasingly being subjected to the logic of capitalist exploitation. Decision-making follows the rules of private, commercial interests, not democratic ones. Yet digitalisation also has the potential to further social progress, provided it is shaped with democratic and social interests in mind. This was the central idea of the Friedrich-Ebert-Stiftung's 2015 congress, which addressed the following questions:

- How are public matters, the public sphere and political processes changing under the conditions created by digitalisation?
- What gains in freedom do digitalisation processes promise and where are individual freedoms threatened?
- Does digitalisation threaten to bring about a privatisation of the public and a simultaneous commercialisation of the private?
- What opportunities does digitalisation offer for economic development, where does it endanger social well-being?
- What are the implications of a digitalised public sphere for political inclusion and participation?
- Is digitalisation dividing and fragmenting society or is it creating new forms of solidarity?

THE DIGITAL ECONOMY AND THE FUTURE OF WORK

Andrea Nahles

Thirty years have elapsed since Microsoft issued its Windows 1.0 operating system. Could any of us have imagined thirty years ago that today we would be carrying around our entire music libraries and our photo albums on tablets, laptops and smartphones? That we would be able to communicate with the entire world, book our travel and purchase all kinds of goods in real time from anywhere? Or that many of us would have practically our entire office in our pockets, enabling us to work from anywhere and at any time?

Unfortunately, as in 1985, today's digitalisation debate continues to focus mainly on the risks. Yet thirty years of experience have taught us that technical progress also offers tremendous opportunities for our lives and work. As the #DigiKon15 programme says: "... digitalisation also has the potential to further social progress, provided it is shaped with democratic and social interests in mind." And this is precisely the point: digital transformation must be democratically shaped.

Our current "Work 4.0" discussion is addressing the effects of digitalisation on our lives and work. Taking a people-focused approach, it is seeking active ways to ensure that digital employment is decent employment.

One thing is clear: we won't run out of work, but our work will change. The experience of the first, second and third industrial revolutions has taught us that technology changes employment – in some areas causing it to disappear, but in others yielding new tasks and occupations. This creates opportunities.

I would like us to make active use of these opportunities to maintain a high level of employment. New research findings have shown that the potential is there. The current labour market prognosis issued by the Federal Institute for Vocational Education and Training (BIBB) and the Institute for Employment Research (IAB), for example, predicts on the basis of an Industry 4.0 scenario that overall employment will remain at the currently high level until 2030. A survey of human resources managers conducted by the Cologne Institute for Economic Research revealed that the demand for personnel is likely to rise in the medium term, particularly in digitalised companies. And the Boston Consulting Group gives a figure for employment growth up to 2025 of

350,000 people, based on the assumption that rising productivity generates an increase in demand, both for new products and for qualified workers.

The key thing will be to prepare people for changing employment and to help them to keep pace with this change, to be equipped to tackle new tasks and challenges and to remain healthy and motivated.

A high level of qualification will continue to be the entrance ticket to today's and tomorrow's world of work. This applies most especially to young people, which is why we are doing everything we can to support young people – particularly those experiencing difficulties at school – in making the transition from school to work: with youth employment agencies, where all those responsible are making a concerted effort.

In addition, we must help refugees to obtain access to the qualifications necessary to become well integrated in our society, for the best way to do this is to find work quickly. Most of those currently arriving in Germany are highly motivated to stand on their own feet and to feed their families. We must give them the chance to do this – by offering them German courses, training and swift access to the labour market. And last, but not least, we must give those who have become trapped in unemployment the wherewithal to re-enter the labour market. We want to enable them to make a new start as well.

More than in the past – perhaps even continuously – we will acquire new knowledge and skills and keep those we have up to date – this applies even to those who are firmly established professionally. Qualification, further training and training on the job are all things we must intensify. Here social partners will have a key role to play. I could, for example, imagine a federal agency for employment and qualification that would be responsible for helping people to upgrade and refresh their qualifications throughout their working lives. For one thing is certain: qualifications are the best insurance policy against unemployment.

Digitalisation has created completely new opportunities for companies and their employees via enormous productivity gains facilitated by modern IT. New technology has allowed people with disabilities to overcome barriers that previously excluded them. Machines now perform dangerous or physically exhausting tasks previously carried out by people. Mobile employment has made it easier to combine work and private life. So digitalisation is also about opportunities for greater freedom and personal development and the chance to live and work as a self-determined individual.

In principle, mobile forms of employment can be a win-win situation for employees and employers alike, but only if there are clear agreements. And even then the risks posed by digitalisation cannot be contained by works agreements or legal regulation alone: employees must also learn to set their own boundaries. I believe that our working lives can be structured so that there is “room to breathe”. This is already happening in many places: the policy framework has been created for flexible working hours and for parental and caregiver leave, and a number of model collective bargaining and in-company agreements have become a reality. All of this can function if the will is there, if employers, works councils and employees work towards common goals and realise them jointly – in other words, if everything is “shaped with democratic and social interests in mind”.



Andrea Nahles is German Federal Minister of Labour and Social Affairs. After studying literature she gained national political prominence when she was elected chairperson of the Young Socialists in 1995. She became a member of the German federal parliament, the Bundestag, in 1998 and was General Secretary of the SPD from 2009 until 2013.

HOW DOES TECHNICAL INNOVATION BECOME SOCIAL INNOVATION?

Daniel Buhr

Smart homes, vehicles that drive themselves, tele-surgery – Google’s executive chairman, Eric Schmidt, is convinced that: “Everyone benefits from the web, even if not to the same extent – from greater efficiency and innovative power to a better quality of life.”¹ Growing digitalisation does indeed offer enormous potential. Technically – through the merging of goods and services into smart objects that will allow products to be manufactured more quickly, using fewer resources and hence more efficiently. Organisationally – by organising companies in new ways and creating new forms of employment and business models that will offer us a whole range of services quicker, better and cheaper. But also socially – through more inclusion and better ways to combine work with taking care of a family or of the elderly and disabled.

These are the chances offered by digitalisation. But there are also risks: an increasing concentration of data in the hands of a few monopolies able to evade state control, an intensification of the digital divide and the polarisation of society, the continuing erosion of jobs but also of the boundaries between work and private life, an acceleration and intensification of work and more stress. If ever more tasks are performed by machines, we may lose a whole range of abilities and skills, physical, manual but also intellectual.²

We will respond to these developments with innovations, yet we will not be able to meet all the challenges facing us with technology alone. Here it is up to policy-makers to come up with solutions. Interestingly, for many years now they have tried to respond to technical progress with technical solutions – for example, by gearing economic policy to technical innovations – while generally paying too little attention to service, organisational or even social innovations. A technical innovation may make a company successful and by extension boost the national economy – but if it is to improve the quality of life for as many people as possible it must also lead to social innovation.

¹ Eric Schmidt, *The New Digital Age: Reshaping the Future of People, Nations and Business* (London, 2013).

² Steffan Heuer, “Digitalisierung als Fluch oder Segen? Oder beides?” in *change – das Magazin der Bertelsmann Stiftung*, 1 (2015).

Social innovation has been defined as a “systemic reconfiguration of social practices with the aim of solving problems or satisfying needs better than is currently possible on the basis of established practices”.³ An innovation can, however, only be social if it becomes broadly diffused through society or certain parts of society and ultimately becomes established as new social practice.⁴ Examples of social innovation include book printing, health insurance, the right to vote and co-determination.

Digitalisation as exemplified by the internet illustrates very well how social innovation can have a decisive influence on whether a technical invention becomes a widespread innovation, via which paths and channels it spreads and what impact it has.⁵ Innovations of this kind occur through systems and dialogue, through the participation of as many people as possible. This can make a society more receptive to technology and increase its realistic assessment of risks. So instead of seeing themselves as passive victims at the mercy of digitalisation, people can instead shape it constructively. After all, knowledge is often acquired through practice, through learning by doing and learning by using. People who carry this knowledge become driving forces for innovation.

Innovation policy must take greater account of this fact, by making basic provision for the digital society. In other words, as a first priority by installing fast internet everywhere in the country while at the same time encouraging social discourse and critical reflection. This means major tasks ahead for education policy – from pre-school to university. Innovation policy can stimulate collective learning, so that new technologies and new knowledge are diffused more quickly. It could, for example, use competitions or start-up funding to promote the establishment of interdisciplinary project networks and competence centres and support the transfer of fundamental research findings to application development – through real-world laboratories, living labs und reference factories. This would promote communication and cooperation and prepare the ground for social and technical innovations, required above all in the field of security and data protection. Innovation policy could take as its starting point supply and demand, via (in)direct procurement, information, certification bodies, the establishment of a sounder infrastructure, training and further education etc. In addition, Europe should be regarded as a chance for digitalisation – as a lead market with the potential to set global data protection and data security standards (e.g. European cloud infrastructures or European legal frameworks) and social standards for click- and cloudworkers.⁶

Only then will good technical ideas dovetail with useful services and organisational innovations and become generally established practice in our everyday lives, allowing digitalisation to deliver on its promises, such as a more sparing use of resources, more “decent work” and a better quality of life. For ultimately innovations are made by and for people.



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³ Jürgen Howaldt, Ralf Kopp and Michael Schwarz, “Innovationen (forschend) gestalten: Zur neuen Rolle der Sozialwissenschaften”, in WSI Mitteilungen 2 (2008): 65.

⁴ Wolfgang Zapf, “Über soziale Innovationen”, in Soziale Welt, 40 (1989), nos. 1–2: 177.

⁵ Hans-Werner Franz, “Qualitäts-Management als soziale Innovation”, in Jürgen Howaldt and Heike Jacobsen (eds.), Soziale Innovation: Auf dem Weg zu einem postindustriellen Innovationsparadigma (Wiesbaden, 2010): 336.

⁶ Daniel Buhr, Social Innovation Policy for Industry 4.0, report commissioned by the Economic and Social Policy unit of the Friedrich-Ebert-Stiftung, WISO Diskurs (Bonn, 2015).

HOW DIGITALISATION IS CHANGING UNSKILLED JOBS IN INDUSTRY

Hartmut Hirsch-Kreinsen

Research findings about the consequences of the increased use of digital technology (also known as the Industry 4.0 concept) for unskilled jobs in industry can be summarised in the following points:

The term “unskilled” refers to jobs that do not require any relevant vocational training and can be performed after a brief qualification or induction period. Typical examples of unskilled work are the manual operation of specialised or simple machine tools, short-cycle machine loading, repetitive packing tasks and monotonous monitoring activities. In 2013, unskilled jobs accounted for a surprisingly high share of total employment in manufacturing in Germany: 23 percent.

The current scientific and political debate about the digitalisation of employment is characterised by widely differing assumptions. Accordingly, more or less explicit expectations about the future of unskilled work diverge:

- It is generally agreed that the short-term effect of digitalisation on unskilled jobs will be redundancies. More controversial is the question of whether this will be a permanent trend or whether it will be compensated by new tasks and jobs. A unanimous assumption is that simple, routine tasks will become automated.
- With respect to the possible consequences of digitalisation for tasks and qualifications some believe there will be an upgrading of qualifications that will also affect unskilled jobs. Others assume a polarisation of qualifications, which may well result in new forms of unskilled work.
- Finally, a stronger trend towards the transformation of in-company and extra-company value creation chains is considered probable, mainly in the form of crowdsourcing and crowdworking – i.e. extra-company work – some of which may be unskilled.

Despite some contradictory theses, almost all the studies concur that we are currently seeing a technology push, which is changing work in technologically-induced and predictable ways. Social scientists would argue, however, that this technology-centred perspective does not go far enough, because the social consequences can scarcely be deduced simply from

the potential offered by new technologies. Far more plausible is the idea that the connection between the implementation of technical systems and the consequences for employment is much more complex than this and is influenced by many additional factors. When considering the consequences of the digitalisation of work we should take three main factors into account: first, automation potential is limited by the major importance of knowledge that cannot be understood by computers; second, the dynamic nature of tasks and working processes; and third, the influence of highly differing company structures and conditions.

For this reason, we should not assume any definite trend for unskilled work. It would be far more reasonable to suppose that, as the digitalisation of work advances, unskilled work will develop in different directions. The current state of research allows us to identify four diverging paths of development for unskilled jobs in industry:

- Development path I: “Automation of unskilled work”, i.e., unskilled work will largely be replaced by machines
- Development path II: “Upgrading of unskilled jobs in industry”, i.e., an upgrading of qualifications required for unskilled work
- Development path III: “Digitalised unskilled work”, i.e., the emergence of new forms of unskilled work
- Development path IV: “Structurally conservative stabilisation of unskilled work”, i. e., no change in existing personnel and organisational structures

These differing paths of development imply fundamentally conflicting policy goals:

- A modernisation- and employment-oriented policy approach would be to improve the quality of work and the creation of “decent” work by supporting automation and upgrading measures; this would, however, also further limit employment opportunities for those with low qualifications.
- A social- and labour market-oriented policy approach, on the other hand, would see a need to stabilise the various forms of more or less “taylorised” unskilled work, i.e., “non-decent” work in order to preserve employment opportunities for a growing number of workers with low qualifications.

Generally, a broader research and innovation policy approach is required that would widen the previously high-tech-oriented perspective to include less technology-intensive sectors and companies employing unskilled workers.



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INDUSTRY 4.0 – HOW DIGITALISATION IS CHANGING VALUE-CREATION MECHANISMS AND THE CHALLENGES THIS POSES FOR INDUSTRY, POLICY AND SOCIETY

Peter Stephan

INDUSTRY 4.0 – DIGITALISATION HAS REACHED THE FOUNDATIONS OF OUR PROSPERITY

Industry 4.0 is a term coined to denote the digitalisation and internet-based networking of machines, products, people and IT systems in our factories. While digitalisation still tends to be regarded in Germany as something new, it has in fact already reached industrial production – one of the foundations of our economic prosperity in terms of value-creation.

The power of digitalisation to transform the economy can be illustrated by a number of examples: the demise of previously leading photography companies like Kodak and Agfa following the triumph of digital photography; the irreversible shake-up of power relationships in the music industry brought about by the introduction of the MP3 data-exchange format; and the transformation of the mobility sector by platforms like UBER, which can now be halted only by the courts. These examples demonstrate how the digitalisation of whole sectors can very quickly render know-how acquired over many years worthless, how existing markets can be replaced by new ones and how value-creation mechanisms – i.e. the viable business models of particular sectors – can change radically.

Given that a central sector of German industry is facing “disruptive” change of this kind, it is time for the private sector, policy-makers and the public to think about its consequences and to try to shape that change in a proactive and positive manner. Indeed, it is imperative if Germany is to remain a successful economic location, for digitalised manufacturing and digitalised products demand significantly different parameters to those prevailing today. Equally pertinent are the questions digitalisation raises about active social participation and social responsibility, for these are essential components in the evolution of a positive vision of a society based on sustainable value creation potential and a responsible set of values for the digital age.

INDUSTRY 4.0 @ WITTENSTEIN – A PRACTICAL APPROACH

WITTENSTEIN AG is a company engaged in manufacturing mechatronic drive technology. With around 1,900 employees

and an annual turnover of 276 million euros (2014), it is a typical German SME. In a bid to remain competitive WITTENSTEIN AG is currently having a close look on Industry 4.0 and its potential impact on business.

In so doing it has taken a very practical approach, realising Industry 4.0 applications in a “show-case factory” as part of the research project “CyProS” sponsored by the German government. The “show-case factory” demonstrates how today’s production challenges can be mastered by networking IT systems and machines and by processing real-time information for people. This “progressive view” follows a people-centred approach that places employees at the centre of production as “well-informed decision-makers”. Yet innovations of this kind, designed to improve efficiency and master complexity, will not be sufficient to keep German companies active in high-margin markets. To do that existing markets and marketplaces must be dissolved and replaced with completely new value-creation mechanisms (“disruptive view”). Because digitalisation has set in motion a process of “creative destruction”, established companies are being forced to think about how their business models need to change in order to sustain their value creation in the future.



Dr. Peter Stephan is deputy director of the Pioneering Field of Cyber Physical Systems at WITTENSTEIN AG. He is responsible for the realisation of Industry 4.0 in the “show-case factory” of WITTENSTEIN bastian GmbH and has developed digital business models for network-compatible products. He obtained his doctorate in 2012 at the German Research Centre for Artificial Intelligence. During this period he headed the interdisciplinary working group “Information management”, led research projects on the Internet of Things and was project coordinator of the SmartFactoryKL e.V., considered to be one of the pioneers of Industry 4.0.

CHALLENGES FOR POLICY-MAKERS AND SOCIETY

The challenge for policy-makers is to create favourable parameters for companies based in Germany so that they can continue to generate value and remain competitive. These parameters would primarily comprise:

- an infrastructure that allows the global provision of internet-based services
- better conditions for start-ups and the creation of incentives systems for risk capital to finance them
- an educational campaign to train young people in IT and business skills for the digital economy

The challenge for society is to determine on what values and in what dimensions of social responsibility a positive digital reality should be based. In view of digital market and economic mechanisms, priority must be given to negotiating

- how socially responsible business practice can be defined in the highly flexible environment of the digital economy
- what kind of risk culture a society requires in order to produce successful and sustainable business models for a digital economy
- how the role of individuals and their responsibility for their own actions must change and the implications of this for social policy

These challenges need to be addressed if German manufacturers are to continue to generate value in the future and hence make a central contribution to our prosperity. And it will continue to form the basis for the development of a social market economy model for the digital age.

THE ROBOTISATION OF VALUE CREATION

Anja Richert

Industry 4.0 has many implications for the working world. This brief summary of theses and scenarios looks at how work and value creation may change in the course of the fourth industrial revolution known as Industry 4.0 and at the opportunities this revolution offers and the challenges it poses for our society. Advancing digitalisation and automation are resulting in a redefinition of traditional processes and products and in a new understanding of the data on which they are based. These advances are founded on three main pillars: 1) The growing computing power of IT systems allows real-time data analysis in the context of big data. 2) Computing capacity facilitates new models of artificial intelligence that support seamless cooperation between humans and robots. 3) New generative manufacturing processes such as 3D printing allow economies both of scale and scope, thus enabling new forms of value creation.

The physical world and the digital world are growing ever closer together, resulting in their fusion into cyber-physical systems, as illustrated by generative manufacturing processes. 3D printing, for example, allows a digital model to be immediately processed into a physical product. CPS go one step further, assigning entities in a production process both a physical and a digital identity. The interaction between these two identities is what creates value. This allows products to be created with innovative functions capable of continual expansion throughout their life cycle. The human role in this scenario changes from that of a skilled worker to that of a managing director of networked services.

A central characteristic of the fourth industrial revolution is connectivity, conditioned by an enormous growth in the volume of data. Whereas in 2005 the global volume of data was around 130 exabytes (1 exabyte = 10¹⁸ bytes), by 2015 this had grown by a factor of 68 (see ICD 2012). This increase is due mainly to the large number of machines, sensors etc. communicating with one another. The significance of data for innovation is thus growing rapidly.

Indeed, continual improvements in the processing and use of big data are turning whole markets upside down. A new class of providers threatens to further intensify the pressure of competition in the future. Young and successful major US concerns such as Amazon and Google are continually ex-

panding their fields of business and in the medium term could even constitute a challenge to the traditional machine-building sector. We would hardly think of Google as a car manufacturer, for example, yet its contribution to the development of autonomously driven vehicles is state of the art. The availability and analysis of big data and the ability to translate these into innovations is a key factor in the competitiveness of companies and even whole economies.

The growing role of IT and digitalisation is now an established factor in job profile requirements and in the curricula of training and continuing education programmes. The complex problems posed by the fourth industrial revolution for industry and research, usually at the interface between different disciplines, means that comprehensive solutions require collaboration between specialists from different areas (see Rajkumar 2010). These new forms of cooperation, in turn, require new communication skills and new approaches to creativity and decision-making in which IT systems increasingly provide omnipresent support and assistance. Simulations, data analysis and data acquisition are tasks usually performed by virtual agents developed and adapted to tackle a particular problem. Being able to adapt in this way requires a solid grounding in IT.

The increasing use of CPS is not limited to Industry 4.0, but also has a social impact. When everyday objects are networked and connected to IT services they become "smart", thus contributing to an intelligent use of resources. For example room automation systems currently being tested can regulate room temperature depending on how far the user is from home, thus promising greater comfort and energy efficiency. Growing virtualisation and networking thus allow the entire product life cycle to be integrated in the value creation chain. User feedback can, e.g., be directly translated into software development and hence integrated into a product (see Bauernhansl et al. 2013), enabling new business models that go beyond the classic limits of a product life cycle with respect to economic development.

The age of digitalisation, automation and connectivity known as Industry 4.0 also influences the role of people in the overall social context. Theses that assume a falling working population in the future are calling for new working hours and social models. This has also given new momentum to the discussion about introducing an unconditional basic income for all (Kaiser 2015). As the digital finger print gains significance as a central factor in internet visibility, many people also fear a loss of privacy through centralised data structures (data leeches). The digitalised Society 4.0 thus highlights ethical, philosophical and legal issues that also need to be addressed by policy-makers.



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THE DIGITAL DELIMITATION OF TIME AND SPACE – THE FUTURE OF WORK

Kerstin Jürgens

The debate about the digitalisation of work is in full swing – yet it threatens to marginalise many of the looming issues that will constitute major challenges for German society. These include:

(1) the aging society, posing problems for companies of aging workforces and difficulties recruiting new personnel. An associated issue is that of workers maintaining good health as they grow older. If the aging of the working population leads to both longer daily working hours and a longer working life, this raises the question of human performance, which already seems to have reached its limits: while we have known for some time that restricting working hours and introducing occupational safety regulations are conducive to good physical health, work-associated mental health problems have come to light much more recently. The increase in absences and sick leave and reductions in earning capacity owing to mental illness have shown us that there are limits to mental performance as well. So even before the next technology push reaches us, we already face the challenge of solving these problems in the use of our workforce.

(2) We face a restructuring in the direction of an adult worker model. Women not only want to participate in gainful employment, they should and must, as wage trends and changes in the maintenance law in Germany demonstrate. As women increasingly go out to work full-time, childcare and nursing care for the elderly have become major controversial issues, for which there are so far no adequate institutional solutions. As a result, employees who are simultaneously care-givers struggle on a daily basis to balance these conflicting areas of their lives.

These two points illustrate special features of Germany that likewise touch on the time-space dimension and must be taken into account in discussions about the digitalisation of work and assessments of its effects and potential.

The technological advances of recent years have brought us new options for shaping our working lives: today we have access to information and communications technology that enables us to work from different locations and to seek out virtual places of work where we can retrieve, process and save information. The resulting delimitation of work in the form of mobile work or trust-based working hours is not new in

terms of the logic in follows. We already know the advantages it offers – no journey to work, setting our own working hours, a less intense working day, new options for social inclusion, greater autonomy – as well as the risks – ergonomically problematic places of work, a tendency towards longer working hours, a lack of extended periods of rest, an intensification of performance, social isolation. Gaining greater control over their working day can give employees sovereignty gains provided they have the competence to realise these gains themselves and to set their own limits.

Qualification today therefore also entails preparing employees to assume this level of responsibility in controlling their degree of involvement in their working and life worlds. This is already an implicit component of vocational training, but it is foreseeable that it will need to happen earlier in life. What is more, social polarisation is likely to be the consequence if those who make increasing use of the advantages of digitalisation are those with a high professional status (or a high position in a company) – i.e. “sought-after” workers, while the rest continue to be tied to a specific place of work and rigid working hours.

These delimitation effects will acquire a further dynamic through the current technology push. On the one hand, because work takes place in a global network and is hence subject to the working rhythms and the time zones of other regions of the world; on the other, because the group of those who are no longer attached to companies but independently sell and market their services via platforms as crowdworkers is growing larger. A new employment segment is emerging, but how this is to be regulated in a way that enables the crowd to use it as an opportunity for gainful employment without having to shoulder the associated costs and risks alone is still unclear. Standards for remuneration, legal protection and occupational and health safety are frequently rejected as an anachronistic level of regulation, but they will remain a priority as long as the general public continues to bear the costs – in the form of sick benefit, disability pensions etc. – of that workforce becoming worn out.

Citing the new demands of the digital economy, some have even called into question the law regulating working hours. Limiting daily working hours or stipulating regular periods of rest are regarded by employers as obstacles to the digital economy. The trade unions, on the other hand, are sceptical and defend the law as a social achievement. Both sides’ arguments underline the fact that the technology push has led to a questioning of prevailing standards and agreements and to old labour conflicts flaring up again.

Thus, we are currently in a phase in which the boundaries for the use and expenditure of labour today and in the future are being renegotiated. Whereas the delimitation of space and time in itself is not an entirely new phenomenon, we may identify a historical landmark that represents a radical development – namely, the first collectively anchored experience and recognition of the fact that not only physical labour but also mental work is a very limited resource. Ever since comprehensive findings became available documenting the increase in occupationally induced mental exhaustion and overload, a new boundary marker has been set. We must therefore ask whether and how we can imagine a digitalised economy that takes this circumstance into account while remaining globally competitive.



Prof. Dr. Kerstin Jürgens is Professor of Microsociology in the Social Science Faculty at the University of Kassel. Her research and teaching address questions of lifestyle in contemporary society with a particular focus on maintaining health, combining work and family and more general questions of balancing work and private life. Her research projects explore issues relevant to employment policy, such as the human impact of the organisation of work and the effects of different models of working hours. For many years she was spokesperson of the section „sociology of work and industry” in the section of the German Sociological Society and since 2015 has co-chaired the “Work of the Future” committee of experts together with Reiner Hoffmann.

REDEFINING WORK.

Ulrich Klotz

When modes of communication change, so does the fundament of society. Communications and coordination technology determine how people combine and develop their skills and capabilities and thus, by extension, the latitude for shaping human work as well as the forms it takes.

Our current definition of work as something fixed in time and space that is executed continuously in the form of gainful employment dates from an industrial age that began with the invention of book printing, for printed texts were the first serial products. What is more, the information and communications technology engendered by the printed word shaped society – and hence, in many fundamental respects, work as well – for many centuries.

The modern-day equivalent of book-printing – computer-based information technology – has had socially transformative effects similar to those that Gutenberg's invention had in his day, albeit often precisely the opposite effects. Now an increasing number of tasks can be freed from the constraints imposed by industrialisation, enabling humanity to leave the civilisational blind alley of employing humans as cogs in the machinery and in many cases treating them little better than machines. The internet has a key role to play in this transformation. Its ability to coordinate the contributions of many people without the paralysing effects of hierarchy and bureaucracy makes possible new corporate models, value creation processes and forms of work. The boundaries between work and leisure, between place of work and home, between learning and working, between work and retirement, between dependent and independent employment, between production and consumption and between companies and sectors, all of which are products of industrialisation, are becoming blurred again. Work is fragmenting into many and varied forms and once again denotes what one does rather than where one goes.

KNOWLEDGE WORKERS AND THE KNOWLEDGE SOCIETY

In 1959, the management pioneer Peter F. Drucker coined the terms "knowledge worker" and the "knowledge society". Drucker recognised that the explosion in knowledge triggered by information technology could only be mastered via specialisation. As the increased use of computers led to routine tasks being performed by machines, humans would be left with those areas of knowledge that computers could not yet understand. Value requiring human input would hence in future be generated primarily in dealing with exceptional situations rather than in standard processes. This meant that in the long term human work would become ever more intellectually demanding. Drucker also recognised that knowledge workers required a different kind of management to manual labourers in factories.

Drucker defined the knowledge worker as "someone who knows more about their job than anyone else in the organisation". In this sense, the majority of the gainfully employed in developed countries are knowledge workers – for in many places those doing the work have the greatest expertise about their own work. Knowledge workers need organisations in which they can combine their own know-how with that of others in optimal ways in order to generate new knowledge. However, hierarchical organisations are unsuitable for this purpose because knowledge is not hierarchically structured but instead either relevant or irrelevant depending on the situation. Organisations for knowledge workers must pay heed to this fact, since decisions need to be taken where the knowledge is.

This gives rise to a dilemma that is typical of our age of transition from the industrial to the knowledge society: today, knowledge workers are to be found almost everywhere, yet most of them are still employed in organisations run according to Frederick W. Taylor's concept of "scientific management" in which decisions are made and implemented by different people. Most of us are familiar with the effects of this dilemma: often our bosses make decisions concerning things about which as a rule they understand less than we do, yet by virtue of their position they think

they have to tell us what to do. The consequences of these anachronisms are widespread: frustration, demotivation, high staff turnover or inner resignation.

NETWORKS INSTEAD OF HIERARCHIES

Systems that are structured and function as hierarchies with permanent positions – the classic company, in other words – are doomed to fail sooner or later owing to their resistance to innovation. Innovation tends as a rule to be a bottom-up process that is fundamentally incompatible with top-down structures. Currently, new kinds of value-creation networks, specifically the many open-source (OS) projects, are emerging as alternative forms of collaboration, which in the long-term will lead not only to a redefinition of work but to a fundamental transformation of society as a whole.

OS practice is becoming a central idea in the shaping of structures in a way similar to the influence of Taylorist modes of behaviour and thinking in the industrial age.

The success of products like Linux, Firefox, Wikipedia and the like, which often quickly prove superior to their commercial competitors, testifies to the creative power of OS cooperation based on voluntary engagement by people spread all over the world to generate complex products of a global standard. However, OS projects are not only about producing software, they are also a social phenomenon.

Value creation in OS communities is based on mutual esteem where people work together as equals. Whereas traditional bureaucratic structures were based on the jealously guarded knowledge of those in positions of power, engendering a working atmosphere poisoned by mistrust, control, opportunism and window-dressing, OS structures have a different understanding of shared intellectual property. The name – open source – says it all. In OS structures people are motivated and willing to share their knowledge and ideas with others or with an organisation because they receive trust, respect, recognition, fair treatment and tolerance in return. Management functions are restricted to a specific topic or project and are based on communication and specialist competencies and not on formal authority conferred from above.

THINKING IN TERMS OF SKILLS RATHER THAN “WORK X.0”

Computers and the internet are gradually changing every aspect of the way we think: our perception, our memory, the language we use, our powers of imagination, our creativity, our judgement, our decision-making processes etc. Other media which were new in the past – such as language, writing and printing – had similar effects except that today everything happens much more quickly. The knowledge society is not only redefining work, but also our image of human beings. When people no longer have to work like machines, then it is the human qualities that distinguish us from machines that count: creativity, emotions, intuition, knowledge, experience and the ability to respond intelligently to unforeseen events. In order to be able to compete with ever more powerful technology, human beings will in the future have to concentrate on those things that we can't (yet) teach computers. In tomorrow's competition it will be the quality of ideas

that will count. Hard work, stamina and the acquisition of skills alone will not be sufficient. We will no longer be able to afford the anachronistic working structures that fail to make use of the most valuable human potential.

We will once again think of work as something we do rather than something we have. We will need to abandon the traditional category of a “job” or “place of work” and instead think in terms of skills that enable people to earn their living.

During such phases of transformation, people often remain trapped in old ways of thinking for a long time and are thus initially unable to recognise the essence of the changes going on. Attempts to hold onto traditional notions and categories like working hours, place of work, performance and job and to regard “Work N.0” simply as an extension of “Work M.0” are symptomatic of this. The dominance of ways of thinking moulded by the industrial society reminds one of the monks who even fifty years after the invention of book printing would still proofread every single printed copy, having failed to grasp how the new technology worked. It is entirely possible that future generations will smile wryly and shake their heads when they recall how we thought of the internet today.

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Ulrich Klotz holds a degree in electrical engineering and information technology from the Technical University Berlin. After working in the computer industry and machine-building and in ergonomics (TU Hamburg-Harburg) he joined the executive committee of the trade union IG Metal in 1987 where his fields of expertise were research and innovation policy, information technology and the future of work. Alongside teaching appointments at the universities of Bremen, Hamburg and Hannover he also held an endowed professorship at the University of Art and Design, Offenbach am Main. As a member of the advisory board and consultant at the Federal Ministry of Education and Research for many years, he supervised numerous research programs on the subject of work and innovation and most recently became a member of the “Future of Work” group of experts at the Federal Chancellor's Office.

GENDER AND DIVERSITY IN TECH

Bettina Shzu-Juraschek

Who is a part of the tech scene? People who work, whether paid or not, with software-driven projects.

What is software? Software is a set of words entered into a computer by a human. Software programmers tell the computer what to do through these sets of rules. Then, software empowers people who don't know how to code to use the computer. So software is ultimately built for users.

Software already surrounds you: it's how you change the channel on your TV with a remote, how you get money from the ATM, how an elevator takes you upstairs. But most of the time, we don't think of the elevator company Otis when we talk about the tech scene. We think of companies whose primary focus is software, especially those with a strong web presence.

What about diversity? People can be diverse in many ways, including... gender, sexuality, religion, socioeconomic class, education, physical ability, ethnicity, age, nationality, job level, body type, skin color. This is not an exhaustive list.

As Anika Lindtner says, "everyone belongs to many groups, not just one group. Diversity happens when you can't see a dominant group anymore, because there isn't one."¹

What is gender? Gender describes the characteristics that a culture sees as masculine or feminine, so what is considered „masculine“ or „feminine“ can be very different across cultures. Furthermore, different cultures attribute and expect different characteristics and behaviors to masculine and feminine gender roles.

So what are the key issues surrounding diversity in the tech scene?

- 1 The tech scene is not very diverse.
 - a) Great fill the pipeline initiatives for women...
 - b) ... and studies show that women are leaving the industry in midcareer.
 - c) What about other kinds of diversity besides gender

¹ Anika Lindtner, <http://m.youtube.com/watch?v=IDGiYPcg5ql>

diversity? “This is important to us, we’re working on it,’ is often the message. The work, though, seems to favor one group more than others: women.” (Erica Joy Baker)²

- 2 Diversity is better. But not enough people know that diversity is not only the right thing to do, but it’s also good business.
- 3 Diverse teams are faster and more creative. Understanding perspectives different from our own enables us to think and act beyond our own life experiences so that we come up with the widest range of solutions for a diversity of users.
- 4 When people build software, they usually build it for users just like them as default. Thus, homogeneous teams risk building technology only for users like them. Right now software builders are most likely very different from the full range of possible users of their software. The more the people who build technology reflect users’ diversity, the more able we are to build technology that addresses the needs of all the users.³
- 5 Thus, a diverse workforce can capture a greater share of the consumer market by addressing their needs better.
- 6 There is a difference between acceptance of diversity and celebrating and welcoming inclusiveness. The message is not that we should treat anyone as special, but that we should be making everyone feel welcome in tech.
- 7 Core question: Technology is the future. Who gets to shape that future and why?

Recommendations:

- 1 Personally, people in tech can use their privilege for good. For example, it’s important for men to stand up to other men perpetuating sexist stereotypes, because sexist men don’t listen to what women have to say.
- 2 Listen to people’s stories. They’re out there on the web.⁴
- 3 Support the initiatives already out there and share what they’re doing.

Political actors have more power to change the social structure in which we live. So what kind of initiatives should political actors sponsor?

- 1 Combat stereotypes and preexisting beliefs, especially in the education system and among hiring managers.⁵
- 2 Implement salary transparency and equality, starting in the government IT sector. Government jobs with connection to tech can easily be filled with workers with diverse backgrounds. For example, during World War II many women were employed as code breakers and later as programmers.⁶

- 3 Sponsor existing community-based pipeline initiatives to increase diversity like Rails Girls, Rails Girls Summer of Code, Open Tech School, and ClojureBridge.
- 4 Fund gender studies research to dive deeper in how to retain midcareer women in technology.
- 5 Fund initiatives for increasing intersectional diversity in tech. For example, fund self-organized migrant foundations (“Migrantische Selbstorganisationen” in German) to organize hackathons and workshops for their communities.⁷
- 6 Promote, support and reward companies to reduce discrimination, e.g. anonymous applications where photo, gender, date of birth are not needed as well as diversity training, unconscious bias workshops, etc. especially for hiring managers.⁸

Fund projects that teach about working against stereotypes, so that early on people will be encouraged in all topics. For example, teachers can teach about women’s contribution to computer science.⁹

Add Diversity training to the curriculum for teachers.^{10 11}



Bettina Shzu-Juraschek Bettina Shzu-Juraschek is a Texan product manager and organiser of programming workshops. Based in Berlin, she would like to live in a world where everyone, regardless of their background, can learn to code in a supportive and positive environment where diversity matters to all involved. After learning to code in 2012 with Rails Girls Berlin, Shzu-Juraschek began giving HTML and CSS beginners’ workshops and ClojureBridge workshops in 2013. Her aim is to create a community around the coding languages, similar to the Rails Girls who accepted and supported her.

² Erica Joy Baker, <https://medium.com/this-is-hard/ffffff-diversity-1bd2b3421e8a#zpkimue62>

³ Davey Alba, <http://www.wired.com/2014/11/code-documentary-gender-gap/>

⁴ One example: <https://medium.com/absurdist/the-stories-of-women-in-tech-that-we-may-never-hear-7379f502fb52>

⁵ See <http://economix.blogs.nytimes.com/2014/03/10/study-women-who-can-do-math-still-dont-get-hired/> and <http://www.nytimes.com/2015/02/07/upshot/how-elementary-school-teachers-biases-can-discourage-girls-from-math-and-science.html>

⁶ Thanks to Helga Hansen for this idea.

⁷ Thanks to Thuy Le for this idea.

⁸ Renuka Rayasam, <http://www.spiegel.de/international/business/test-shows-anonymous-applications-helps-diversify-workforce-a-828322.html>

⁹ Thanks to Helga Hansen for this idea.

¹⁰ Thanks to Helga Hansen for this idea.

¹¹ I can only speak from my experience as an Asian-American woman who has lived in Berlin for seven years. I can’t speak for all women. I can’t speak for all Americans. I most definitely cannot speak for professional programmers, as I’m not one. This abstract was a collaborative effort with my community. Big thanks to Anika Lindtner, Helga Hansen, Ute Mayer, and Thuy Le for challenging my ideas and supporting me so very generously.

SOCIAL MEDIA AND LABOUR MARKET PARTICIPATION

Anne Suphan

Social media are a central element in the daily lives of many adults and are playing an increasingly important role in labour market participation, especially in job searches. Companies use Facebook, Xing and co. to advertise vacancies and to find new staff. Companies and private human resources services systematically evaluate social media profiles as a way of contacting and recruiting new staff online. Indeed, the majority of jobs are now advertised only online and social media recruiting is a growing trend to which job-seekers are adapting: in 2014, more than one-third of them conducted their job searches via social media.

SOCIAL MEDIA HELP THE UNEMPLOYED

Social media offer enormous potential to the unemployed. They help them maintain relationships with friends, acquaintances and former work contacts and find new ones. They form networks of social relationships which bring important benefits both directly in seeking work and indirectly in helping them to deal with the distressing situation of being unemployed.

Social networks also facilitate integration in the labour market. A large and increasing share of posts are filled via personal contacts. Here "tenuous contacts", i.e. those with more distant acquaintances, prove to be particularly relevant in looking for work. They provide access to information and hence to possible job offers. The loss of precisely these contacts occasioned by unemployment (for example, to former colleagues or business partners) can be mitigated by social media.

Social media also strengthen closer social relationships, which are especially important for the unemployed, because close friends and family members can provide not only helpful information but also emotional support, which cushions the negative effects of unemployment on mental well-being.

All in all, if unemployed people are able to communicate regularly with others via both close and looser networks of relationships they feel less socially isolated and more supported, despite their exclusion from working life. These are important factors in maintaining motivation and contacts in order to return to work more quickly.

THE UNEMPLOYED NEED ACCESS TO THE INTERNET AND SOCIAL MEDIA

Currently, not all social groups benefit to the same extent from the opportunities offered by social media. Although many unemployed people use their own internet access (internet connection plus PC or notebook) to look for work, an above-average share of those with a low level of formal education do not yet have the requisite equipment and are dependent on public internet access. This usually means PCs at the job centre, which may be used only for job searches and applications for specific jobs. These restrictions do not allow job-seekers to use the internet to activate personal networks via social media. What is more, spatial and time limitations prevent the use of social media. This lack of access or limited access puts paid to all efforts to acquire information, assistance or support by digital means, and often leads to these individuals being excluded from social participation in the internet in many respects.

THE UNEMPLOYED REQUIRE TARGETED ADVICE ON USING SOCIAL MEDIA

The strategic use of social media for social integration and participation in the labour market depends both on educational background and qualifications and on experience and competence in using these resources. Deciding whether to use social media means weighing up how easy they are to use and how useful they will be on the one hand and the perceived risks on the other. This means that individuals will use those applications they perceive as useful and which they feel confident to use. While seeking work, many unemployed people teach themselves how to use social media, but they remain very sceptical and uncertain about data security. Their sensitivity regarding data disclosure means that their online profiles tend to be very cautious. This in turn hinders strategic networking via social media.

Services to teach people how to use social media for finding work tend to be few and far between, or else they are geared to the use of a specific application. The potential of social media is, however, extremely dynamic. Services to help the unemployed use social media services must therefore focus less on specific competences concerning online job applications, for these quickly become out of date. Instead, job-seekers need to learn how to present themselves more effectively online – in other words to gain more confidence in their own ability to look for work in the new digital world and despite all the problems and difficulties to act as autonomously as possible.

Besides these positive effects, using social media can also be a negative experience for the unemployed, for the forum in which they present themselves and their virtual lives is shared with many other users. Seeing the profiles of others may give rise to a perception – stronger than in offline relationships – of being socially excluded by unemployment and socially useless. This ambivalence regarding social media as well as the different levels of prior experience in using them needs to be countered by special advice services on how to use social media to find work.



Dr. Anne Suphan is a post-doc at the Chair for Sociology at the University of Hohenheim. She has done research on inequality, particularly in a digital context, addressing issues such as the consequences for social sub-groups of lack of access to the internet and inadequate skills and the impact of this on the labour market. Anne Suphan wrote her dissertation "A Gateway to Inclusion? The Potential of Social Media in Situations of Unemployment" at the University of St. Gallen. In 2013, she was Visiting Researcher at the Donald McGannon Communication Research Center at Fordham University New York, USA.

DATA PROTECTION AND THE RIGHT TO PRIVACY: IS DIGITAL SOVEREIGNTY POSSIBLE?

Peter Schaar

Digitalisation and global information networks, data-driven business models and e-services are resulting in ever greater volumes of data crossing borders, in many cases channelled through foreign servers and network nodes. Indeed, distinguishing clearly between national and global communication has become almost impossible in many cases. This raises serious questions about the application and enforcement of legislation concerning the flow of data.

Global internet companies repeatedly succeed in evading what they perceive as annoying obligations – whether taxation or data protection laws – by using clever contracts and choosing favourable business locations.

What is more, intelligence services operating outside their national territory or accessing foreign data within their national territory regularly regard themselves as exempt from the legal restrictions they would have to observe in their domestic surveillance activities. Surveillance by foreign intelligence services and the exchange of data between intelligence services leads to basic rights guaranteed by national laws being undermined or circumvented.

A central factor in the success of digital business models is their scalability: something that functions on a small scale can be applied with little extra investment to a much larger number of users and volumes of data. Google Inc., for example, continues to provide its huge range of services from California and therefore usually regards itself as bound by Californian data protection regulations. The European Court of Justice ruled on 13 May 2014 (C-131/12) that Google must comply with European data protection law when operating its search engine in Europe and was therefore obliged to delete any inadmissible references to search results involving personalised data.

However, given the inadequate harmonisation of data protection regulations among the EU member states, internet companies can control, through their choice of business location, which laws they are subject to and hence which data protection authority is responsible for monitoring them.

Facebook is a case in point: by basing its EU operation in Ireland it has so far been able to evade the much more stringent data protection regulations applicable in other EU member states.

Whether such a strategy will remain viable in the long term appears doubtful given the latest European Court ruling in the law suit between the Austrian data protection activist Maximilian Schrems and the Irish data protection commissioner (C-362/14 from 6 October 2015).

Global surveillance activities by intelligence services also encroach on national sovereignty. In many countries, including Germany, calls are growing louder for a guarantee of “digital sovereignty”, in other words, private individuals, companies and institutions should be effectively protected within national borders from foreign surveillance activities. There are several aspects to this:

- National intelligence services should be given additional surveillance powers and human and technical resources in order to bring them onto a par with global intelligence services
- Given the “backdoors” in hard- and software there have been calls to reduce dependence on a few manufacturers located mainly in the United States and China. Targeted funding programs and corresponding requirements governing the procurement of IT components should make technological sovereignty possible, at least in core sectors
- There have also been proposals to make national telecommunications networks, including the internet, independent of foreign – i.e., American – providers. Network and server structures should be designed so that data generated in Germany or in the EU does not leave those territories.

Whereas in the real world clear criteria exist for defining sovereign territories, these are absent in the virtual world. Even if most data processing is territorially based – after all, the servers, cables, network nodes and computer terminals must be located and operated somewhere – complex, usually networked, global data processing can scarcely be controlled by national law, for legal stipulations normally apply to a specific location.

Requests by national authorities for the release of data stored outside their sovereign territory is of particular interest. The release of data stored on European servers to the US authorities already contravenes EU data protection law.

CONCLUSION

It is currently impossible to predict whether and how the conflict between national legal provisions will be resolved. Were Europe to refrain from enforcing its data protection standards, this would result in a loss of trust that could scarcely be regained.

But whether the United States and other states will be prepared to submit to the requirements of EU law is anyone’s guess. Hopes currently hinge on an umbrella agreement on data protection that the United States and the European Union have been negotiating for years and are currently at a standstill. More important still, however, would be global solutions (still even further off than an EU-USA agreement) that would effectively protect basic rights not only on both sides of the Atlantic but worldwide.



Peter Schaar is Chairman of the European Academy for Freedom of Information and Data Protection and served from 2003 to 2013 as German Federal Commissioner for Data Protection and Freedom of Information. After studying economics, he was appointed assistant professor at the University of Hamburg in 2007. His numerous publications include the book *Das Ende der Privatsphäre* (2007) for which he was conferred the “Das politische Buch” award by the Friedrich-Ebert-Stiftung in 2008.

THE NSA COMMITTEE OF ENQUIRY. WHAT HAS IT ACHIEVED SO FAR?

Christian Flisek

The German parliamentary Committee of Enquiry appointed to investigate the NSA spying scandal began its work in March 2014. As a first step it heard a number of expert reports concerning the legal basis for German federal law and international law and the legal provisions governing the activities of the intelligence services. The experts were unanimously critical of the current practices of the German intelligence service, the Bundesnachrichtendienst (BND), and of existing legal parameters. One of the Committee's first achievements was to recognise that the provisions in the BND law empowering it to engage in foreign surveillance were inadequate and needed to be revised.

The Federal Chancellor's Office has in the meantime concurred with this view and announced the tabling of new legislation. However, to date only minimal changes can be expected with a view to clarifying the situation. The G10 Commission, which examines and, where appropriate, approves BND strategic signals intelligence involving Germans, needs to be strengthened both legally and practically in order to be able to monitor routine traffic (traffic between two foreign states) effectively. Not least, the intelligence services have become more aware that they must be able to publically justify at any time both their practices and the need for the information they have collected. This will probably encourage the BND to be more self-critical in the future.

EVALUATION OF THE GRAULICH REPORT ON US SEARCH TERMS

The appointment of the lawyer Kurt Graulich as an independent ombudsperson was a good choice. His published report testifies to a painstaking and expert investigation of the issues, allowing the Committee to take a much more dispassionate approach in discussing questions such as whether Germans or Europeans were affected and the issue of economic espionage. In terms of scope and conciseness, even the open version of the report goes far beyond anything the German government has provided to the Committee in the way of selector lists. This constitutes a historically unique degree of transparency vis-à-vis the public. Our conclusion is that routine surveillance must be removed from the unregu-

lated grey area and instead be subjected to clear legal regulation and continuous parliamentary control.

PROBLEMATIC BND SELECTORS

The BND and the Federal Chancellor's Office reported to the Parliamentary Control Panel that search terms had been found and deactivated in the BND's own selector lists that allegedly concerned embassies and institutions of EU states and other partners. According to the most recent reports, a German diplomat serving the EU was targeted – and this despite the instructions issued by the BND president in November 2013 following Angela Merkel's statement that "spying among friends just isn't on" for European targets in the BND's own information gathering activities to be very carefully scrutinised for compliance with the "assignment profile".

THE PARLIAMENTARY CONTROL PANEL

The Parliamentary Control Panel (PKGr) is responsible for controlling federal intelligence services and monitors the work of the BND, the Military Counter-Intelligence Service (MAD) and the Federal Office for the Protection of the Constitution (BfV). The body consists of nine members of parliament from all the parties represented in the Bundestag and operates on the basis of the Parliamentary Control Panel Act (PKGrG). This obliges the German government to inform the PKGr in detail about the activities of the intelligence services and about operations of special significance.

CRITICISM OF THE PARLIAMENTARY CONTROL PANEL

Members of the PKGr, who also sit on specialised parliamentary committees and often bear responsibilities as parliamentary secretaries (whips) or spokespersons in the past seldom had the time to concern themselves intensively with the details of the inspection processes. This applies particularly when the PKGr session has a long agenda to discuss. With just a small secretariat the

PKGr is still too under-staffed to monitor the work of almost 10,000 intelligence service employees. The SPD therefore plans to introduce a law that would create a permanent PKGr representative who would support the committee with a much larger staff and independent powers of control.

OUTLOOK

The SPD has called for a reform of strategic signals intelligence by the BND and tabled a white paper to this effect in June 2015. We would like telecommunications surveillance by the BND, both abroad and in Germany, to be placed on a sounder legal basis. If Germany were to institute these reforms it would be a global pioneer in the legal control of its intelligence services and this might prompt other states to reconsider this issue and possibly change their behaviour.

Good transatlantic cooperation will continue to be a cornerstone of German foreign policy. Current challenges, such as combating IS terrorism, make close collaboration essential. The SPD therefore clearly recognises the need for our intelli-

gence services and for their cooperation with partner services. We will continue to participate in the investigation of possible mass surveillance scrupulously, critically and in full awareness of our responsibility. In addition, we must come up with a viable strategy for guaranteeing cyber security and for controlling the intelligence services in the information age, promote understanding of our approach internationally and find partners for its implementation.



Christian Flisek, is a member of the German Bundestag and a lawyer specialising in legal protection of intellectual property with a focus on trademark, patent, competition and copyright law. He became a member of the German parliament in 2013. In addition to serving as a regular member of the Committee for Legal Affairs and Consumer Protection, of the Digital Agenda Committee, of the Subcommittee on European Law and as an alternate member of the Committee for Economic Affairs and Energy he is also spokesperson for the 1st Committee of Enquiry (NSA). He is also Start-Ups Commissioner for the SPD parliamentary group.

BIG DATA AND SMART CITIES: CHALLENGES AHEAD FOR THE RIGHT TO PRIVACY

Eva Blum-Dumontet

As technologies become more and more embedded in our lives we generate increasing amount of data. According to one study by IBM, by 2013, 90 per cent of the world's data had been generated over the course of the two previous years.¹ Every day, we produce 2.5 billion gigabytes of data.² But while our devices and services are collecting vast quantities of data, they are also generating information about us, even without our involvement.

The implications for privacy are enormous when this data can be exploited by other actors who can gain access to our devices, our networks, and our services. This allows institutions, both public and private, to generate intelligence on us all.

Our institutions, legal and technical infrastructures are not ready to adequately protect us and laws are poorly prepared for the onslaught from business and government imperatives to mine this data.

"SMART" CITIES?

Privacy International has been investigating this phenomenon and its impact across the world, from the City of London to communities in the "Global South." One of the new trends we have observed across the world lately is the emergence of so-called "Smart Cities."

The term "Smart City" has emerged as an umbrella concept for many distinct but interconnected systems that comprise an infrastructure spanning an entire city. The core idea is that the environment senses and adapts to deliver optimal quality of service to the city's inhabitants. Some of these components include the smart grid to make optimal use of electricity generation, transmission and consumption; smart homes to save energy or deliver the specific living conditions the owner desires; and smart transport to adapt to changing conditions and faults.

A growing number of companies like IBM, Oracle and Accenture are now specialising in offering packaged plat-

forms for smart cities. With the 2016 Olympics coming up, Rio de Janeiro has for instance purchased from IBM a network to address emergency response. The system is there to centralise all the data gathered by various agencies to predict crimes and natural disasters.³ It is also being deployed in Senegal as part of initiatives of the African Development Bank. We also have reports of their deployment in Gabon, Ivory Coast, and South Africa.

Governments are increasingly allocating budgets to deploy those Smart Cities. But it remains unclear what the rules of the game are, who sets them, who is expected to comply with them and oversees whether they are enforced and how.

The City of London – the financial district within London – is already an example of the risks and failures that await populations whose governments are choosing to go down the road of smart cities without sufficient legal technical safeguards to protect rights, including the right to privacy. The City of London has deployed since 2012 – after a deal during the London Olympics – a free WiFi service to allow near continuous connectivity throughout the entire area. One aspect of Smart Cities technology is the requirement to extract as much intelligence as possible from any data source. Research we conducted showed the City of London network was not secure and exposed users' data to anyone within range of a user's device.⁴

This shows how technologies are often vulnerable but also easily modifiable without requiring the consent of users. We therefore need laws that will take the changeable nature of technology into account and govern how information is generated, collected, and used.

As we have shown with the City of London, our laws, technologies and societies are not ready for the future that is already being built. The situation is all the more worrying in countries where surveillance is often used to clampdown on political opponents, journalists, and civil society who challenge government policies and practices.

¹ Hess, Ken. Does anyone really understand big data? <http://www.zdnet.com/article/does-anyone-really-understand-big-data/> accessed on 23/10/2015

² Ibid.

³ IBM Helps Rio Become a Smarter City <https://www.youtube.com/watch?v=vuBBGYFonXM> accessed on 23/10/2015

⁴ Privacy International. Storm Clouds over Smart Cities. Research to be published.

DATA EXPLOITATION WITHOUT THE RULE OF LAW

In Thailand, various political regimes have been extremely unstable; and the military junta that took power after a coup in May 2014 is determined to use surveillance to help them stay in power.⁵

Since the coup, 53 people have been investigated for lèse-majesté – speaking ill of the monarchy – 40 of them for content posted online.⁶ In Thailand, lèse-majesté is often used as an excuse to repress political opponents. Facebook posts, often dating back several years, are used to justify arrests and jail sentences. As we have observed, a list of IP addresses is sometimes proof enough of a defendant's guilt.⁷ One can therefore only guess what the consequences of mass data collection can be in a country like Thailand whose laws blatantly violate the International Covenant on Civil and Political Rights, despite the country being a signatory to the treaty.

A document from the Dutch Ministry of Economy unveils the ambition Thailand has to turn Bangkok into a smart city.⁸

Without proper legal safeguards, smart cities present another risk: the multiplication of actors who will have access to our data and what their duties and responsibilities are.

WHAT NEXT?

We live already in a world where marketing professionals want to make Big Data and the Internet of Things appear like an unstoppable phenomenon, and governments are keen to invest into algorithmic decision-making and data warehouses. Privacy International is working to build a network of advocates who are equipped with the skills and expertise to investigate these technologies, evaluate digital/data driven initiatives and document the violations and abuses, including exclusions and discrimination that will necessarily be the result of these systems. We want to help and support individuals and groups of society who are unfairly arbitrarily singled out by those surveillance programmes but importantly, to set an evidence-based reform agenda.

Both technological and legal steps are needed. Privacy must be recognised in technical standards that are widely deployed. But there must also be limitations on what can be

done with a user's data (both content and metadata) without his or her consent in accordance with international data protection standards. Likewise users must be informed about exploitative practices and non-users who may be affected

by the data collection practices of a company are also entitled to be warned to ensure that they make informed decisions when engaging with the products and services available to them, and in some circumstances forced upon them.



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⁵ Privacy International, The Right to Privacy in Thailand. Stakeholder Report Universal Periodic Review 25th Session – Thailand. Report yet to be published.

⁶ Belford, Audrey. Special Report: Thai junta hits royal critics with record jail time. <http://www.reuters.com/article/2015/09/04/us-military-convictions-thailand-special-idUSKCN0R400X20150904> accessed on 23/10/2015

⁷ Ilaw. Katha: Wet Dream (Stock falling case). Progress of the case. http://freedom.ilaw.or.th/en/case/83#progress_of_case accessed on 23/10/2015

⁸ Agentschap NL Ministerie van Economische Zaken. Smart Cities in Thailand. <http://www.rvo.nl/sites/default/files/Smart%20Cities%20Thailand.pdf> accessed on 23/10/2015

OPINION-FORMING IN THE ECHO-CHAMBER – SOCIAL MEDIA AND PERSONALISED NEWS

Dr. Jasmin Siri

Drawing on empirical sociological studies on the topic of politics in social media, the following contribution examines how opinion-forming and decision-making processes function in the public spheres of the internet (Siri 2014). As the use of the plural form – public spheres – indicates, it rapidly becomes clear that in the worldwide web we are dealing with more than just the bourgeois public sphere where citizens discuss politics on the basis of a shared experience of reading and news, mediated through publishing houses and a handful of media outlets (Habermas 1990). Instead we move in plural public spheres that may potentially not even be aware of one another, and in which today no-one can claim a monopoly over opinion and knowledge.

PLURALISED PUBLIC SPHERES – THE MEDIUM IS THE MESSAGE

The erosion of the (relatively ordered) bourgeois public sphere thus represents one important starting point for understanding contemporary political communication in the internet. A second is found in media theory: The media form our reality not only at the objective level, as selectors and disseminators of information. Beyond that, the manner in which news is conveyed is also relevant, because the media themselves also affect the news and the users by conveying a specific technical experience. Marshall McLuhan describes this as the media “massaging” themselves into us. Thus on the one side the development of new technologies changes our media experience and our presence in media, on the other side every medium modifies the form of its messages through a specific mode of dissemination (McLuhan 1995). While that may sound terribly theoretical, it can be clearly demonstrated in empirical studies of politics on Facebook and Twitter. I will illustrate these theses using data from three studies concerning Twitter, Facebook and right-populist internet communication.

THE DANGER OF TWITTER

On Twitter, which our study identifies as a dangerous medium for politicians, a message (potentially) disappears in the flood of other messages seeking maximum publicity. Precisely this may lead to carelessness in communication, potentially provoking the shitstorm (Siri and Sesler 2013). On Twitter scatter causes great irritation to both the politically engaged and recreational users – for example when a spectrum from SPD and greens right through to right-wing extremists and IS sympathisers all tweet using the hashtag #parisattacks.

FACEBOOK: POLITICS OF FRIENDSHIP

The situation is quite different on Facebook, where the politics of friendship predominate. SPD members are (largely) friends with other SPD members, greens with greens, right-wing extremists with right-wing extremists and apoliticals with apoliticals. One consequence of homogeneity is paradoxical: while the politically engaged especially like Facebook, where one's friends confirm that one's political attitude is absolutely correct and one's engagement is valued by others, it is especially difficult to reach those who hold different opinions or are largely disinterested in politics through this forum. Thus Facebook is of little use for the work of political persuasion. Even if (paid) election campaigning on Facebook might suggest otherwise, in the medium of friendship the dissenting opinion is rarely convincing, and meaningful campaigning demands the application of enormous resources. Incidentally, such extreme effort is how Obama's (absolutely mythologised) campaigns operated. If one takes a closer look at their concepts, staffing and funding, it quickly becomes clear that such campaigns could never work in Germany, because they would be simply unaffordable here. Where Facebook can be productively used in election work, however, is mobilising activists and core voters, and communicating to them the central political themes and the importance of active engagement (Siri, Melchner and Wolff 2012).

OPINION-FORMING IN THE ECHO-CHAMBER AND NEW COUNTER-PUBLICS

With respect to the ratio of homogeneity and heterogeneity in internet public spheres, something can also be learned from the observation of hate groups on the web. In the course of my work on anti-gender groups and right-wing internet politics, I have learned that the rules I had identified for established politics on Facebook and Twitter (for example that on Facebook one is communicating above all with people who share similar political opinions) apparently do not apply unrestrictedly in this political spectrum. In all social media, anti-gender groups, Christian fundamentalists, AfD members, right-wing extremists and conspiracy theorists succeed in communicating and connecting with one another (Siri 2015a, 2015b). How can that function, given their very closed and often contradictory world views? One possible explanation, it would appear to me, is that all these groups see themselves as resisting an establishment of left-wing media and left-wing politics, which they perceive as comprising all newspapers, television stations and established political parties

(through to the Bavarian Christian Social Union). Here, homogeneity is created not through membership of an organisation or policy positions, but through participation in a counter-discourse on the "lying media" and "traitors" branded as enemies.

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SWIPE, WATCH, PARTICIPATE

Anna Frey

Spoilt and lost, loud and apathetic, “generation something” and anyway: #fail. “The children now love luxury. They have bad manners, contempt for authority; they show disrespect for elders and love chatter in place of exercise.” When Socrates wrote that, nobody thought of “networks” in connection with “social” and a “web” had nothing to do with data. Some time around 400 B.C. it was, says Siri. So it was all the same back then, yet still very different.

The youth of today, the generation of 100 labels from “Y” to “yolo”, none of which really fit. In fact they cannot even agree on a social network. How can such a generation get involved? They have all the knowledge in the world at their fingertips, from the moment they wake up. And the possibilities of participation are endless – endlessly confusing. What path is this generation taking in its search for information and involvement? And how brightly lit must it be? #questionoftheday.

The German government for its part has recently dimmed the lights, terminating its online youth magazine *schekker.de* in summer 2015. No more youth offering. The Facebook and Twitter profiles of the Federal Press Office and government spokespersons will fill the gap apparently. Of course, social communities play a huge role in this young target group, whose internet usage is overwhelmingly mobile (JIM-Studie 2014).¹ But is it possible to keep young people informed about politics via posts and tweets, or enthuse them for social engagement and the environment? Does that not ignore important findings in relation to political education? The “Beutelsbach consensus” of 1976 identifies the following three central criteria:

- Not overpowering: Communication must not overwhelm its targets and prevent them arriving at an independent judgement.
- Controversy: That which is controversial must be presented controversially in all its facets.

¹ http://www.mpfs.de/fileadmin/JIM-pdf14/JIM-Studie_2014.pdf

- Targeting: The addressee must be enabled to analyse a political situation and their own interests and to search for ways and means to influence the identified situation in their interests.

And there is something else, too, that has remained unchanged – since Socrates, since the Beutelsbach consensus and certainly since the invention of the internet (#neuland): Young people, whether they are fans of Sami Slimani, soya or the Superbowl want to

- be taken seriously,
- be informed,
- not be talked down to,
- be involved themselves,
- present themselves,
- be entertained,
- discover the new without searching for it.

An interview with Merkel by one of the best-known German YouTubers does not go far enough, and can only be treated as the experiment it was. As an experiment it revealed all the gaps that exist in political communication and participation today – despite and because of the many possibilities. There is a lack of structures, strategy and rules.

Of course, it is not enough to offer an online portal and hope that the target group finds its way there, if the path remains dark. Decentralised communication is needed in the networks in which the target group moves – like many little LEDs. In that respect the German government's youth offering was no longer up-to-date. Nor do *mitmischen.de*, the youth portal of the Bundestag or *Fluter*, the magazine of the Bundeszentrale für politische Bildung, make full use of their communication possibilities with the young target group.

Bit by bit public instances are opening up to influencers like YouTubers, bloggers, Instagrammers and Snapchatters. But how should these deal with the responsibility suddenly placed on them? Does their growing influence (fans, followers, subscribers...) perhaps even imply a duty to face up to this task? And may they, should they be paid for this?

Influencers who regard themselves not as advertising space but as purveyors of content have already begun to organise themselves. *Verein 301+* is an example of how media people are seeking to establish structures and rules for themselves and others, in order to make their communication transparent and responsible. This communication is not tied to a single channel. It can occur today on YouTube and Twitter and tomorrow somewhere different from the day after. But the requirements should remain unchanged and sight not be lost of the criteria that it be non-overpowering, controversy and targeting. That demands strategies for using the channels and their structures without making oneself dependent on them, and creating the decentralised structures that guarantee dissemination. Perhaps Socrates would have uploaded his answer to this challenge as a YouTube tutorial. Perhaps he would have got his fans to vote on different approaches on Facebook. His solution would certainly have trended on Twitter. But maybe his data allowance would have run out just at that moment. Today it is up to us: #challengeaccepted?



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AUDITING EDEMOCRACY – WHAT IS LEFT WHEN THE HYPE IS OVER

Daniel Roleff

If one consults the academic literature on the question of what really counts in a democracy, one always ends up in the triangle of free access to information – voluntary participation – freedom of decision. In short, the ideally well-informed citizen participates in the decision-making processes of society. This plays out in the democratic arena, on the basis of a multitude of rules, institutions and common sense.

But if one considers the debates over the past twenty years in consolidated democracies, a considerable body of studies speak of a “crisis of democracy” or a democratic deficit. Election turn-out is declining in many countries, both at local and national level. Political parties and associations complain of shrinking membership, while trust in politicians has been at record lows for years.

In the midst of crisis, the technological/societal transformation that emerged in the early 2000s appeared an enticing panacea, capable of rectifying democratic deficits and promoting new civil engagement. As David Runciman, political scientist at Cambridge University, puts it: “The most significant revolution of the 21st century so far is not political. It is the information technology revolution.” Like the creation of new economic modes and social networking, not a few saw the digital as an opportunity to break political log-jams. Never has information been more freely available than in a decentralised network without a classical gatekeeper. Never have the transaction costs for participating in decision-making processes been lower than in an environment of digital communication and participation. The idea of the electronic democracy forged its path.

EXCITING PROSPECTS, DULL REALITY

As far as the real relevance acquired by electronic democracy in Germany is concerned, the statistics reveal both sides of the coin. In a survey by the Forsa Institute for “Science Year 2014: The Digital Society”, over 50 percent of respondents said they would like to have the possibility to participate in political decisions via the internet. More than three quarters even asserted that involving citizens in major projects – such as the controversial major rail redevelopment Stuttgart 21 – would strengthen trust in politics.

And the conditions for this are good. At the level of basic service (up to 2 Mbit/s) Germany has more or less achieved full coverage, and about 96 percent of households have access to broadband at up to 6 Mbit/s. LTE availability is also moving closer to the 90 percent mark. According to the 2014 D21 Digital Index, 76.8 percent of Germans aged 14 and older use the internet. The ARD-ZDF online study reports 41 million daily users in Germany.

On the other side, however, the statistics speak an equally clear language. In the eGovernment Monitor 2014 only 10 percent of respondents report ever having participated in a digital participation process, for consultation the figure is just 3 percent. In the Forsa survey cited above 24 percent reported at least having signed an online petition. More complex and time-consuming formats such as infrastructure defect reporting (14 percent) and participatory budgeting (5 percent) show lower values for participation. If range and participation are indicators for a functioning e-democracy, then the deficits here are greater than in the analogue model.

OUT OF THE VALLEY OF DISAPPOINTMENT LEADS THE PATH OF ENLIGHTENMENT

A tangible digital disillusionment is noticeable among many actors in politics and administration on the grounds of the costs and disappointing outcomes (quantitative and qualitative). Budgets for e-participation experiments are being cut, participation formats stopped. That is not the death of the idea of electronic democracy, but a natural cleansing process after technical innovations enter the market. Following exaggerations of the significance of digital technology for democracy in the flood of new economy and social media success stories, a hangover was inevitable.

Ultimately, state actors wishing to explore positive uses of digital democratic elements often lack expertise of their own, which is why in the past such formats have often been successful only for agencies and other service providers. Visions were often obscured by debates about instruments. For the ongoing development of digital democratic activities, more attention must therefore be devoted to the importance of state innovation resources. Depoliticised citizens cannot be reincluded simply via the internet. Instead every channel, every format, every offer has at least one target group that must be addressed with realistic objectives.

Over the course of the past ten years important insights have been gathered about the nature and utilisation of the world wide web, and their influence on political relations in digital space. The digital is tabloid. The internet is fast, viral, emotional, suited for colourful snappy content. But how tabloid can a budget proposal or legislative process be? That is not to say that the digital arena is apolitical, but the internet and social media have to date proven much more effective in mobilising protest than in the collective construction of alternatives. So the real circumstances must be taken into account in the future development of e-democracy. The good news, if one believes in the Gartner hype cycle, is that a consolidation of e-democracy will take root in the coming years. Particular formats and processes will become the new standards, while others will rightly slip into oblivion.



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FOURTH ESTATE RELOADED: HOW DATA AND CODE ARE TRANSFORMING JOURNALISM

Vanessa Wormer

“Dog bites man” is no headline. But “Man bites dog” is. Journalists have always sought the unusual in the ordinary, the one piece of news that stands out from the rest. But injustices often creep up quietly, attracting no attention, hiding inconspicuously amongst the normal. Journalists need time to tease out and understand structures. How does it all connect up? Which of the relationships are more than random? What goes beyond the anecdotal?

In data journalism journalists harness technology to analyse information and documents. The computer in general and programming languages in particular are the tools they employ. What this is about is a different perspective on reality. Just as scientists explain the world using models, data journalists approach their research object methodically. They scrutinise the data in search of answers that go beyond the recounting of anecdotes, the regurgitation of facts. This approach makes journalists more independent of external interpretations by government agencies, organisations and institutions.

But there are also difficulties of course. Data itself is not in fact objective. While feigning objectivity, it has always been gathered for subjective reasons, emerges in specific contexts and is subject to error. Drawing inspiration from science and the open-source movement, data journalists address this problem with a strong focus on transparency. The genesis of the analysis, the source code of the research, is part of the publication. Every step from data cleansing and analysis to visualisation is recorded. The outcome is a script that can be published alongside the research. The results are then verifiable and reproducible. This way, journalists create a new space for societal discourses. That space is shaped not only by their theories and research findings, but equally by the process through which these come into being. Journalists thus demonstrate the possibilities of crucial data-driven and document-based analyses, which politics and science for various reasons – dependency, laziness, fear of confrontation – avoid.

Transparent data journalism orientated on empirical methods and therefore able to make a contribution to societal debates within society, or in fact initiate them, is a high standard that most outlets fail to reach for lack of time, experience and expertise. But there are already journalists working

in exactly this manner, such as the US non-profit research agency ProPublica. Its project on the ties between pharmaceuticals corporations and physicians, “Dollars for Docs”, represents an outstanding example of this holistic approach. Thanks to its computerised methods anyone may peruse the data, which in turn enables a broader public debate. In this way the anecdotal gives rise to structural descriptions that are not necessarily truer or more objective, but in many cases more relevant and place discourses on a broader footing.

That is very necessary. Given the growing mountains of data produced by the digital age, we are now able to empirically measure more and more social phenomena: for example tracking influenza epidemics using Google search requests, documenting patriarchal structures in the form of streets with male first names, and so on... But all this creates another difficulty. Journalists who have learned to work with words and images balk when faced with such gigantic, unmanageable amounts of data. But technological progress is the trump up their sleeves. Modern computers can process immense amounts of data, while highly efficient programs and algorithms are freely available on the internet. Data journalists profit enormously from the open-source movement and the many developers who share their knowledge and products. A permanent exchange of knowledge and experience between journalists and the hacker community has become established on the web, on Twitter and in mailing lists. By this route ever more outsiders are finding their way into journalism: statisticians, whose methodical approach opens up new stories; computer linguists who glean new insights from heterogeneous text sources; and programmers whose skills are needed for example to “liberate” data published only on websites or in unstructured pdfs.

This aspect represents yet another challenge for data journalists: so much data is not publicly accessible, even where its collection has been financed with tax revenues and free access is in the general interest. Many government departments regard data as a source of power to be closely guarded. Even today, the official secret in the Bismarckian tradition still often comes before the needs of mature and responsible interested citizens, especially where there is no freedom of information legislation. Government agencies need to learn that data is not per se sensitive and in need of guarding. Granted, global technology companies generate a general unease and fear of privacy violations, leading to a great feeling of uncertainty. But such fears must not be misused as grounds to deny citizens and journalists access to data and documents or adopt unchallengeable data protection conditions that in many areas impede transparent public discourse.

Today journalism is confronted with new challenges, as digitalisation changes our society in unforeseeable ways. Journalists are also having to fight ever harder for users’ attention – and their trust. They can assertively meet these challenges. If modern journalism adds transparent, data-driven computerised methods to its classical repertoire it can survive as a relevant source of inspiration and a strong fourth estate in the digital age.



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CODE FOR GERMANY – DIGITAL TOOLS FOR THE CITY OF THE FUTURE

Julia Kloiber, Fiona Krakenbürger

Twenty cities already have them. Developers, designers and journalists meeting weekly to collaborate on applications and tools that demonstrate how a city can reap the benefits of digitalisation in the 21st century. They are members of the Open Knowledge Labs (OK Labs), a network of more than three hundred volunteers working for transparency, digital governance and open data.¹ The OK Labs form the heart of the Code for Germany programme, a project of Open Knowledge Foundation Deutschland.²

The programme launched in early 2014 with a call to found local groups, known as OK Labs. The response from the community was enthusiastic. Today the network has grown to include Labs in twenty cities, with more in the start-up phase. In the Labs citizens contribute their abilities and demonstrate the possibilities offered by opening up administrative data. The issues are diverse, encompassing everything that affects the city, its residents and its politics, from environment, infrastructure and transport to urban planning and finances.

In Berlin for example there was a referendum in May 2014 on the use of the Tempelhofer Feld, the former Tempelhof Airport.³ In order to help citizens make a well-informed decision, members of the Berlin OK Lab modelled the building plans for the site in a 3-D visualisation and enriched it with additional information.

This data journalism project, which was realised jointly with a city newspaper, shows how new forms of representation can be used to make information more easily accessible.

Even very everyday tasks can be accomplished more easily using digital tools. In Ulm the Lab improved the interface used by parents to search for nursery places. The application “Kleiner Spatz” (little sparrow) shows where the nursery is located on a map of the city, and whether places are available. With one click the nursery can be contacted using a standardised form.⁴

¹ <http://codefor.de/>

² <http://okfn.de/>

³ <http://interaktiv.morgenpost.de/tempelhofer-feld/>

⁴ <http://www.ulmapi.de/kleinerspatz/>

In Stuttgart the Lab tackled the problem of fine particulate air pollution. Alongside the readings from the city's few official monitoring stations, the Lab wanted to gather additional data connected with the problem. Using DIY sensor hardware, hundreds of participants now measure air quality and feed the data to a central website. Alongside its scientific contribution, the project aims above all to generate public interest for the topic.⁵

In Munich the city already makes documents relating to everyday council business publicly available through its information system (Ratsinformationssystem, RIS). However, the system lacked a number of functions, including full-text search. To address this, a couple of members of OK Lab Munich developed the "München Transparent" platform based on the existing RIS but with much greater ease of use and practical additional functions.⁶

Those are just a few of the themes that can be addressed using data from municipal administrations. Creating useful digital tools from raw data, and thus making information as widely accessible as possible, requires programmers, designers, journalists and urban planners to interpret and process the data.

The required knowledge about how a city can use digital tools can be found, so to speak, in its streets. The OK Labs meet in hackspaces, libraries, offices and coworking spaces to discuss how they can improve the city. They use existing open data and come up with new applications. Open data is the raw material of their creativity. But they also make contact with their city administration, local press and fellow-citizens, seeking dialogue to work together on solutions to urban challenges. City government and administration, agencies and institutions must not only improve their attitude to open data and transparency, but must also open up to the potential of communities with which they have to date had few points of contact. There are countless opportunities for this: the OK Labs, as gatherings of experts, offer an initial point of contact. Regular round tables with different participants and perspectives are a proven format for exchange and progress.

One potential future expansion of cooperation would be a fellowship programme, where a team with expertise in the fields of software development, design and communication is integrated for several months into the municipal administration to jointly develop digital tools and solutions. Such programmes already exist within public administrations in Australia, Mexico, Pakistan, Poland and the United States.⁷

The same applies to German cities too. Involving external expertise and cooperation with engaged citizens are helpful in transforming cities into transparent and more efficient apparatuses whose decisions are not only comprehensible, but also open to participation. Cooperation can occur through exchange with local OK Labs and other technically adept communities. But advancing innovation also requires change within the administration. Creating attractive new jobs for young people with know-how and fresh ideas in the city and its authorities is the next step. In addition to the good working

conditions already offered by institutions, they need freedom of action, strong advocates and the confidence of their employers, if they are to develop effective innovations on the road to the city of the future.



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⁵ <http://luftdaten.info/>

⁶ <https://www.muenchen-transparent.de/>

⁷ <https://www.codeforamerica.org/about/fellowship/>

WE DON'T NEED NO EDUCATION – OPEN EDUCATION AND OPEN EDUCATIONAL RESOURCES

Saskia Esken

Access to knowledge through the fast, low-threshold channels of communication, networking and international exchange that we all carry around in our trouser pockets represents a fundamental transformation of our world. Internet and digitalisation present huge opportunities for emancipation and participation – and hold the risk of a dramatic digital divide, for at this point only a few are able to handle them competently and confidently.

Digital autonomy means empowering people to shape self-determined lives in a digital world, both at work and in private. We as social democrats want to avoid a digital divide in our society, we want to enable everyone to benefit from digital autonomy and thus promote participation. Our education system must therefore face up to the digital transformation, must fetch people's lived realities into its institutions and concern itself with the present and future conditions of work and society.

So what does digital autonomy involve? Is it about information science (and even programming), or media competence, information and data? Yes of course, all those must play a role, but much more too ... Because what is really new about the digital transformation is its constancy. What we need most are the courage to seek change and the security and confidence to accomplish it.

With access to constantly growing and changing knowledge of the world, education must be about more than filling heads with knowledge. Instead we must awaken and preserve the innate lust for learning, curiosity and openness to change and make constant, lifelong learning a skill that everyone can benefit from.

Teachers, to quote Thomas Krüger, President of the Federal Agency for Civic Education, must risk a little loss of control: We don't need no education – or put another way, teach less and instead create spaces and opportunities for every learner to find their own route into the digital world, to learn to handle media, information and data actively, competently and confidently. Education, yes, but open rather than arbitrary, with open access and an open end.

Much more than the bare technological revolution, the new production methods and new business models, it is the digital cultural transformation that is changing our world, as

openness, networking and exchange create new hierarchies and more strongly team-based forms of work. A system that is governed by individual performance and competition cannot promote the skills required for this cultural turn: creativity, communication, collaboration and critical thinking are the 21st century skills, the competencies for a modern, open and innovative economy and society.

Learning causes that generate discussion or even dismantling and learning processes that are individual but nonetheless rooted in commonality and exchange require open-licensed digital teaching and learning materials that are freely accessible and can be used, modified, exchanged and circulated by teachers and students. That means Open Educational Resources (OER). OERs also grant teachers legal security when using teaching and learning materials and adapting them to their own needs and those of the students. OERs enable individualised approaches that also take into account the important challenge of inclusion in educational institutions.

Networked creation, use and continuous development of digital learning materials on open platforms also means a quantum leap in quality. Yet OERs are not automatically a declaration of war on the publishers of educational materials. The competence of educational publishers is in developing existing content, standards and curricula into good teaching concepts that work well in practice, and this will continue to be needed.

Not only in educational institutions do teachers and students profit from Open Education and OER. Open and cost-free access to learning opportunities such as MOOCs (Massive Open Online Courses) and the free availability of OERs enables even those who cannot attend educational institutions because of family situation, mobility restrictions or other reasons to learn something new. This applies equally to academic and vocational courses, and to offers that pursue private needs and interests. Such unhindered access to education and knowledge is a gain for the whole of society, not just for its education system.

In spring 2015 a joint hearing of the conference of state ministers of education with the Federal Ministry of Education and Research concluded that Open Educational Resources could have a positive overall effect on the quality of learning processes and materials. The concluding report explicitly approves further promotion of the development, retrievability and availability of OERs.

At the initiative of the SPD group in the Bundestag, a sum of 2 million euro for promoting OERs was included in the Education Ministry budget for the first time in 2015. I firmly expect that the mapping projects supported using these funds will confirm that Open Education and OERs represent a gain for teachers and students, for the education system and for society as a whole. I also assume that the final reports expected for early 2016 will substantiate the need for further funding. I will therefore work to persuade national and state governments to considerably expand their funding for OERs. For even if OERs should be open and free of charge for teachers and students, they are not to be had for free – and as I hope I have made adequately clear, they are anything but worthless.



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LEARNING FROM THE NETWORKS: HOW A NEW ENTREPRENEURIAL CULTURE EMERGES

Lena Schiller Clausen

Today we see the future – as the crisis of the present. The signs are the dissolution of old certainties, the disappearance of renowned companies, the blurring of sectoral demarcations and the failure of familiar business models. The trigger of all these developments is the digital transformation of – quite simply everything. What might be a danger from the perspective of the established is a big opportunity for younger market participants. Much of what is appearing in the way of jobs and businesses in the complex ecosystem surrounding the internet is characterised by the generally rather difficult conditions of our time. Iterative methods, often born out of necessity – above all cooperation in networks in place of proper jobs – have proven a boon to product development and business growth.

The “doers” of the upcoming generation prefer to organise in open, democratic, anti-hierarchical and dynamic networks – just like the internet. Their generation is characterised by a new motivational model, a departure from that of their predecessors. Whereas specialist expertise takes a back seat in these dynamic working relationships, young workers are looking above all for employment opportunities that give them recognition of their network competence, mobility and availability.

This new mindset is especially recognisable in the open-source movement, and has spread from there to many other work contexts. Starting from the question of why so many people make the fruits of their labour available for free – be this code written for Linux or knowledge shared in entries written for Wikipedia – we can observe that, alongside the possibility of contributing to something larger than oneself, this is associated with a sense of purpose. It is above all important for participants in open source projects to be able to make their own abilities visible in a relevant peer group. New skills can be learned and one's own work corrected by others. More important than specialist expertise in such projects are abilities such as proactive communication, constructive feedback and knowledge-sharing, without which active participation in an open source network would be simply impossible. Another motivation is to experience one's own creativity, where self-selection means that every challenge accepted corresponds to one's own capabilities and an optimal

balance between skill and task emerges. Non-material motivation is naturally complemented by economic potentials, where skills acquisition in the course of a project represents an investment in each member's own human capital, and thus in their own employability.

Given that the young find many employers failing to supply satisfactory answers to their needs, many seek alternatives. They found or join start-ups. But the road to this new world of work is certainly also open to other companies, not just the young and digital. In fact, successful examples are already found in medium-sized and large companies alike. For the principles of the new world of work are shaped not by fashion, but a fundamental and irreversible social transformation of society.

For better understanding it is worth taking a brief glance at the second half of the last century, at the beginnings of "network capitalism". This emerged not with the rise of the internet, as one might think, but traces its origins to the second half of the 1960s. Permanent change, innovation and creativity – characterised by networking businesses, the globalisation of finance and digitalisation – unleashed an appeal to which people responded with personal mobility and an enhanced capacity to establish networks. What once applied only to the self-employed is now found among permanent employees too: they must increasingly operate as so-called "entre-ployees", who manage and trade in their own labour power and seek to remain competitive. Even in traditionally organised businesses we increasingly observe permanent employees shaping their work proactively via networking. Thus – often against the instructions of superiors – a company's peripheral boundaries gradually open completely of their own accord. Anyone wanting to join in this "New Business Order" will have to risk experiments such as the following:¹

NO SUPERIORS

In the spectrum between classical optimisation and workers' emancipation, businesses must find new individualised forms of work and cooperation. Managers no longer need to lead those under them, but support them in shaping their cooperation and interfaces.

NETWORK THE PERIPHERIES

The internet promotes structural change and is at the same time its model. Connections to partners customers, colleagues and staff are as dynamic as the internet itself. Every company can open its peripheries through the networkability of its staff.

PROMOTE UNCONTROLLED EXCHANGE

Today the entire knowledge of humanity is available through global networks. Networks profit from the strength of weak ties, and those who refrain from exchange quickly encounter their own limits.

PROMOTE REBELLION AND TAKE DETOURS

New ideas and projects – as well as new rules and norms – that are intended to facilitate change in culture in a deadlocked situation often die before they have really been born. In order to bring about change in companies, and ultimately find the right short cuts, one must permit social distancing and rebellion, and take creative detours.



Lena Schiller Clausen, born 1980, is an entrepreneur and author with an interest in the possibilities for participation in the digital transformation of economy and society. As co-founder of the coworking space "Betahaus Hamburg", curator of "Work in Progress" and consultant with Co/lateral she shapes interfaces between businesses and the growing "creative class". In her book "New Business Order" (Hanser, 2014) she discusses the impact of start-ups on the economy and society.

¹ Christoph Giesa and Lena Schiller Clausen. 2014. New Business Order: Wie Start-ups Wirtschaft und Gesellschaft verändern (Munich, 2014).

ONLINE HARASSMENT AGAINST WOMEN

Caroline Criado-Perez

When we talk about the harassment of women online, we often think of it as a digital problem, that needs a digital solution. And in some ways, it is. Female journalists often think of the comments section of an article as a no-go area. "Don't read the comments" has become something of an internet mantra. A recent video produced by the UK newspaper The Telegraph, featured the three editors of the women's section reading out a selection of the abuse they have faced on a daily basis for the three years the section has been active.

GOOD MODERATION IS CRUCIAL

But does online abuse have to be inevitable? Research shows that good moderation can make all the difference, because the first few comments under a piece set the tone: if they are constructive, the others are more likely to follow suit, whereas if they are abusive trolling, the subsequent comments are also likely to be in a similar vein.

Of course, the comment sections of articles are a specific, controlled and relatively contained area. It is much harder to see how to change the prevailing culture on a platform like twitter, for example. And twitter has something of a rape threat culture. It seems like every time a woman offers her opinion in public, she is inundated with rape and death threats. As I write this, in the UK, a female Member of Parliament (MP) has been subjected to 24 hours and counting of graphic and violent threats to rape and kill her. Her crime? To laugh at the suggestion made by a male MP that men in a male dominated parliament never get a chance to debate their issues. For this, she must be violently sexually violated.

And actually, a woman doesn't even have to voice an opinion to merit such treatment. A few months ago, the lead presenter of Top Gear, a car magazine show, was fired from his position. The decision came after a history of off-hand remarks that had been deemed racist and sexist. The final straw was when he punched one of the show's producers. The show had been one of the UK's most watched programmes, and the search for his replacement was the subject of intense debate. From this speculation emerged a rumour that he was to be replaced by a woman called Sue Perkins, who

has fronted a number of comedy and cookery-based shows. As punishment for being the subject of this rumour, Perkins faced such intense abuse, again in the shape of graphic and violent threats to rape, mutilate and kill her, that she shut down her twitter account.

LOSS OF WOMEN'S VOICES

And this is the central issue. Beyond the obvious cost to women's mental health, there is a cost to society in the form of a loss of women's voices. The issue of abuse online is often framed as a free speech issue — and it is. But it is not the speech of men who threaten to rape women that is at risk — rather it is the speech of women that is being threatened along with the integrity of her body. According to a 2005 Pew report, the proportion of internet users who participated in online chats and discussion groups dropped from 28% in 2000 to 17% in 2005, "entirely because of women's fall off in participation." In 2007, Kathy Sierra, a successful technology writer, joined these silent ranks. Her social security number and home address had been posted online amidst a storm of graphic rape and death threats. "I have cancelled all speaking engagements", she wrote at the time. "I am afraid to leave my yard, I will never feel the same. I will never be the same". She didn't return online until 2013.

The tendency to shut women up with violence has a long pedigree. In the 1500s, women who "nagged" or "gossiped" too much were liable to be paraded around the town square wearing a "Scold's Bridle", a metal mask with a tongue clamp that would forcibly prevent a woman from speaking. Often, the clamp had a spike attached to it so that if a woman moved her tongue it would be lacerated. This contraption remained in use in the UK until the 1800s. A similar focus on their speech faced women who were accused of being witches, who often had their tongues cut out before being burnt at the stake. A famous anti-suffragette poster from the UK shows a crying woman with her tongue nailed to a table. And then we fast-forward to 2013 and I find myself in the middle of a storm of rape and death threats, similarly concerned with my mouth, my tongue, my speech. "Shut your whore mouth or I'll shut it for you and choke you with my dick", read one of the more to the point threats I was sent.

THE INTERNET IS NOT THE CAUSE, IT IS THE PLACE

Men are not sending women rape threats because of the internet. They are sending them because they fear women's voices and what the presence of those voices in the public sphere means for them as men. It is striking that the type of man most likely to send a woman a rape threat is a man who is least secure in his masculinity — a masculinity that is defined by power, leadership, having control over the public space. For such a man, who already feels he has a tenuous grasp on power, the intrusion of women into a traditionally masculine sphere is more than unwelcome — it is a violation against his very sense of self. And so he responds with extreme violence against this perceived violation. If we are to have any hope of addressing this type of abuse, we have to step back way beyond the internet and consider the highly

damaging and prescriptive gender binary we impose on every person from the day she is born.

We need to stop teaching girls that their only function is decoration, that they have no access to rational thought, that they can only ever be the object to a man's subject. But we also need to stop teaching boys that they cannot cry, that they cannot care, that they cannot be vulnerable. Because until we do, we are going to carry on producing men who suffer an existential crisis every time a woman opens her mouth in public. And this type of man will continue to send rape threats to such a woman. And women will continue to shut up.



Caroline Criado-Perez is a freelance journalist and feminist activist living in London. In 2013 she won the Liberty Human Rights Campaigner of the Year Award for her engagement for gender equality. She successfully campaigned for a prominent woman to be illustrated on the reverse of a new British banknote after Elisabeth Fry was replaced on the five-pound note. Her first book, *Do It Like a Woman* was published by Portobello Books in May 2015.

DIGITALISATION AND THE FLIPPED CLASSROOM

Malte Persike

When one speaks of the digitalisation of university teaching, the term “flipped classroom” crops up regularly as the quintessence of blended learning, a method that inverts the responsibility for the different phases of acquiring knowledge and skills. Students initially explore the material on their own using learning media that offer flexibility in place and time of use. In subsequent face-to-face teaching the learned content is then applied, discussed and deepened in the presence of the teacher.¹ Scientific evaluation of this method has to date focused on students and investigated the learning effectiveness of the flipped classroom, its motivational effect, the permanence of knowledge acquisition and changes in student effort requirement.² In fact the flipped classroom need not automatically have anything to do with digital teaching, because there is no reason why the classic handout should not serve as the learning medium for the self-study phase. But in practice flipped classroom and digitalisation almost always go hand in hand. The learning media are frequently video-based, often in fact organised as open online courses.

THE OTHER SIDE OF THE RESOURCE BURDEN

Digital learning media have to be produced by somebody. At German universities that usually means the teacher him- or herself. Such a venture demands skills at various levels – technical, media and didactic – and involves a considerable expansion of the role of the university lecturer. They are now no longer merely teachers, but media creators, often integrated into a larger team. That alone is sufficient reason to examine the resource burden generated by the digitalisation of university teaching not only among students, but equally on the side of the teachers. The following contribution therefore focuses on the production of video-based learning media as one of the currently decisive formats. At

¹ M. Lage and G. Platt, “Inverting the classroom: A Gateway to Creating an Inclusive Learning Environment Source”, *Journal of Economic Education* 31 (2000): 30–43.

² J. O’Flaherty and C. Phillips, “The Use of Flipped Classrooms in Higher Education: A Scoping Review”, *Internet and Higher Education* 25 (2015): 85–95.

Mainz University researchers followed the production process of seven video-based online courses and recorded the time required. All the courses were intended for use in the flipped classroom scenario, and are to be available not only to students at the university itself, but also external students.

DIGITALISATION DEMANDS TIME

The recorded figures are striking. Over a period of six months the project teams invested an average of 9.1 hours/week in producing the online course materials, at peak times well over 20 hours/week. The work breaks down into different phases. Course planning, as the foundation stone of the teaching unit, is followed by production of materials. In particular with video-based productions the spoken texts are often scripted to ensure a flow of speech with minimum interruptions during filming. Furthermore, many materials originally conceived for face-to-face teaching must be reworked for use in audiovisual moving media. Recording and post-production are the most time-consuming phases. Finally, the learning media are integrated into an online programme. The research suggests that teaching staff only partially succeed in delegating the work involved to their teams. Substantial parts of the process, such as course planning, production of materials and recording, continue to burden the teacher.

Breakdown of production time for an open online course (average 9.1 hours/week)

	Teacher	Assistants
Course planning	4 %	3 %
Material preparation (e.g. scripts, presentations)	17 %	2 %
Recording	21 %	12 %
Post-production	5 %	22 %
Publication and course support	5 %	9 %

The open online course with its generally professional studio production is naturally a polarising example. Other forms of audiovisual learning media such as e-lectures or screen-casts are easier to produce,³ but also require considerable technical media expertise and appropriate time budgets for the teacher's production work.

SUPPORT AND TRAINING

Because of the growing time required for digitalisation, teachers require solid support during the production phase. This applies not only to the classic areas of audiovisual media production, such as camera, sound and editing technology, but also questions of suitable design of digital learning media and the didactic structure of the face-to-face parts, in order to underlay the flipped classroom with activating teaching methods.

DIGITALISATION AS SERVICE

The digitalisation of university teaching is an irreversible process that generates a series of benefits for both students and teachers. But digitalisation also demands expertise and binds resources to an extent not available to many university teachers. All phases of media creation are affected by this, from educational design through technical production to a sensible didactic integration of the new media into existing teaching. This makes the creation of institutional support structures a crucial task for universities. The digitalisation of teaching can only go mainstream if it is seen by the teachers to be "minimally invasive". And therefore digitalisation must not remain the sole responsibility of university teachers. It needs to become a service function, run by university media centres, e-learning services or computing centres. Suitable concepts should be developed to release teachers from the chores of production and allow digital learning media to become a natural part of teaching.



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³ J. Handke, Handbuch Hochschullehre Digital: Leitfaden für eine moderne und mediengerechte Lehre (Marburg, 2015).

ALL PRACTICE IS GREY: ON THE REAL STATE OF DIGITAL COPYRIGHT

Leonhard Dobusch

The dreadful state of copyright law in the digital age can be nicely illustrated by a thought experiment. If one thinks back to 1980, it is hard to imagine how one could have committed a copyright violation with a book, an LP or a reel of film. Lending the book to a friend, duplicating parts – or even the whole book – on a photocopier, or staging a reading were all possible without clarifying rights. While copyright was already a complex matter at that time, until the internet it played little role in most people's everyday lives.¹

Today everything is different. Anyone who uses a smartphone to video everyday experiences and share them with friends in a personal blog will hardly be able to avoid violating copyright. A couple of seconds of music or a poster in the background will suffice if "making publicly available" in the internet violates copyright. Many of the most creative digital artforms, such as remix and mashup, are almost impossible to disseminate by legal means, still less to commercialise. The use of even the briefest music or video sequence must be legally clarified, and in most cases this is much too complicated and expensive. Libraries, museums and archives battle with similar problems, preventing them from digitising their holdings.

Apart from shorter copyright periods, there would be two other sensible approaches to solving this problem. Firstly, a European harmonisation and expansion of the catalogue of copyright limitations and exceptions would be sensible. The introduction of a *de minimis* or remix exemption modelled on the fair use clause in US copyright, combined with the forms of flat-fee reimbursement established in Europe, would enable new forms of recreational and remix creativity. Even for commercial publication of remixes and mashups all that would be required is to notify the relevant copyright collecting society (as is already the case for cover versions), in place of the complicated and expensive process of clarifying rights. Secondly, the establishment of a European register of works would simplify clarification of rights and restrict ongoing copyright protection (after an initial period) to cases where works are in fact still in commercial circulation.

¹ The idea of this thought experiment needs to be attributed to James Boyle, who described a similar scenario in his book „The Public Domain: Enclosing the Commons of the Mind“ (2008, Yale University Press).

But a register of works, like a shortening of copyright periods, would stand in contradiction to international treaties like the Berne Convention and is therefore regarded as unrealistic. The same applies to the introduction of an open fair-use exception at the European level: in view of the hardened fronts, the required European harmonisation of exceptions can be regarded as equally unrealistic, at least in the short term.

However, a glance at the real state of copyright, the law in action, paints a different picture. In fact, in certain spheres such as music, film and books practical access to content has become enormously more easy during the past ten years. On YouTube one finds not only the current chart hits, but endless old and otherwise no longer available songs and video clips. Google Books in turn has made it possible to search the full texts of an ever-growing body of digitised print publications and in this way makes cultural heritage available once again, in a broader context.

What remains problematic however is the publication of works created using other works (such as music), in particular when parts of several works are mixed. But at least for applications such as mobile phone videos with backing music a solution is now available. In YouTube's digital audio library users can now verify before uploading whether, how and in which regions a song may be used in a video clip.

The precondition for clarifying rights via YouTube is ironically precisely what is regarded as unrealistic at the legislative level: a digital register of works and a one-stop shop for clearance. Rights-holders who monetise their content on YouTube (by means of advertising) or wish to have it blocked must register it in YouTube's Content ID database. An algorithm then checks whether uploaded content is registered in the database and, if it is, allows the rights-holders to decide how to proceed. YouTube thus demonstrates that a combination of registration with central and, up to a point, blanket clearance is not only practicable, but can in fact generate new revenue streams, especially for works whose conventional exploitation cycle has expired.

So is a reform of copyright in fact superfluous? By no means. Even setting aside the fact that Content ID offers no solution for remixes and mashups, Google's approach is associated with many restrictions: The rights are clarified only for use on YouTube, not more generally, and there is no legal security because rights-holders may revoke at any time. The system also lacks transparency for artists, while smaller labels have no negotiating power vis-à-vis Google. A legislated solution with flat-fee remuneration negotiated by the copyright collecting societies would be more transparent and transferable to other platforms.

Paradoxically it is precisely Google, the internet behemoth criticised by politicians, artists and rights-holders alike, that can live best with the rigid and outdated copyright system – and in fact make money from it. Most of the others, lacking Google's resources and market dominance, belong to those who lose most through the current state of copyright law. It is therefore time to bring the law more closely into line with lived practice in the internet, for the good of users and artists alike.



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FUNDAMENTAL SOCIAL DEMOCRATIC VALUES IN THE DIGITAL SOCIETY: THE CHALLENGE OF THE 4TH INDUSTRIAL REVOLUTION

Thymian Bussemer, Christian Krell, Henning Meyer

The following contribution outlines the thoughts of the SPD's Fundamental Values Commission about how to respond to digitalisation.

SOCIETY IN DIGITAL FLUX

Society is changing rapidly, and we are only just beginning to recognise the contours of the emerging new formation brought forth by the digital revolution and rapid technological progress. The digital society of the future has yet to find its form and function. But already today one thing would appear to be clear: hardly any area of public or private life remains unaffected by digitalisation. The way we do business, work, live, shape democracy and communicate with one another are all subject to enormous change driven by the rapid transformation of digital technologies. Political influence and the question of what guides it must therefore always also consider digitalisation.

CHALLENGES FOR FUNDAMENTAL SOCIAL DEMOCRATIC VALUES

Inspired by the French Revolution and the philosophy of the Enlightenment, the values of liberty, equality and solidarity have guided the democratic labour movement for more than 150 years. The digital revolution raises questions that go to the heart of fundamental social democratic values. This paper outlines how fundamental social democratic values can relate to a digitalising world and what answers they offer to its problems. Beyond that, we pay particular attention to work, which is an absolutely central issue for social democracy and at the same time subject to an unbelievable dynamic of digital change.

LIBERTY

Empowering people to live self-determined and free lives represents the essence of the social democratic idea. The internet can without doubt strengthen the individual's opportunities for liberty. Minorities in society can organise better and more easily, new forms of participation emerge and

people can decide increasingly autonomously about their own lives and circumstances.

At the same time we experience considerable threats to liberty associated with digitalisation. The exponentially growing databases about each and every one of us contribute significantly to this. For all the differences between the actors that wish to gather, integrate and exploit this data – private corporations and state intelligence services – their interests are rather similar. Privacy, in the sense of withdrawal from presence in and observation by the public sphere, is an important precondition of freedom. Only if we can decide what is public and what is not, are we truly free. More liberty in the digital age also means more control over our data.

EQUALITY

Access to the internet will increasingly represent the key to fair participation by all in society, to equal orientation and employment opportunities. Currently different technical standards and equipment (quality, speed, etc.) and also different individual abilities (media competence, etc.) contribute greatly to inequalities.

In relation to the material prosperity of society we can assume that digitalisation has boosted growth. Much more open is the question of how these prosperity gains are to be distributed. The first research results suggest that the economic and social consequences of digitalisation will further exacerbate existing inequalities.

SOLIDARITY

Solidarity is the willingness to act on empathy. Solidarity can overcome degrading circumstances. The welfare state represents solidarity in action. But in an age of digitalisation the conditions for solidarity with one another are changing. In view of compartmentalising public spheres, the separation of work from the workplace, the changing requirements of the welfare state and a powerful libertarian discourse, solidarity is becoming both more difficult and more necessary.

WORK

Social democracy is the party of work. Digitalisation will fundamentally change the way we work. On the one hand, professions will disappear, human labour will be substituted and material production processes will be automated. On the other hand, there will be new opportunities to humanise work and flexibilisation will occur in the interests of better compatibility of family and career. There will be massive demands on politics to adapt labour norms and rules for the digital society, to create better conditions for further qualification and to adapt the social systems to the changing circumstances of work.

SOCIAL DEMOCRATIC VALUE POLITICS IN THE DIGITAL SOCIETY

If we wish to protect the basic rights of the individual and the cohesion of society as a whole, in the sense of fundamental social democratic values, we will have to shape digitalisation – in Germany, in Europe and worldwide. Social democracy, which helped shape industrialisation in the first place – and channelled the forces it unleashed into pan-European prosperity and individual liberties – is not only especially well-situated to take on this task, it is duty-bound.



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Dr. Christian Krell has been head of the Akademie für Soziale Demokratie at Friedrich-Ebert-Stiftung since 2007 and has written and edited numerous textbooks in this function. In 2014 he was appointed to the SPD's Fundamental Values Commission. Krell studied at Siegen University and the University of York. He held a scholarship from Friedrich-Ebert-Stiftung and completed his doctorate in 2006 with a comparative study of the Europe policies of the British, German and French social democrats.



Dr. Henning Meyer is editor-in-chief of the digital media platform Social Europe (socialeurope.eu) and director of the consulting firm New Global Strategy Ltd. He is also a research associate with the Public Policy Group at the London School of Economics and Political Science and a member of the SPD's Fundamental Values Commission. His research interests focus on the impact of digitalisation on work and the labour market, and on the digital transformation of economies.

A LEGAL UPDATE FOR THE INTERNET

Matthias C. Kettemann

Let us begin with the good news. The Internet is governed not by anarchy, but by power and law. Better still, power is increasingly being juridified, and at all levels – state, regional, global – its exercise is being subjected to stricter requirements of legitimacy. Yet, the normative order of the Internet (which is made up of a mixture of legal orders and regulatory arrangements) remains – like all other legal systems – deficient.

New applications, like new rules (then applied to them) are scrutinised in increasingly complex processes with the means of law – especially international law and human rights – with respect to their compatibility with the finality of the information society. This should be done in a way that is sensitive to human rights and development-oriented, which requires terminological clarity and knowledge about the role of law in the regulation of the Internet.

INTERNATIONAL LAW APPLIES TO THE INTERNET

Terminological uncertainty in political documents (governmental declaration, Digital Agenda) is problematic, because it obscures the real (and existing) challenges in applying international law to state and non-state activities in relation to the Internet. At the same time the focus on international law falls short; the norms of Internet governance, whose objective is to secure the integrity of the Internet and its potential for human development, are a great deal more diverse than is suggested. There is certainly a need for an “international law of the Internet”, in the sense of a set of international norms applicable to state and non-state activities, to effectively protect freedom and security on the Internet.

The states of the world agree that building a human-centred, inclusive, development-oriented information society must be based on the goals and principles of the UN Charter, international law and human rights. As such, existing international law is fully applicable to the Internet.

HOW CAN THE “INTERNATIONAL LAW OF THE INTERNET” BE IMPROVED?

Two preconditions for exercising human rights on the Internet are access to the Internet itself (to be ensured through infrastructure measures) and access to Internet content (to be protected from censorship). In Germany, the right to Internet access is protected under the Basic Law as an extension of the right to dignity and the welfare state principle. The basic right is a human right, and therefore also applies to refugees. That means that all human rights that apply offline also do so online. There is no need to reinvent the wheel; just for a little work on the shock-absorbers.

Human rights are violated on a daily basis. In the light of the Snowden revelations, the right to privacy especially appears to have become irrelevant. That is false. It is privacy that creates the preconditions for exercising freedom of expression; the two are closely intertwined. Freedom of expression (and correlating rights such as freedom of information) is the catalysing right of the Internet, the one on which all the others build. The latest rulings from the European Court of Human Rights – from *Digital Rights Ireland* to *Schrems* – show the way. It is not that the international law of the Internet is deficient; it is the illegal acts of individual states that violate the right to privacy and endanger the character of the Internet as a place of trust.

Democracy is also based on trust. Democratic participation in the Internet can be promoted by integrating individuals more strongly in global processes of Internet governance, which again presupposes access. More than half of humanity still has no access to the Internet. By 2020 the United Nations wants to have all the world’s population connected to the Internet, and the German government has promised to expand broadband to all of Germany by 2018. This process needs to be monitored and encouraged. One central concern of international law here is to give states clear substantive directives for their national policies to preserve the Internet as a space of freedom and security. The principle of openness and freedom of the Internet implies maximum access to maximum public WLAN coverage with minimum regulation.

WHAT DOES THIS MEAN FOR POLITICS?

Many different regulatory regimes apply on the Internet. Despite all the de facto difficulties of the multi-level system, the duty to protect basic rights and guarantee legal protection resides largely with the states. In view of the challenges to human rights (especially privacy) and democratic participation that the Internet brings with it, the central responsibility of all states must be to work convincingly for a human-rights-sensitive development-oriented information society.

To put it more concretely, the Internet touches on the work of all ministries. Internally, privacy in the Internet must be defended against intelligence agencies; in justice, whistleblowers and journalists must be supported in reporting injustices and must not be prosecuted for treason; in defence, state infrastructure must be protected against cyber-attack; in foreign policy, we must work towards a legitimate, multi-stakeholder-based normative order of the Internet; in educa-

tion, e-literacy initiatives must be conducted to overcome digital divides; in social policy, Internet access must be recognised as an immediate constitutional right to participation in social life; in EU policy, viable transatlantic solutions for data transfer need to be found; and in development, the UN goal of Internet for all by 2020 must be pursued with full resolve.



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Imprint:

© 2016

Friedrich-Ebert-Stiftung

Publisher: Division for Economic and Social Policy,
Political Academy, Political Dialogue

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D-53175 Bonn
Fax: 0228 883-9223
www.fes.de/de/digikon15



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ISBN 978-3-95861-421-5

Design: www.stetzer.net
Printing: www.bub-bonn.de

