POLICY IMPLICATIONS OF VIRTUAL WORK

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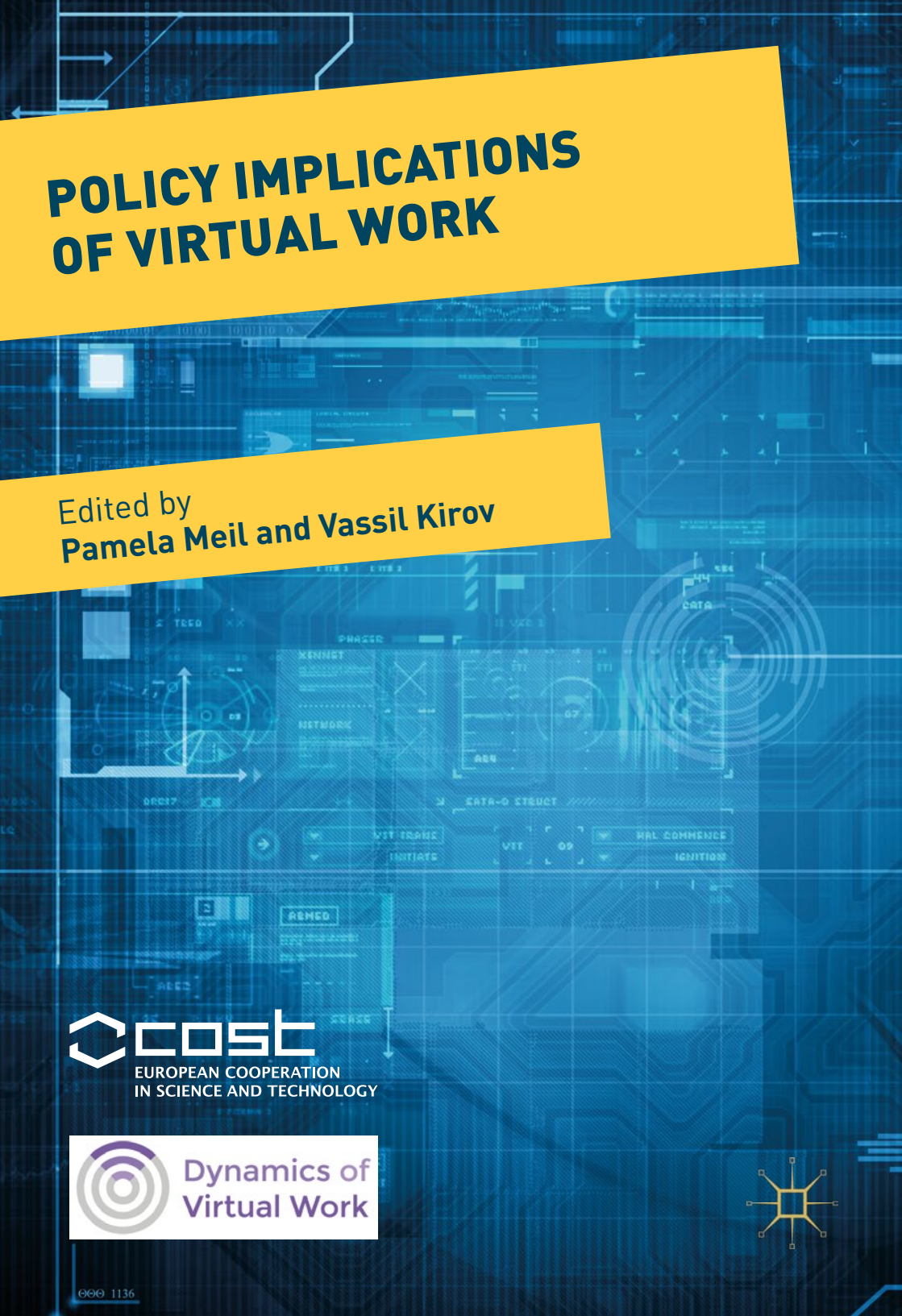

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Dynamics of Virtual Work

ΘΘΘ 1136

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Editors

Policy Implications of Virtual Work

2017

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Pamela Meil and Vassil Kirov

Introduction: Conceptual Debates

This book tackles a very diffuse, diverse and controversial subject: virtual work. The processes of digitalization leading to 'virtual work' are not new, and there has been much research on the effects of Information and Communication Technologies (ICT) on industry (Freeman and Soete 1994), on value chains and the restructuring of work (Sauer et al. 1992; Huws 2003; Flecker and Meil 2010) and on employment creation or destruction (Cohen 1995; Autor 2015; Brynjolfsson and McAfee 2011). What is new are the extensive and rapid changes that virtual processes are having on so many aspects of our lives: the way we buy, sell, network, communicate, participate, create, consume and, of course, the way we work.

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*,
Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_1

Both very pessimistic and optimistic scenarios predict the end of working as we know it: the former through the use of automation, robots and algorithms, thereby making workers superfluous (Frey and Osborne 2013), the latter through a mix of technology and peer-to-peer cooperation and collaboration making traditional forms of organizing economies superfluous (Benkler 2006; Rifkin 2014). There is a general consensus in the literature that the digitalization of work has an increasing impact on the quality of work and employment in Europe (Degryse 2016; Valenduc and Vendramin 2016), but investigation on the actual effects of digitalization on the quality of work and employment is relatively new. In any case, there is no clear approach to the direction that policy should be taking or the forms of regulation that should be pursued due to the complexity of the processes and their interactions, actors' contradictory interests and the size and impact of developments. The objective here is to present an array of policy implications emerging from the many different sides of virtual work. It is less an attempt to either analyze specific policies (although a couple of the chapters in this volume do address this task) or offer concrete policy recipes. Given the enormous scope of issues affected by digitalization and involving virtual labor, the areas covered here are not exhaustive. However, a variety of cases, sectors, policy arenas and practices are examined, analyzed by scholars coming from a variety of different disciplines. We see our contribution in laying out a broad range of arguments, debates and research findings in a field that is evolving quickly, where the debates on different issues are heated and the positions entrenched, and the landscape for developing policy is multilayered and complex. The goal is to identify policy challenges of virtual work in order to navigate potential alternatives for policy and regulation.

On the Concept of Policy

Policy (from the Merriam Webster dictionary): (1) prudence or wisdom in the management of affairs; management or procedure based primarily on material interest; (2) a definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions; a high-level overall plan embracing general goals and acceptable procedures.

There is an interesting range of perspectives expressed in these definitions: from a somewhat vague call for guidance to one that is potentially biased or subject to influence (1) and/or derived from clearly and objectively determined conditions to general guidelines that are strategically broad and comprehensive (2). The extent, breadth, diversity and unclarity of these definitions fit well with the concept of virtual work: it is hard to pin down and contains many contradictions, and that is one of the things that make guiding or regulating it extremely difficult. Before turning to the challenges of identifying and formulating policy, we first lay out a number of conceptual debates on virtual work, which are addressed later in more detail and in a variety of exemplary cases in the chapters of this volume.

What Is Virtual Work?

Virtual work can be labor utilizing various types of digital technologies. It can also be labor that produces content that is then introduced into digital media or for use in digital technologies. It can also be labor that comes from work that is mediated through digital media or technologies.[1] Virtual work can be paid or unpaid or a combination of both. It blurs a number of other boundaries: between producers and users; public and private; employee versus sharer; employee versus player. Some virtual work is grounded in place or even in enterprise although highly embedded in a complex array of processes. On the other hand, virtual work has been defined as having no geographical location. This is of course only partly true. It can be offered 'virtually' (through digital media) and carried out locally. It can be offered through digital media globally, but even then, it is ultimately carried out as real work in a real place. Often what is produced can, however, be consumed or used in a completely different location or in several at the same time.

In fact, there are different dimensions of digital labor and virtual work, although there is continuous debate in the literature of what exactly

[1] This is an adaptation of a definition that was used in the COST Action IS 1202, Dynamics of Virtual Work, funded from 2012 to 2016 by the COST Association.

should be included under this label. Changing business models have transformed the work and work organization in many sectors. For example, virtual work is often presumed to be creative (i.e., generating something new, innovative, working with new knowledge), and much of its rhetorical appeal lies in this apparent quality. However, virtual and digital work is empirically extremely diverse, and an emerging body of empirical studies of its different forms suggests that there is need of a more subtle analysis of what exactly digitalization entails and how it changes work and employment (Eurofound 2015; Meil 2015). Evidence is still required concerning emerging technologies and new media—among them, big data, cloud computing, crowdsourcing, automation and robotics, and social media—and their application in different fields of work and employment (Holtgrewe 2014).

With regard to the policy implications of virtual work, another difficulty that arises is that activities carried out in the digital world are often not considered as labor. This is a central contradiction in the area of virtual work. The very term sharing economy, for instance, arouses images of equitable exchange in which profit or value creation does not play a role. The idea of peer-to-peer production is non-capital-based cooperation which is geared to the creation and production of societal use values for the 'commons'. Among advocates of the 'commons', digital media is seen as a way to promote free access, increased autonomy, innovation and new opportunities particularly for creative occupations such as television, music and film production, journalism and design. The rather utopian vision is for a variety of artists to have new open channels of distribution, giving them opportunities that would otherwise not exist in traditional modes of mass market promotion and distribution, which are largely managed and controlled by large companies. The examples of the uses of social media as a means to more democratization and public involvement abound: community building, politics, education, co-creation, and so on. User-generated content is the vehicle for collaborative social production and consumption.

Obviously, there is another side to this story, one in which activities in the digital world are very much forms of work carried out by labor. Some are unpaid and carried out in the form of user-generated content which creates a lot of gray areas for policy implications. Others are paid

and carried out under some form of contract arrangement and thus easier to identify as labor, but are so diverse in form and exist so much outside of traditional areas of regulation that they also present a number of challenges for policy implications (Meil 2014).

Which Work Is Being Affected by Digitalization and How Is It Affected?

In his recent literature review of the impacts of digitalization on labor markets, Degryse (2016) distinguishes four areas of (eventual) impacts: job creation (new sectors, new products, new services), job change (digitalization, human/intelligent machine interface, new forms of management), job destruction (automation, robotization) and job shifts (digital platforms, crowd sourcing, 'sharing' economy). The impacts do not rule each other out: they can happen simultaneously. Given the diversity of causes and effects, it is useful to dissect the various issues, sectors and developments surrounding virtual work or digital labor.

First, it is useful to differentiate between new forms of digital work that are carried out within the boundaries of traditional industry and service providers (such as companies) and digital work that takes place either on or via platforms. In industrial manufacturing, new developments known under the name 'Industrie 4.0' or the Internet of Things are characterized by highly automated production and logistic networks in which virtual and real processes merge on the basis of cyber-physical systems, aided by exponential increases in computer processing capacity (big data) and Internet-based communication technologies (Pfeiffer 2016; Hirsch-Kreinsen 2016). The fear of dramatic job loss and a polarization of skill profiles, leaving only a few highly skilled computer specialists and very low-skilled service tasks with a hollowing out of middle-level qualified occupations, is one of the pessimistic scenarios associated with Industrie 4.0. Replacement of human labor by robots or the increasing uses of big data to control and manage processes are only part of the developments looked upon critically by stakeholders and organized labor. The ongoing networking between companies and externalization of processes through outsourcing or offshoring is also facilitated by digital technologies. A new

development in this regard is the use of platforms by traditional companies to recruit workers for individual tasks, sometimes highly skilled technical or design tasks. All of these trends present a broad catalogue of policy implications. To what extent should jobs be protected both from automation and externalization? What kind of skilling or competence development should be taking place? What happens to traditional forms of social benefits systems when the workforce shrinks dramatically? These are all difficult issues, but they are still embedded in bounded spaces: the EU, nations and companies are therefore within the reach of existing processes of negotiation and regulatory tools (Drahoukopil and Fabo 2016).

Many more problems for policy arise as work occurs across boundaries, outside of the traditional economy, and beyond existing regulation frameworks (Meil 2009). There are different kinds of intermediaries using digital environments in which labor, either paid or unpaid, is involved in creating value, content, products, information and so on. Applications of social media, such as Facebook, Twitter, Instagram and YouTube, are one example. Another is online exchange or bartering sites, marketplaces, accommodation sites such as eBay or Airbnb, or offers for the provision of services. Various forms of user-generated content whether it is eGovernment, journalistic blogs or reviewing may increase participation, but they also affect some occupations by blurring the lines between professionals and amateurs. The activity that engenders by far the most debate and has the greatest potential to affect employment and working conditions is crowdsourcing. This has been defined as 'the act of a company or institution taking a function once performed by employees and outsourcing it […] in the form of an open call: Both by peer production, but also by […] individuals. The crucial prerequisite is […] the open call and the large network of potential *laborers*' (Howe and Robinson 2005). Other definitions (Felstiner 2011) call it, 'a new form of organizing the outsourcing of tasks' or the use of an online platform 'to enable organizations and individuals to access an indefinite and unknown group of other organizations and individuals to provide – upon payment – specific services or products' (Green et al. 2013). Crowdwork, carried out in the framework of crowdsourcing through the use of platform intermediaries, is thus an extension or extreme version of outsourcing and offshoring developments, a strategy for externalizing work to reduce costs, tap

resources and skills globally, use labor flexibly and so on. The need for policymakers to seriously address this type of work is becoming more and more clear as studies appear that reveal the actual extent and growth of crowdwork. The individuals engaged in crowd employment, and the turnover of tasks being fulfilled has been continuously increasing over the last years. For example, one online provider, Elance, reports that their turnover rose from 200 million USD in 2008 to 1 billion USD in 2013 and registered users increased from 1.5 to 3.5 million (for more information, see: https://www.elance.com/q/online-employment-report; https://www.elance.com/trends/talent-available/geo#GeoRanking). There are forecasts that this spectacular growth will continue in the coming years; Standing predicts that one third of all labor transactions will pass through online platforms by 2025 (see for example: https://workingclassstudies.wordpress.com/2015/02/16/taskers-the-precariat-in-the-on-demand-economy-part-one/). A new study coordinated by the University of Hertfordshire has revealed that the size of the 'gig' economy in the UK is much larger than originally estimated and that for a substantial proportion of crowdworkers, it is their main source of income. Similar results are being found in Germany, the Netherlands and Sweden (Huws et al. 2016).

As with so many other aspects of digital work, there are pros and cons which is one of the reasons that the identification of policy implications is so difficult. Online platforms can be seen as a very effective way of matching supply and demand of labor; it can be seen as a way to reduce transaction costs and market frictions by facilitating outsourcing to individuals, a source of job creation, and an opportunity for flexible employment for those with decreased mobility options due to age, health or childcare responsible (De Stefano 2016). However, the increased flexibility means that standard forms of employment get eroded leading to a greater casualization of work and informalization of the formal economy. The 'pay-as-you-go' workforce character of crowdworking platforms devalues and disguises work. Instead of jobs or positions, there are 'gigs' or 'hits' (De Stefano 2016). Furthermore, online work opens the door for increased surveillance and monitoring of work, thereby infringing on privacy rights. Given the pay-by-task nature of work on many online sites, there is the risk of an intensification of work. Reports also exist in which

work that has been submitted is rejected or payment is refused. The possibility for redress is difficult with anonymous employers and regulatory gaps for intermediaries. Crowdworkers' ability to bid successfully on online platforms is also linked to evaluations and ratings that they receive, making it difficult to ever go offline or to redress their grievances (Schörpf et al. 2017). It even affects the free choice of platform and real flexibility in looking for work since platform loyalty is one path to keeping ratings high.

The character of online work makes the power relationship between capital and labor more and more unbalanced. With digitalization, the compression of space takes extreme forms. Although platforms often have a global marketplace for labor, the landscape of production, exchange and consumption changes dramatically. The configuration of value chains thereby shifts, replacing sequential processes with an integration of processes and actors. Functions in this digital world may all occur in the same place, and time wise, very close together (Simon 2016). A wide array of economic actors (regular employees, unpaid labor, customers, business partners) participates in a given process of value creation. In light of the compression of time and space that occurs in digital environments, the potential for accumulation and concentration of capital increases dramatically (Huws 2014). Those with a strong digital presence tend to be the most visible and to get even stronger as can be seen with companies such as Google or Amazon.

How Can Virtual Work Be Regulated: Or Should It?

The traditional economy was characterized by its embeddedness in companies as units of production which were in turn bounded in regional or national contexts with distinctive institutional frameworks. Workers are recruited from the labor market and according to sector, size of company, qualifications, product, process, area of specialization and so on carry out jobs in a particular division of labor and receive remuneration in the form of wages and benefits. Depending on the social model, a certain share of this remuneration goes to paying taxes and to supporting the social

benefits system (health, pensions and unemployment benefits for instance) in the country in which the work is being carried out and in which the company operates. The company, again depending on the social model, also pays a share of its profits to support the social infrastructure in the form of taxes or contributions to the social benefits systems.

Of course even in this regionally or nationally based model, things have begun to look quite a bit more complicated in the last couple of decades. In most sectors, company activities are rarely so bounded that there is no connection to other regions or countries, through sales, production, services, labor exchange and so on. Companies are often part of larger global value chains or networks. Workers are still embedded in a particular division of labor, but it is increasingly complex, project-based and international. The blurring of boundaries in the so-called traditional economy has led to fragmented working conditions in which the standard, unlimited employment contract has been replaced by a wide variety of contract forms and working arrangements. This has contributed to an increasing precarity of work and has made regulation in traditionally existing frameworks difficult (Meil et al. 2009; Meil 2012b; Holtgrewe et al. 2015; Delteil and Kirov 2016). In the digital economy, of course, many of these trends continue but in more extreme forms, and a number of new debates, issues and challenges have been added.

In the discussions surrounding virtual work, it is not only a question of how it should be regulated, there is controversy over whether it should or can be regulated at all. Representatives of the 'commons' position view activity in the digital world as peer to peer in which traditional organizations and their regulations are superfluous since the rules of interaction are cooperative and for the public good. The opposite position sees a pressing need for regulation in the digital world, precisely because traditional organizations and institutions are being bypassed making existing regulations and their frameworks ineffectual. Here, dangers for intellectual property rights, exploitation of unpaid labor, deregulation of work and so on are apparent if ways are not found to protect and regulate virtual work. There have been a number of initiatives for policy in a broad range of areas, but given that virtual work cuts across existing regulatory frameworks, there are many obstacles to achieving meaningful or effective policies or guidelines.

With regard to work regulation on platforms, a major difficulty is that employers deny that an employment relationship exists since the crowdworkers have multiple employers and rarely have employment contracts in the traditional sense. In any case, given the role of intermediaries, it is often difficult to determine who the real employer is at all. There is a fear that platform work will foster more precarity. There have been pockets of organizing and collective action to improve bargaining positions on platforms (Milland 2016; Laplante and Silberman 2016), but there are real risks to attempts at organizing or speaking out for better working conditions since it is easy to monitor workers on platforms and also because reputation and ratings are the source of obtaining jobs.

Concerns about the impact of digitalization on labor markets abound: the 2015 European Trade Union Confederation (ETUC) congress reaffirmed that quality of work and employment includes a decent wage, occupational health and safety provisions, opportunities for training and promotion and regular secure working contracts, all of which are hard to ensure on digital platforms. One strategy for organized labor has been to argue that work on platforms is indeed an employment relationship and that existing regulations for temporary and casual work, temporary agency work and freelance work also apply to it. The impacts of digitalization could be analyzed at the level of individuals and groups (professions and occupations), but also classes ('cybertariat' – Huws 2003, 'precariat' – Standing 2011), professional organizations, institutions and regulations. In general, there is an agreement about the need to further investigate if those jobs are of good quality and, if not, then how this could be achieved.

In light of the many developments toward freelancing, self-employment, non-standard work arrangements and so on that are part of digital labor, there is also real concern about the sustainability of social benefits systems which are based on nationally bound regulated employment contracts. Health benefits, unemployment compensation, pensions, and taxation and other obligatory payments are organized for the most part around the standard, contract-based employment relationship. Yet here again the boundaries for regulation are shifting as are the calls for more openness versus the calls for more protection. In addition to the temporary job or task-based recruitment on platforms or Internet-recruiting sites that are now widespread, employers are talking about the possibility of creating

'liquid' pools for hiring qualified labor on a needs basis, thereby decreasing the size of the regular workforce presumably down to a small core. The policy implications of such developments for decent work are clear. However, the abilities to freelance in several creative occupations or to supplement income are both seen as positive aspects of the digital world.

Do Labor Markets Exist in This Unbounded Space?

Confronted with a characterization of the labor market for virtual work, several questions arise: Is it an open space, a digital space, does it occur in a particular institutional space or a regulation space? In fact, there is more than one labor market for virtual work. For one, it has both a global dimension and a local one: there is work that can be carried out online, but other work, although captured online, can only be carried out locally with a physical presence, such as maintenance, cleaning, tutoring and service tasks. It should also be pointed out that there really is no such thing as 'virtual' work. There is always real work behind virtual work. There is perhaps no better example than looking at the different types of work being carried out for the digitalization giants such as Google. The workplaces of high-tech firms are legendary for their high pay, creative atmosphere and elite highly qualified workforces. However, there are many jobs behind these highly touted ones that are a lot less attractive. For Google's so-called self-driving car project, a lot of real people who do not have permanent jobs drive around scanning to create a digital image of an area, including the heights of curbs and the angle of intersections as well as developing processors and control systems for the processing of this data (Irani 2015). Nonetheless, for Internet-based recruitment, the labor market is a unique 'unbounded' place. It criss-crosses national and institutional boundaries, and accesses a global labor force. The range of occupations and skill levels vary widely on virtual labor markets. Occupational profiles also shift in terms of skill, blurring boundaries between amateur and professional and so on, and there are a wide range of occupations affected by these shifts: from creative occupations (artists, musicians, journalists) to technical ones (engineers, production workers,

IT experts). Given the absence of company-based employment, there is no internal labor market for Internet-based work which obviously has consequences for careers. Furthermore, in this digital world, it is unclear how credentials or qualifications are determined or measured (and by whom), how occupational identities get defined or formed or how professionalism is rewarded or recognized. Ratings and reputations are one way to receive the more qualified and better-paid jobs. However, they are difficult to transfer between platforms.

The types of jobs that exist in the digital labor market are very diverse, and this also goes for those that will be created in the future. On the top of the scale, there are data analysts, data miners and architects, creators of algorithms and software and application developers. On the bottom of the scale, a number of low-level and poorly paid jobs can be found such as data entry and clean-up and Mechanical Turk HITs which are highly standardized and divided up. There is also poorly paid and precarious work in the 'sharing' or 'collaborative' economy such as Uber drivers or casual odd-jobbing (Degryse 2016). Under the circumstances, it is not surprising that digital labor markets are often characterized as highly polarized.

Although communication and exchange in social media can be quite lively, and rapidly creates digitally based social ties and networks, it centers mostly on unpaid labor. The amorphous place of work for paid labor tends to make association and collective organization difficult as well as identification with co-workers or jobs.

Arenas of Policy and Regulation

The discussion above has clearly demonstrated the highly diverse array of topics and issues surrounding virtual work as well as the controversial and contested nature of the debates. The chapters in this volume provide analyses and research results which shed light on the cause and effects of digitalization in a number of areas relating to virtual work and the policy implications and challenges which derive from them.

In Chap. 2, Ursula Huws makes an important contribution to understanding the organization of work on online platforms by asking: Where

did online platforms come from? and then taking a close look at their historical roots and tracing their evolution and development. Making a distinction between virtual work per se, and the virtualization of work organization, she reveals that the organization of work online is an ongoing, long-term development, enabled by a combination of digitalization and telecommunications. A number of key trends that have converged in the second half of the twenty-first century which characterize the virtualization of work organization are identified. First, Huws discusses the elaboration and extension of global value chains over a period of several decades in which tasks were standardized and outsourced and new international divisions of labor were created. Eventually, 'the stage was set for a development, in which intermediaries could act as brokers, and putting global sourcing within the reach of much smaller companies or even individual entrepreneurs'. Huws then looks at how online platforms have affected the development of freelance labor markets, both for high-skill creative work and low-skill repetitive work. Next, attention is turned to the growth of teleworking, which encompassed broad swathes of the workforce in the course of its evolution and transition. A last trend shows how standardization and performance monitoring have evolved and explores their links with both the global division of labor and the growth of teleworking. Each of the four trends which have been developing over several decades has converged and reached critical mass due to the explosive growth of crowdsourcing platforms in recent years. Once these trends reach critical mass, they 'bring about qualitative as well as quantitative changes in the structure of labor markets and the organisation of work'. This, of course, raises a number of implications for social and economic policy, such as what will and should happen to social protection or welfare systems, support for self-employed workers, quality of working life and psycho-social risks associated with precariousness and work stress.

One of the difficulties of forming policy or regulating virtual work is that there is still too little information on how much there is and what types are spreading. Mandl and Curtarelli (Chap. 3) identify and attempt to map new forms of work and employment related to digitalization in Europe (such as ICT-based mobile work, crowd employment, portfolio work, and so on). This research is based on contributions from national

correspondents and a limited number of case studies; however, it is the first major attempt to measure those new forms of work and organization related to virtual work. Many concrete examples from different European countries illustrate the developments in crowdsourcing and ICT-based mobile work. Beyond the well-known platforms or the large countries, the chapter provides evidence about the state of the art in countries from Eastern or Southern Europe, nationally based platforms. Their conclusions on the policy implications for these new forms are alarming, in the sense that legislation and collective agreements on these issues are 'either absent or not specific enough'. This lack of regulation could counteract the policy efforts and achievements to improve working conditions in Europe for the last decades.

Obviously how policy gets expressed, formulated and enacted is a central issue for a volume on the implications of policy. In Chap. 4 by Valtýsson, a critical discourse analysis is used to understand regulation of a wide variety of digitalization practices and arenas using the EU's *Digital Agenda for Europe* as a case. Valtýsson emphasizes that regulation is a product of policies that are constructed: 'they are the result of competing political, economic, social, and cultural interests'. These, in turn, are 'greatly affected by dominant discourses and discursive formations at a given place and time'. He chooses the EU Digital Agenda on the grounds that international frameworks are crucial in regulating the micro-world of the Internet because of the global re-mixed, re-distributed content found there. The Internet completely alters traditional national or regionally based patterns of production, distribution and consumption.

Valtýsson closely analyzes which dominant discourses guide the Digital Agenda and asks, among a broad range of actors—the European Commission itself, the EU council, civil society, industry or the users themselves—whose interests are being pursued or protected. He finds that the various institutions or organizations that are commenting or participating in the formation of policy tend to view users as consumers, citizens and/or workers, but not as creators or communicators. Furthermore, the Agenda chooses to present an optimistic view of developments on the Internet, and several EU level agencies are interested in creating a digital single market and simplifying regulatory frameworks. In light of the convergence of technologies and given that policies cut across a number of areas, includ-

ing economy, trade, technology, communications, culture and development, this has proven a quite difficult task. 'Arrangements amongst state actors have now turned into a highly complex landscape, where states and intergovernmental institutions share the stage with private corporations, standard setting entities, civil society organizations, epistemic, and technical communities'.

The particular areas which repeatedly get identified as being important in the discourses are achieving a vibrant digital single market, enhancing digital literacy, skills and inclusion, and ICT-enabled benefits for EU society, for instance, the environment and sustainable healthcare. The EU Parliament emphasizes discourses which focus on economic growth and social added values, skills and trust in ICT technologies and infrastructures. It is also recognized that technological and infrastructural developments seem to move faster than the negotiation and formation of regulatory frameworks for a supranational body like the EU. Valtýsson points out that given the complexity, convergence and speed of developments, it is easier to identify challenges rather than to propose solutions. The attempt to cover a broad range of relevant topics and to respond to convergence processes, cross-media communications and user-generated content simultaneously has led to input being very general and vague. The current EU regulatory regimes have proven too complex and institutionally anchored to deal adequately with the challenges. Valtýsson concludes that among all of the discourses on regulation, there in fact seems to be a regulatory void.

Since digital work is linked to the development of the Internet, regulation of the Internet is crucial to addressing a variety of policy challenges. In Chap. 5, Van den Graaf and Fischer argue that there has always been a need for regulating the Internet. However, the 'user environment' is currently still 'either somewhat under-regulated, leaving, for example, issues of personal information in the hands of, mostly, (large) organizations who own or host the platform, and use this information to their own benefit (for example, third party sales, target advertisements), or it tends to be subjected to near-automatic over-regulation'. The two authors introduce the notion of 'co-regulation', supporting the idea that a regulatory regime is made up of a dynamic consisting of both general legislation and a self-regulatory body. The evolution of regulation is analyzed

in the context of the evolution of Internet platforms, mainly using the example of Facebook. As the authors suggest, some of those platforms, for example, YouTube, have changed, highlighting the continued formalization or regulation of 'free labor'.

The regulation challenges are related also with the question of privacy, as 'this mediation and manipulation of social relationships and the gathering of people's preferences (across the Internet) that impacts on, among others, the privacy of individuals online' (Van den Graaf and Fisher, in this volume). As personal information about users is being collected by the platforms on the basis of the sites accessed and used as the digital footprints (left while using search engines, social network sites, location-based services and transactional services), the question is how to regulate this privacy. The court case (Farley vs. Facebook, 2011 see chapter 5 for a detailed description of the case.) is illustrative about those debates and the role of courts in addressing those regulation issues. As argued by the authors, 'the plaintiffs made two legal claims pertaining to their right to control what they consider to be their personal information: their right to authorize the publicity of this information (that is, privacy), and their right to profit from the value created by this information (that is, ownership)'. Van den Graaf and Fischer examine the arguments for co-regulation and assert that in a context where 'regulation can be seen to be frequently lagging behind in its ability to address what is happening' and 'there is a risk of applying yesterday's solution to tomorrow's problems', co-regulation could be an effective way to tackle the logic of the users and the logic of the market.

Digitalization has facilitated a change in the way creative work is being carried out and under what conditions, and a change in the way it is being distributed and consumed. In the chapter on Assessing Music Streaming and Industry Disruptions by Nordgård (Chap. 6), the music industry is the focus of an analysis on the effects of digital streaming services on the work and remuneration of musicians as well as effects on distribution practices. Initially, digital services were lauded as a potential great equalizer for musicians and a source of diversity for music provision. The idea was that easier access would lead to benefits for musicians who would no longer be controlled by the market dominance of a few major music companies. Once new copyright agreements were in place and stricter monitoring of copyright injuries was enforced, thus making it possible

for artists to receive compensation for their work, there was great optimism about the use of digitalization for independent artists.

However, what has emerged, according to Nordgård, is a reallocation of channeling functions within internal value chains in the music industries, but an overall continuation of existing structures and power relationships. This has resulted in a re-establishment of the positions of incumbent firms and maintenance of the dominant position of a few major players. In fact, there has been a noticeable worsening of conditions for musicians due to the shifts in value chains and the introduction of new players such as streaming platforms. Musicians and artists are forced to take on new hybrid roles and functions in the music economy such as 'artrepreneurs' or the 'prosumer'. And tasks that record companies had traditionally provided such as start-up or risk capital, marketing costs and so on are not available in the streaming economy, leaving artists mainly on their own. This is in a market in which the options that are available—tens of millions of tracks—have exploded, making marketing paramount. Independent musicians do not have such resources. As Nordgård explains, 'there is a fundamental shift from traditional purchase and consumption, to access and rent', and if the artist does not achieve a large digital presence or a large share of the market, his/her career is not sustainable. Thus, there is large growth in income gaps, and the economic strength and marketing budgets of major record companies have resulted in a 'continuation of past models which seems to amplify incumbents' position instead of challenging and disrupting them'. In fact, given global distribution and the power of streaming sites in this realm, things have actually gotten worse for artists who previously had at least a share in small local markets. Nordgård sees a threat to cultural diversity in this development and calls on a change in policy and more support for independent artists.

The so-called 'sharing' or 'collaborative' economy is an important policy area. Often represented as a creator of societal use values and a means to increased participation and democratization, it can also be used to generate products (commodities, services, even creative effort) for profit. Although mediated through digital technology or media, the sharing economy often gets implemented locally. There are a number of issues around how it is used and by whom and also how value is created and

for whom which are relevant for policy and regulation. There are two chapters in the volume which deal with different aspects of the sharing economy.

Many cities in developed countries have become arenas of the evolving sharing economy. In Chap. 8, Mazzucotelli and Pais (in this volume) investigate the sharing economy as a path to urban development in four case studies: San Francisco, Amsterdam, Seoul and Milan. In the context of urban sharing, different approaches to policy are taken by various stakeholders in the four cities examined. While sharing seems to be a solution for addressing urban challenges, such as housing, transportation and so on, its concrete shape is shaped by different actors and in different policy and legal frameworks. The driver in San Francisco is the city, which has mainly played the role of 'regulator', fostering private-sector intervention through de-regulative actions. Amsterdam created a new private rental category (Mclaren and Agyeman 2015), but, in contrast to San Francisco, the Dutch city is starting to integrate sharing into its Smart City Program which focuses on cutting carbon emissions in energy and transport systems and in engaging citizens in participatory service evaluation and design. While the multi-stakeholder approach is observed in San Francisco and Amsterdam, in Seoul, the collaborative approach is promoted mainly by the local government. The variety of the roles played by institutions in all the three cases is directly linked to the purposes behind the implementation of sharing policies in the three cities: while in Seoul the sharing economy is viewed as part of a broader sustainability program, in San Francisco the main objective is to support business and innovation. In Amsterdam, institutions aim to transform it into a more livable city through sharing. The case of Milan exemplifies a comprehensive strategy to introduce sharing policies (in many areas such as mobility, food and catering, culture, services, social links and so on). Introducing an important typology of policy configurations, building on Polanyi, Mazzucotelli and Pais contribute to the idea of diverse 'shared economies', concluding that there is no one best way to the sharing economy. In this way, they address the urgent question of the evaluation of sharing policies in the context of the changing role of local governments articulated with the idea of participation of civil society and grass-roots movements.

Cunha and Seiceira (in this volume, Chap. 7) investigate the use of ICT by politicians as way to increase political and civic participation. On the basis of ICT use during Obama's presidential campaigns (2008 and 2012) and in his administration, as a 'paradigmatic case of political use of ICT', they analyze the experience of Portugal. The empirical data is from surveys with members of the parliament. Their conclusion is that despite the increased use of ICT, there is no impact on political participation. The reason there has been little increase in participation is because politicians use it mainly as means to distribute information to their constituents or to gather information, but do not really use it in any interactive democratizing way: 'sole use of these means of communication and information in and of themselves do not lead to an increase in political participation'. So the authors point out that civic participation can be empowered only on the condition that the attitude and way of use by politicians change. At the end of Chap. 7, Cunha and Seiceira formulate concrete recommendations about such a change.

A most critical policy arena concerns the situation of organized labor in the wake of digitalization. Wirsig and Compton in Chap. 9—*Workers, Contradictions and Digital Commodity Chains: Organizing with Content Creators in Canada*—address this issue in a very comprehensive way by looking at how digitalization has restructured commodity chains, thereby changing labor processes across a wide range of media industries. They observe that 'the decomposition and recomposition of labor involves intense efforts to overturn and restructure long-standing work routines and professional standards'. The integration of media organizations into global conglomerates, and increased financialization which has fostered a wave of mergers and acquisitions, has shifted the content and character of occupations dramatically, leading in some cases to 'clear breaks with […] core legitimation principles'.

One of the main developments in the media industries as a result of the shifts and extensions of value chains facilitated by digitalization has been the increase in freelance and short-term contracting. There has always been a large presence of independent media workers in TV and film production, and they have traditionally organized in a variety of occupational guilds and associations. Now, however, there has been a surge in precarious work and contract forms. Broadcasters outsource and

contract out more and more production, and digital platforms such as YouTube are used by more and more 'independent' creators. This has created a huge challenge for media unions 'to find a way to embrace these contradictory identities and create a sense of common purpose and inter-dependency among the people who produce for the media'. They have to do this without really having a say in the large variety of platforms and organizations that profit from their work. The idea is for the decomposed workforce, those with new occupational profiles and links to external processes and colleagues, as well as the contracted-out and freelance workers to recompose a fragmented, diverse labor market. They do report some successes in their case study of the Canada Media Guild. Hundreds of workers in independent non-fiction TV production have begun to organize collectively in Canada, the USA and the UK. For this trend to continue to other groups, Wirsig and Compton conclude that 'they will need help from researchers and policy-makers'.

Another contribution to the labor perspective is brought by Kirov (Chap. 10 in this volume) discussing the process of digitalization of the public sector and public services in Europe and addressing its impacts in the domain of work and employment. The emerging interest and involvement of the public service trade unions in Europe in the digitalization-related debate is analyzed. The argument is that digitalization, being examined in the literature mainly from a 'technical' perspective, starts increasingly to challenge stakeholders in general and trade unions concretely in terms of work and employment consequences. The chapter discusses the intensification of policy debates in 2015 and 2016 and points out the position of organized labor and the need for knowledge about the impacts of digitalization.

Issues of labor regulation and protection are a central domain of employment and labor law, and Chap. 11 by Prassl and Risak turns to an examination of crowdwork through the lens of the law, particularly legal challenges and possible solutions to regulate it. They begin by laying out the characteristics of crowdwork which have had negative consequences for workers (pay, ratings methods, possible rejection of work) and have increased their vulnerability while at the same time catching regulators and lawyers off guard due to its rapid development. Prassl and Risak focus on the challenges that crowdwork poses for traditional labor market regulation and 'explore a series of options to ensure that crowdwork remains or is brought back into the scope of employment and labor law'.

They point out that one central challenge for regulation is the myriad of arrangements that exist between platforms, workers and customers (employers) which call into question provisions in labor law which center around a traditional binary employee-employer bargaining relationship. Attempts to categorize crowdworkers as self-employed encompass a number of difficulties since this group has no right to organize and bargain collectively and no right to minimum wages, sick pay or protection against unfair dismissal. In any case, the new 'solo entrepreneurs' and freelancers found doing platform work are very different from the traditional self-employed liberal professions. They also see only increased confusion and little gain in attempts to create ever new categories of workers, for instance, the recognition of a new group defined as being somewhere between employee and independent contractor. In fact, the authors see little difference between crowdworkers and traditional employees in a number of respects.

Prassl and Risak, using a series of five-employer functions that employment law identifies—from hiring workers to setting their rates of pay—propose concentrating on how these functions are implemented in the changing relationship between employer, their intermediaries, the crowdworker and consumer. In the search for solutions, they warn not to try to reinvent the wheel and to take care that chosen solutions will not lead to the dilution of workers' rights. They see the greatest promise in the creation of a special legislative act dealing with the issues involved with crowdwork as was done for temporary agency work. 'The aim would most likely be to ensure the protection of crowdworkers and to improve the quality of crowdwork'. Only such sophisticated and responsive approaches will be able to address the vast range of problems identified.

Policy Implications

There are a broad range of policy implications that emerge from the chapters of this book both in terms of protecting workers from the vulnerabilities that virtual work can engender and in the potentials for cooperation it can harness.[2] In Chap. 2, Huws sketches out several policy concerns ranging from individual quality of worklife to safe and sustainable working con-

[2] For a detailed list of research issues, see the COST Network IS 1202 website (Towards a policy research agenda, http://dynamicsofvirtualwork.com/).

ditions, to designing appropriate social systems for crowdworkers. In order to regulate the many types of virtual work in sensible and practicable ways, it is necessary to know the extent and character of the work being carried out: what are the demographic characteristics, geographic spread, skill levels and so on of virtual workers. Mandl and Curatelli provide a European-wide overview in Chap. 3 which sets the scene for making informed policy decisions. More such inventories, both quantitative and qualitative, are necessary to ascertain the breadth and character of virtual work.

Another important piece of the puzzle for developing informed and feasible policy is to understand the institutions responsible for it and the place (the Internet) where the regulation or guidelines are supposed to be implemented. Chapters 4 and 5 by Valtýsson and Van den Graaf and Fisher both tackle these tasks. The potentials apparently range (and must range) from central European agencies that have the challenge of trying to take an enormously diverse range of topics and interests and break them down into workable regulatory solutions—a task that, according to Valtýsson, has not been succeeding very effectively up to now—down to groups or individuals. Thus, the other end of the pole is the regulatory activities of users themselves, also a difficult task while operating in a world increasingly dominated by powerful economic actors and many disguised and unclear relationships as Van den Graaf and Fisher show. Although many potentially negative consequences can be identified with virtual work, there are also positive benefits to be gleaned from virtual environments.

Participation, democratization and sharing are all associated with the digital world: but how can these potentials bear fruit and what policies are necessary to ensure or at least encourage positive outcomes? These are the policy implications found in Chaps. 7 and 8 by Mazzucotelli and Pais and Cunha and Seiceira. Mazzucotelli and Pais formulate concrete ideas about the role of local governments in enabling and supporting the development of sharing cities: investment in infrastructure, digital services, clustering, branding, but also playing an intermediary role in reputation and credibility building and protecting data from abuse. Cunha and Seiceira insist on the need to address the 'democratic deficit' through the increased use of 'true 2.0 functionality'.

Some of the chapters in this volume have touched on the upside of digital services for different worker groups by creating new channels of

access and distribution. Policymakers have the challenge of finding ways of allowing digital workers to tap these opportunities while at the same time preventing disadvantages or even abuse. Creative workers are often at the center of these considerations. They have experienced many of the working conditions and regulatory gaps that online workers more generally are now facing. They also have a prominent presence and role in online media in a variety of fields such as film, television, journalism, publishing and music. Chapter 6 by Nordgård raises a number of significant policy issues regarding musicians that are applicable to many other creative workers. How can creative workers protect their intellectual property when this is digitalized and how can this be enforced? How can the livelihoods of creative workers be safeguarded: their careers, occupational identity and their professional integrity? At stake is a future for cultural diversity and an independent intelligentsia.

Finally from the view of organized labor both in the public and private sectors as well as labor law, there is a wide scope of policy implications associated with virtual work. The effects of virtualization on the organization of work and a digital world in which value chains are being extended and transnational recruitment is facilitated impact the nature of jobs, quality of worklife, skills and employment status of workers as Chaps. 2, 10 and 11 by Huws, Wirsig and Compton, Kirov and Prassl and Risak all argue. For organized labor, there is a real challenge to mobilize and protect the rights of self-employed or freelance labor to free assembly and collective bargaining. For labor law, determining the responsibilities of the various actors in the digital space (employers, intermediaries, workers, customers) is on the agenda. Setting employment contracts and (re) defining worker status are both challenges for legal systems and a prerequisite for ensuring flexibility on the one side and a protection of workers on the other. At a much more comprehensive context, the transnational, disguised and mediated character of digital work impacts tax and regulatory systems at societal levels as well as social protection systems, pensions and health plans. Which institutions and institutional frameworks are in a position to address policy for these issues—national, EU or global?

The chapters in this volume demonstrate that the policy challenges are immense, but the points of departure for action are becoming clearer and a number of policy initiatives have been launched. They also show

how complex the policy landscape is, and this requires additional interdisciplinary research and cooperation to assess developments and gain a comprehensive understanding of the implications and their potential policy solutions.

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2

Where Did Online Platforms Come From? The Virtualization of Work Organization and the New Policy Challenges it Raises

Ursula Huws

Introduction

Much of the recent explosion of interest in online platforms for managing the exchange of labor and services seems founded in the suggestion that they are a new phenomenon that emerged, almost out of nowhere, in Silicon Valley as the result of a kind of serendipitous marriage between entrepreneurial initiative on the one hand and the human urge to share on the other. The idea of the 'sharing economy' (Benkler 2004) or 'collaborative consumption' (Botsman and Rogers 2010) surfaced in the public consciousness shortly after the financial crisis of 2007. Two of the best-known platforms, Airbnb and Taskrabbit, were founded in 2008, with Uber appearing on the scene the following year. This concept places the emphasis on peoples' willingness to share their goods or their time with others for remuneration. It overlaps with others which place a greater emphasis

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*, Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_2

on online platforms as a means of accessing the occasional labor of strangers including 'cloudsourcing' (Vaquero et al. 2008; Muhic and Johansson 2014), 'crowdsourcing' (Howe and Robinson 2005; Estellés-Arolas and González-Ladrón-de-Guevara 2012) or the 'human cloud' (Kaganer et al. 2012). The use of online platforms to access a global workforce on demand is historically a little older. Some of the best-known platforms that evoke this principle include Elance, founded in 1999; Odesk, founded in 2003 (these two companies merged in 2013 and were rebranded in 2015 to form Upwork); and Amazon Mechanical Turk, founded in 2005. 2005 was also the year that Etsy was founded as an online marketplace for craft products.

These conceptions of online platforms are further entangled with other notions relating to shifting boundaries between work and consumption, such as 'prosumption' (Toffler 1980; Ritzer and Jurgenson 2010), 'co-creation' (Prahalad and Ramaswamy 2000; Banks and Humphreys 2008) and 'playbour' (Kücklich 2005) or, more broadly, 'digital labor' conceived as a merging of paid and unpaid work in online environments (Burston et al. 2010; Scholz 2011).

With the exception of Toffler, who saw it as a form of work that would arise in the future, nearly all these commentators have viewed these forms of work as new, associated with the phase of technological development sometimes known as 'Web 2.0', a term coined by Tim O'Reilly and Dale Dougherty, in 2004 (O'Reilly 2005), and likely to reach their full potential only in 'Web 3.0' and 'Web 4.0' (for a discussion of these terms, see Aghaei et al. 2012).

This chapter views the organization of work via online platforms, not as a phenomenon that has sprung out of nowhere but as the end result of an evolutionary development of work organization enabled by a combination of digitalization and telecommunications. It argues that, far from being new, it represents a convergence between a number of different trends over several decades, some rooted at least in the latter half of the twentieth century.

In order to develop this argument, it is useful to make a distinction between two, admittedly inter-related, concepts, the first of which refers to the content and processes involved in particular forms of labor and the second to the way that work is organized. The first of these concepts is *virtual work*, defined as 'labor, whether paid or unpaid, that is carried out

using a combination of digital and telecommunications technologies and/or produces content for digital media'.[1] The second is the *virtualization of work organization.* When work is organized virtually, that is managed via online platforms, virtual work is, of course, involved in the development of systems and software, the management and maintenance of websites, the development of digital content, the processing of financial transactions and security checks, the provision of advice and support to customers and clients and so on. However, many of the workers being managed by such platforms are performing work that is anything but virtual—involving the production of material goods or the delivery of real services in real time and space to actual customers physically and in person.

Thus, although it is undoubtedly the case that the number of people carrying out *virtual work* across the planet is growing rapidly, the *virtualization of work organization* extends much more broadly, including within its scope not only virtual workers but also many other workers involved in production and service provision. The main focus of this chapter is on the virtualization of work organization: its origins, its evolution and the implications of its growth for social and economic policy.

The next section summarizes some of the key trends that converged in the second decade of the twenty-first century to create the online platforms that exist today and are still undergoing rapid transmutation. This is followed by a discussion of how these trends, once they reach critical mass, bring about qualitative as well as quantitative changes in the structure of labor markets and the organization of work. Finally, the chapter concludes with a discussion of some of the policy implications of these changes.

Underlying Trends Contributing to the Virtualization of Work Organization

Elaboration of Global Value Chains

A global division of labor is certainly not a new phenomenon and has, to some extent, characterized most empires throughout recorded history.

[1] This definition was used in the COST Action IS 1202, *Dynamics of Virtual Work,* funded from 2012 to 2016 by the COST Association and led by the author of this chapter.

The newer concept of the 'commodity chain' (Hopkins and Wallerstein 1986) or 'value chain' (Porter 1985) goes beyond that of regional specialization to posit a situation where commodity production is broken down into discrete parts, with different parts of the process carried out by different workers in different locations, with value added at each stage, the whole process coordinated centrally, typically by a single multinational company, but sometimes by a network of companies (Huws 2014).

It is perhaps most useful to date the origins of the present 'new international division of labor' (Froebel et al. 1977) to the period between the 1950s and the 1970s, when multinational corporations in industries, including electronics, clothing and automobile manufacture, began to split up their production processes in this way, distributing them around the world to regions where labor was cheap and there were strong inducements for inward investment. From the 1970s, information and communications technologies played an important and growing role in coordinating the integration of these processes (Huws 2003) even though the labor involved was mainly manual. By the 1980s, the overseas relocation of work extended to service industries as well as manufacturing ones.

As office processes became computerized, requiring new and standardized skills, it became easier to train new workers in different locations to carry them out. Meanwhile telecommunications networks were becoming cheaper and more extensive, providing the means to transmit the digitalized results more or less instantaneously to wherever they were required. The global virtual workforce was expanded by a twofold process. On the one hand, more and more tasks became virtualized, in the process transforming what had been 'fixed' jobs into 'footloose' ones (Huws 2006); on the other, there was a growing need for software skills to develop the systems that would enable this virtual work to be carried out, creating new kinds of jobs with digital content. By the end of the 1990s, helped by the rapid growth of the Internet, the need to digitalize a huge legacy of paper-based financial and other documentation and systems, and to adapt systems to avoid the 'Millennium Bug', there was an established global division of labor in information-based services (Huws and Flecker 2004), with an increasing dependence on ICTs (information and communications technologies) for its coordination and management. The virtualization of work organization, in other words, was

proceeding apace, encompassing both virtual and non-virtual works in the scope of this coordination and management.

It is difficult to get an accurate view of the extent and characteristics of value chains during this period because of a lack of clear indicators in the economic statistics (Huws et al. 2004). However, evidence from surveys (WTO 2005; OECD 2005) and qualitative research (Flecker and Kirschenhofer 2002; Ramioul et al. 2005) suggests that in the main it was large companies that were most likely to take advantage of the opportunities offered to relocate work abroad, which was typically done in one of two ways: by opening or purchasing a subsidiary plant or office overseas ('making') or by outsourcing to another company ('buying'). Only large companies, it was generally thought, could cover the setup and transaction costs involved (which included searching for sites or subcontractors, negotiating with local government bodies and suppliers, legal fees, management costs and the costs of training or retraining staff) and take the risk of failure. Nevertheless, it was already clear by the early 2000s that the picture was more complex than a mere decision whether to 'make' or 'buy' goods and services would suggest. Value chains were becoming longer and more complex with several tiers of outsourcing and a proliferation of intermediaries. As the outsourcing of services spread, specialist companies emerged, often many times larger than their clients, sometimes known as 'a new breed of multinationals' (UNCTAD 2002, 2004; Flecker 2007), to supply these services. In the new competitive market for outsourced services, the balance of power between vendor and purchaser became more volatile. Companies were increasingly likely to choose their supplier on the basis of the company and the particular deal on offer, rather than the specific advantages of any given location. Indeed, many of these companies had workers in multiple locations, putting together 'virtual teams' on the basis of the particular requirements of specific projects regardless of location. The concept of 'global sourcing' from unspecified or unknown locations was beginning to replace that of 'offshore outsourcing' from known and specified locations (Ramioul and Huws 2009). Customers need not worry where or how the work was done, so long as their specifications were met and their responsibilities for directly managing the workforce were carried out by others.

The stage was now set for a further development, in which intermediaries could act as brokers, minimizing the risks and setting-up costs that had deterred companies in the past, and putting global sourcing within the reach of much smaller companies or even individual entrepreneurs. Online 'crowdsourcing' platforms can be seen as a further step in this development.

Evolution of Freelance Labor Markets

A second trend that has contributed to the development of online platforms has been the ways in which freelancers' means of finding work have changed in the context of digitalization and globalization. These changes have affected both the kinds of creative, craft or white-collar work that have become virtualized as a result of the digitalization of content and other kinds of non-virtual work that involve the production, maintenance or repair of material commodities or the delivery of services in person.

Let us start with the freelancers doing virtual work. This category can be broadly subdivided into creative work and clerical work, both of which have been transformed by digitalization in several respects.

Freelancing is nothing new in creative work. It has for centuries been usual for writers, artists and musicians to work independently, and in the twentieth century, freelancing was common (though by no means universal) in broadcasting, the film industry, journalism and the music industry. The rights of these independent creative workers were, however, protected to a considerable extent partly by the fact that their skills were highly specialized, and partly, at least in some countries, by 'closed-shop' trade union agreements that made it very difficult to get a job, for example, as an actor, a Hollywood film technician, a Fleet Street print worker or an orchestra musician, without holding a union 'ticket'. Digital technologies arrived at a time when many of these practices were under attack.[2]

[2] In the UK, closed-shop trade union agreements were finally abolished under the terms of the Employment Act, 1990, but their scope had already been reduced under a series of measures introduced by the Thatcher Government which first came to power in 1979.

The period from the 1970s on also saw a growing consolidation of the media industries, with small independent publishers, record companies and film companies being bought up and amalgamated into large multinational corporations, often spanning a number of different types of media production and distribution. Far from bringing more secure employment, this concentration process was often accompanied by casualization, associated with increasing outsourcing (with the development of increasingly elaborated value chains, like those described in the last section). One example of this from the UK was the way in which Channel 4 television was set up when it was founded in 1982, not on the model of the existing television channels which had traditionally directly employed most production staff, but on the basis that it would commission its programs from independent production companies, which would thus have to carry the risks and costs associated with developing program ideas and pilots with no guarantee that they would ever be purchased (Catterall 2013). A similar practice, known as 'packaging out', was adopted by many book and magazine publishers (Galavan et al. 2008) from the 1970s on, directly associated, according to the National Union of Journalists,[3] with a switch from direct employee to freelance status among copy editors, graphic designers, picture researchers and other staff associated with developing new publications.

Such was the context in which digitalization was introduced, bringing with it a further series of upheavals which impacted creative workers. These included major changes in skill requirements, with the 'physical' skills of such varied workers as graphic designers, film editors, fashion designers, typesetters, animators, architectural draftsmen and prop-makers replaced by the need for proficiency in standard software packages such as InDesign, PatternMaker, Archicad, DigiFab, Photoshop or Final Cut Pro. The standard nature of these packages meant that, even as they had to invest in learning how to use them and purchasing licenses to do so, creative workers found themselves becoming increasingly substitutable by others who had made similar investments (Huws 2015a). A global workforce with similar skills was growing up, providing greater

[3] Personal communication, representatives of NUJ Books Branch and London Freelance Branch, 1986.

choice for employers, but generating greater insecurity for the workforce in an increasingly fragmented and competitive labor market.

Meanwhile, the traditional means for finding work were eroding. In the past, these had included word-of-mouth recommendations within industries characterized by strong social networks, specialist agencies, directories and bureaux, trade union closed shops or advertisements in the trade press (Huws 2010). After the advent of the Internet, many of these were replaced by Google searches on the part of clients, diminishing the value of accumulated reputation. Some of the older specialist agencies and directories that had previously enabled clients to find workers like translators, proof-readers or indexers moved online, but a space was also created for new, more generalist, Internet-savvy enterprises that took advantage of the possibilities offered by digitalization for automatic matching (following successful models such as Internet dating sites). This was the context in which platforms like Elance and Freelancer were born.

The offline precursors of sites offering low-skill repetitive clerical work, such as Amazon Mechanical Turk and Clickworker, are more obscure. Although characterized by high levels of part-time working and temporary agency work, office work has traditionally had low levels of self-employment, at least in the formal sector. However, studies in the 1970s and 1980s found a large 'hidden army' (Crine 1979) of (mainly) women carrying out low-skill repetitive work from their homes, much of it broadly classifiable as clerical work, including data entry, copy typing, addressing and stuffing envelopes and checking the accuracy of entries in directories. Like other workers in the informal economy, they formed part of a dispensable workforce, operating below the radar of official regulations, earning low wages and largely unaware of their rights. They were often recruited by dubious means, including door-to-door leafleting and misleading advertisements (Brown 1974; Bisset and Huws 1984; Phizacklea and Wolkowitz 1995). Nevertheless, some were employed more legitimately. In the days before word processors, there was, for example, an enormous demand for copy typing, often supplied by typing agencies with large numbers of home-based typists on their books. Similarly, before telephone answering machines, and later voicemail, became prevalent, there was a demand for home-based workers to respond to telephone calls—forerunners of today's call center workers—

recruited via telephone answering services (Huws et al. 1990). As these tasks became digitalized, so the workers who performed them could be said to have been transformed into virtual workers, at least to the extent that the work could be done anywhere with the appropriate telecommunications infrastructure. This virtualization of work went hand in hand with a virtualization of its organization, with websites substituting for the old paper-based directories and telephone information lines.

These forms of online organization were not limited to self-employed workers doing virtual work, however. They were also increasingly available for finding a variety of other services traditionally delivered by self-employed workers, including cleaning, gardening, household maintenance, plumbing, delivery, private tutoring, hairdressing in the home and catering. These ranged from 'trades' with professional qualifications, provided by self-employed individuals acting alone or with a few employees (e.g., plumbing, electrical wiring, repair of domestic appliances, tree surgery, gutter clearing, dress-making, taxi driving or providing catering services for weddings or funerals) to work carried out casually or occasionally, as a supplement to a main job or a source of additional income, for people whose domestic responsibilities limited their ability to work for long periods away from the home (e.g., cleaning, baby-sitting, assistance with home decorating or assembling flat-pack furniture or running errands). When they did not find new customers on the basis of word-of-mouth recommendations from former clients, family or neighbors, such workers relied on paper-based advertizing, whether this took the form of leaflets posted through letterboxes or in the windows of local stores or listings in telephone directories. With the former eroded by migration and the break-up of traditional communities and the latter ousted by the increasing use of Internet search engines for information, the field was open for online platforms to step in as intermediaries, intercepting these online queries by clever manipulation of search algorithms and, once they had accumulated enough customer data, augmenting this with targeted emails and advertisements on social media.

The growth of platforms like this, such as Handy, Taskrabbit, Helpling and Mybuilder, has had contradictory impacts on the workforce. On the one hand, it has opened up opportunities for people without prior contacts to enter new fields; on the other, for those who were previously

able to make a living as independent service providers, it has devalued previously accumulated social capital and brought deskilling and a loss of autonomy (Huws 2016).

Growth of Teleworking

Another development that fed the virtualization of work organization and management was the growth of what came to be known as teleworking[4]: the use of information and communications technologies to work remotely. First seen, in the 1970s, as a substitute for commuting ('telecommuting') enabling selected individuals to work from their homes instead of travelling into a central office, as computing power became available on smaller and more portable devices, linked via mobile networks, teleworking has evolved into generalized practices of working on the move, whether this involves the whole job (e.g., the processing or production of digital content) or aspects of its management and communication (e.g., communication with managers, co-workers and clients in relation to tasks that have to be carried out in particular locations).

In the course of this transition, management practices previously reserved for relatively small groups, such as IT workers, became generalized across broader swathes of the workforce. It became common to organize workers in virtual teams, on a project-by-project basis, to communicate electronically and to require workers to use online systems to report their progress and access administrative support services. Workers, too, acclimatized to new cultures in which it was commonplace to check emails outside working hours wherever one happened to be and to catch up on work using laptops or tablets from airports, trains, cafes or clients' premises as well as their own homes (Huws 2016). Habits acquired in the workplace merged seamlessly with those increasingly practiced in private life, for example, for shopping, gaming or banking (Gregg 2011). As the twenty-first century approached its second decade, a very high proportion of the population was thus familiarized with the tools used in virtual work organization, happy to download an app on their mobile device,

[4] The literature on teleworking is vast. For an overview of the earlier developments, see Huws et al. (1990).

respond to notifications and log in regularly to report on progress. This culture, in which virtualized work organization is normalized, is also one in which the practices of online platforms are embedded.

Standardization and Performance Monitoring

Linked with, and enabling, both the global division of labor and the growth of teleworking, and underpinning virtual work organization, is the standardization and modularization of tasks (Huws 2015b). Once tasks are standardized, they can be quantified, monitored and managed (and paid) by results (Huws 2003). There is thus a close connection between standardization and performance monitoring. Indeed, when work is carried out remotely, without direct supervision, some form of performance monitoring is the only way it can be managed. Digitalized tracking of performance sets in place a vicious cycle: the more that work is tracked, the more data is collected on performance; analysis of this data then makes it possible to set more precise targets and develop new performance indicators; this in turn creates a requirement for further monitoring, with the possibility of comparing workers' performance not only against colleagues but also against their own past track record.

The collection of quantitative data on workers' achievements, and the speed at which these have been obtained, is often supplemented by qualitative data, in which ratings by customers play an increasingly important role. Such monitoring takes place across many different industrial sectors in both public and private sectors and is an increasingly taken-for-granted aspect of organizational management (Huws 2016). As in other aspects of virtual work organization, we find this general usage adopted by mainstream organizations in relation to their employed workforce creating a climate in which such practices are not questioned when they are adopted by online platforms, where they are crucial means for building trust between clients and workers who were not previously known to each other. Research by Gandini, Pais and Beraldo (2016) has demonstrated that reputation scores built up on the Elance platform correlate with higher earnings, and thus play an important role in determining workers' incomes from such sources, as well as being used to reassure cus-

tomers that the platforms are trustworthy organizations paying attention to work quality and to building good client-worker relationships. The ways that work is monitored on online platforms, sometimes including real-time surveillance by webcam (Caraway 2010), and the right given by some platforms to customers to avoid paying for work they have rated as sub-standard even while retaining ownership of the results are widespread sources of complaint by crowd workers (Huws 2015c; LaPlante and Silberman 2016). However, workers in developing countries, who have been on the receiving end of discrimination and racism, often welcome such 'objective' performance measures as indicators of fairness (D'Cruz and Noronha 2016).

Once again, we find a pattern whereby the virtualization of work organization creates opportunities for new entrants even while it brings about deterioration in the conditions of longstanding members of the affected labor markets.

What Happens When Converging Trends Reach Critical Mass?

Each of the four trends summarized above, all with origins stretching back over four decades or more, could until recently have been seen as something affecting only a minority of the workforce. However, the explosive growth of online platforms since 2008[5] indicates that, in combination, they are now becoming a mainstream concern. In the early stages of digitalization, many forward-looking traditional businesses (such as recruitment agencies, publishers, service suppliers and retailers) migrated online, retaining many features of their traditional forms of production, marketing and organization, as well as their employees, and relying on the legacies of their previous offline reputations to retain some customer loyalty. But once an online marketplace is established as the norm, then the scene is set for new entrants to emerge, unencumbered by past legacies, and experimenting with different business models (for instance to act as intermediaries, rather than employers, or to rent, rather than purchase).

[5] See Huws (2015c) for a summary of the available statistical evidence.

Although the services it provides may well be required in particular locations, an online platform can overcome spatial constraints, presenting itself as 'local' in any market in which it wishes to operate by judicious branding and use of tags. Once it has achieved significant market presence, then network effects kick in: the larger the platform is perceived to be, the more customers reckon that it is likely to be able to offer a wide choice in their particular location. Furthermore, size is equated with reliability and trust, including protection against fraud: the larger the company, the more likely it is to have secure mechanisms for transferring money safely and for providing remedies in the case of non-delivery or non-completion of work. Size also delivers further expansion by other means: the collection of large amounts of data on customers and workers enables the former to be targeted for the new contracts and the latter to be managed more tightly. Finally, economies of scale drive down costs. Meanwhile traditional players are either driven out altogether by the competition or forced to join the dominant platforms on unfavorable terms in order to survive in their chosen fields.

Such factors, acting in synchrony, underlie the exponential growth of crowdsourcing platforms in recent years and explain how companies like Uber and Airbnb could become dominant in their fields (taxi services and providing bed-and-breakfast accommodation, respectively) in a matter of months. In the process, online platforms have moved from the margins of the labor market to the center, perhaps even, in some sectors, constituting a new normative model of work organization (Huws 2016). What started as incremental changes have become system-wide and, in the process, qualitative, as well as quantitative changes have been introduced.

Policy Implications

The above analysis has demonstrated that, far from constituting a new, discrete 'add-on' to traditional forms of employment and work organization, online platforms represent an extreme form of practices that have been becoming established in mainstream organizations across many sectors of the economy over decades. Although some of their features are unique, demanding specific forms of regulation, they cannot be disem-

bedded entirely from this broader context and raise challenges for policymakers that can only be addressed effectively at an economy-wide level.

Their global scope, however, begs the question of what might constitute an 'economy-wide' approach. Albeit sometimes underpinned by European Directives or International Labor Organization (ILO) conventions, most regulation of employment conditions and labor markets operates at a national level, lacking clear mechanisms for influencing the governance of organizations based outside national borders, ensuring their compliance with national norms or persuading them to participate in national social dialogue or contribute to the social reproduction of their workforce by paying tax, national insurance or pension contributions, or provide training or social benefits.

Problems Related to Globalization

Perhaps the greatest question confronting policymakers, therefore, is what measures can be taken at national or supra-national level to bring international online businesses into compliance with the standards of decency and sustainability established in the past by traditional organizations at a national level.

There are several components to the answer.

First, it is necessary to look critically at existing regulations and directives in order to assess their applicability in new online contexts. For example, how should online platforms be categorized as legal entities? And once their legal status has been determined, under what regulatory regime should they be regulated, taxed and inspected? Establishing this status will constitute a step forward in the process of integrating them into the general regulatory regime. Once this has been achieved, it will be easier to determine whether there remain significant loopholes or gaps to be filled.

Second, the emergence of online platforms gives added urgency to the need to address a question that has often been raised in the past in relation to the development of a new international division of labor in the context of global value chain restructuring: how can a global race to the bottom in terms of wages and conditions be avoided? Perhaps one way to approach this problem is to make a differentiation between virtual and non-virtual work. In the case of non-virtual work that has to be

carried out on-site within national borders, then the quality of jobs can be protected by strict application of minimum wage regulations, health and safety regulations and other national measures designed to ensure that work is decent and sustainable, applied at the location where the work is carried out, regardless of where the employer or client is based. In the case of virtual work, it is not so simple to protect earnings levels directly, because workers are in direct competition with others from around the world, perhaps based in countries where the cost of living and local wage rates are much lower. Insisting that they are paid the locally agreed national minimum wage could just price them out of the market altogether, as well as being extraordinarily difficult to enforce.

Nevertheless, there is much that can be done at a national level to avoid local residents being forced to accept poor-quality work on starvation wages via global platforms. This includes ensuring that the social protection system is strong enough to provide enough basic support to job-seekers to give them some choice in the labor market, enabling them to reject work that pays below subsistence levels. Welfare systems also need to be flexible enough to deliver just-in-time benefits to just-in-time workers who may not be able to predict from one day to the next when they will next be engaging in paid work.

Other initiatives include providing training and stimulating employment creation in local economies. A promising idea here is to encourage the development of locally based crowd work platforms, by supporting local entrepreneurs, social enterprises, co-operatives or public-private partnership that can use virtualized forms of work organization to the benefit of local communities, ensuring that the value created remains in local economies. If local clients see the benefits of using local talent, then the risks relating to globalization are diminished.

Policies to Support Self-employed Workers

The development of online platforms for organizing work has drawn attention to the importance of self-employment in the economy. In some cases, previously hidden groups of workers operating in the informal economy have, by being sucked into the scope of these platforms, found their situations formalized in several respects. For example, they may

no longer be paid cash-in-hand but electronically, leaving a record of all transactions and, in principle, allowing tax and national insurance contributions to be calculated and invoices to be generated. In other cases, previously independent workers, or proprietors of small businesses, have been subjected for the first time to the discipline of external corporations and found their autonomy reduced, losing their discretion to negotiate payment rates, vary the timing of work or tout for further business. Indeed, in many cases, it seems doubtful whether, if the appropriate tests were applied, these workers would even be regarded as self-employed, since their working arrangements now have many features that would normally indicate a relationship of dependence.

One priority for policymakers in this area is to establish clear rules to determine who the employer is in situations where there may be triangular relationships between clients, intermediaries and workers and whether these workers should be regarded as 'own account workers', 'independent contractors', 'dependent self-employed' or some other status. This is crucially important because employee status is an important gateway to a range of other rights and responsibilities that affect the character and security of employment, and the benefits it carries.

Where workers are deemed to be genuinely self-employed, then there is a need to establish how they can exercise their basic rights (some of which have been defined in the 1948 Universal Declaration of Human Rights and in various ILO Conventions). These rights include the right to free association and assembly, rights to ownership of intellectual property and the right to be paid for work that has been completed as well as other more general rights that might be available in particular national or sectoral contexts. Although freelancers are represented by trade unions in some sectors and countries, collective bargaining rights for self-employed workers may be particularly problematic where anti-competition laws deem any association for the purposes of raising wages to be a form of cartel.

Working Conditions

Another major challenge is how to ensure decent working conditions, creating jobs that are secure, healthy and compatible with a good work-life balance that is sustainable over the life course. Given the extent to

which many of the characteristics of jobs in the platform economy are extreme versions of those found right across the labor market, then this involves developing policies at a societal level to address a range of issues that arise in the context of virtualization of work organization. These include the development of clear rules for responsibility for training and the independent certification of skills. They also include clear rules for the reporting of health and safety hazards, responsibility for professional liability and insurance and which agencies should be responsible for safety inspections and ensuring compliance with the relevant regulations relating to the safety of workers, consumers and the general public. Another area of concern is workers' rights to privacy and to be able to challenge ratings of their work by customers or employers that they consider to be unfair.

More generally, larger questions are raised by these developments about the quality of working life: How can the intensity of work be kept to a manageable level that does not induce stress and burnout? How can the psycho-social risks associated with the anxiety induced by precariousness be minimized? How can working hours be kept short enough and predictable enough to be compatible with good parenting? Can the unpredictability of demand faced by employers (and the just-in-time employment practices this leads to) be adjusted so that it is complementary to the unpredictability in the ability to work faced by people with long-term health conditions that affect their mobility and ability to concentrate and, if so, how? Is it possible to foster creativity and innovation without transferring the financial and social risks to creative workers? And finally, how will the pensions of the virtual workforce be paid for?

These are large questions, but the need to address them is becoming urgent.

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3

Crowd Employment and ICT-Based Mobile Work—New Employment Forms in Europe

Irene Mandl and Maurizio Curtarelli

Introduction

Across Europe, new employment forms for both employees and self-employed are emerging, driven by societal, economic and technological developments. These refer either to a non-traditional relationship between employer and employee (or client and worker) or to a new form of work organization and work patterns, including non-standard places or times of work.

In an effort to map these emerging trends on the European labor markets, the European Foundation for the Improvement of Living and Working Conditions (Eurofound) ran a large-scale research project in 2013/2014,

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Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_3

aiming to identify and characterize the new employment forms in the Member States of the European Union and Norway and to illustrate their working conditions and labor market effects (Eurofound 2015).

After providing a brief overview of all of the emerging employment forms covered in the study, this chapter focuses on two of them: crowd employment and information and communication technologies (ICT)-based mobile work. These two have been chosen to be dealt with in this publication as they are strongly related to the 'digitalization trend' and are assumed to be of increasing importance in the future. The progress in ICT in combination with changes in work organization as regards the place and time of working supports that employment forms based on digital technologies become more and more widespread (Popma 2013; Holtgrewe 2014). This development is also supported by economic and societal developments resulting in an increasing need of both employers and employees for more flexible work relationships (Gareis et al. 2006). However, while the trend to such 'virtual employment forms' is observable, there is hardly any data available capturing their numerical dimension as they are hardly covered in available structural employment statistics or surveys. Accordingly, little is also known about their impact on working conditions and the labor market. Such information would be of relevance for better informed policy discussions and implementing relevant measures to ensure well-functioning labor markets that equip companies with the skills they require and protect workers from exploitation and exposure to bad working conditions.

In the following, the main characteristics and work methods of these two employment forms will be described, and some indication on workers' and employers' characteristics and motivations to engage in them will be given. Furthermore, their working conditions will be illustrated by examples of case studies conducted in the framework of the abovementioned project. Finally, conclusions and policy pointers are presented.

New Forms of Employment in the EU and Norway

Based on a mapping exercise across the EU Member States and Norway, Eurofound (2015) identified nine broad employment forms that can be considered as new or of increasing importance since about 2000 in at

least some of the countries. Overlaps between these nine types are possible, and an individual employment can fall into more than one category.

They can be classed in two groups, which are sometimes interlinked:

- new models of the employment relationship between employer and employee, or client and worker;
- new work patterns, that is, new ways in which work is conducted.

Some of these nine forms pertain to employees, others to self-employed and freelancers, and some apply to both groups.

The study considers all emerging employment forms, irrespective of whether they are subject to general labor law, specific regulation, regulated on the basis of collective agreements or not regulated at all. The analysis whether or not the identified employment forms (or elements thereof) are fraudulent would, however, have gone beyond the scope of the project and hence is not conducted.

The analyzed employment forms are recent in the countries in which they have been identified as 'emerging'. In several cases (i.e., employee sharing, ICT-based mobile work, voucher-based work and collaborative employment), the employment concepts do not even have a commonly recognized name. Consequently, Eurofound had to coin terms for them when discussing their characteristics. In other cases (i.e., casual work and crowd employment), policy documents or academic literature discusses the employment form, using a heterogeneity of different connotations. In these cases, Eurofound opted for a name or definition which best suited the understanding of these employment forms in the project on hand.

In **employee sharing** an individual worker (salaried employee) is jointly hired by a group of employers (who are not clients of a traditional temporary work agency). Such workers fulfill their job tasks in the participating employer companies on a rotating basis. In contrast to this is **job sharing**, in which a single employer hires two or more workers subject to labor law to jointly fill a specific job.

Voucher-based work refers to employment relationships which are not based on a contract but on a voucher which also constitutes the payment for the worker. In most cases, the workers have a status somewhere between employees and self-employed.

Interim management describes situations in which a worker—usually a highly skilled expert—is hired for a temporary period of time by an employer to conduct a specific project or solve a specific problem. In contrast to traditional fixed-term work arrangements, interim management has some elements of consultancy, but the expert has employee status rather than that of external advisor.

Casual work refers to an employment relationship (i.e., subject to labor law, not referring to self-employed workers) in which the employer is not obliged to regularly provide the worker with work but has the flexibility to call on them when needed. This might result in a situation in which a salaried employee has a permanent employment contract but in practice works only few hours per week or for a longer duration but at irregular intervals.

ICT-based mobile work refers to the worker (whether employee or self-employed) operating from various possible locations outside the premises of their employer (e.g., at home, at a client's premises or 'on the road'), supported by modern technologies such as iPads and less 'place-bound' than traditional teleworking.

For the self-employed and freelancers, **crowd employment** is a new option. Virtual platforms match a large number of buyers and sellers of services or products, often with larger tasks being broken down into small jobs.

In a similar way, **portfolio work** refers to self-employed who work for a large number of clients, providing just small amounts of work for each of them. Portfolio workers might use online platforms to attract clients (and hence be at the same time crowd workers as described above), but could also use more traditional and non-virtual means of identifying and approaching potential customers.

Finally, new patterns of self-employment in the form of new **collaborative models** that go beyond traditional business partner relationships were found in a variety of countries.

Interestingly, there is not much difference in the number of countries in which new employment forms were reported, many being found in around ten countries. Interim management and voucher-based work were less common (six to seven countries), and ICT-based mobile work was the most common (16 countries).

In most EU Member States and Norway, more than one new employment form was identified. Only in Bulgaria, Croatia, Luxembourg and Poland was just one emergent employment form identified, while in Greece and Hungary seven were found. In many of the Eastern European Member States (Bulgaria, Croatia, the Czech Republic, Poland, Romania, Slovakia and Slovenia) and also in some northern European countries (Finland, Ireland, Luxembourg and the Netherlands), the new employment forms mostly concern employees, while those found in most southern European countries (Cyprus, Greece, Portugal and Spain), the Baltic states (Latvia and Lithuania), Denmark and Germany generally involve the self-employed. New employment forms for both employees and self-employed have emerged in several central and northern European countries (Austria, Belgium, France, Hungary, Italy, Norway, Sweden and the UK). Unfortunately, no explanations for these observations could be found as no clear patterns as regards, for example, country clusters, economic or labor market developments, institutional settings and so on can be identified from the available information (Fig. 3.1).

To conclude this general overview of identified new forms of employment, it can be mentioned that while standard employment is still dominant across Europe, an increasing heterogeneity of employment forms for both salaried employees and self-employed is emerging. Although there are some overlaps across some of the new employment forms (i.e., an individual employment relationship can fall into more than one category), in general they differ rather considerably from each other and should be discussed separately as regards their implications for working conditions and the labor market, and hence potential policy implications. Nevertheless, most of them have in common that they are driven by a higher need or wish for flexibility by either the employer or the worker or both. Accordingly, it can be assumed that they will not disappear from the European labor markets, but rather will find increased use in the future, highlighting the relevance of dealing with them from both an academic and policy perspective. This might be particularly true for those forms supported by new technologies, taking into account the speed of development and spread of use of ICT.

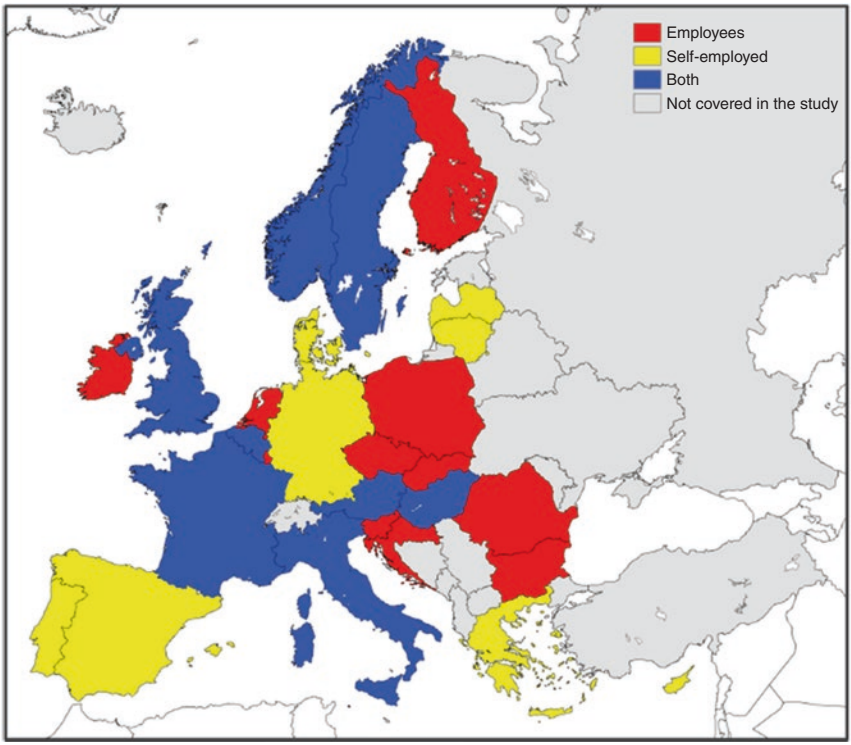

Fig. 3.1 New forms of employment by categorization (pertaining to employees or self-employed) and country (*Source*: Eurofound)

Crowd Employment

Definition, Work Method and Spread

Crowd employment is a new form of organizing the outsourcing of tasks, which would normally be delegated to a single employee, to a large pool of 'virtual workers' (Felstiner 2011). In fact, crowd employment uses an online platform to enable organizations and individuals to access an indefinite and unknown group of other organizations and individuals to provide—upon payment—specific services or products (Green and Barnes 2013; Papsdorf 2009). Technology is essential in this new

employment form as the matching of client and worker as well as task fulfillment and submission is mostly done online. As Kittur et al. state, crowd employment 'is a *socio-technical work system* constituted through a set of relationships that connect organizations, individuals, technologies and work activities' (2013, p. 1). In general, the platform acts as an intermediary or agent. In this role, they facilitate the contact between client and worker by matching supply and demand for services and in several cases providing additional services like acting as a deposit for the payment, conflict resolution support or ratings of the participating workers. However, in general the platform does not become directly involved in the business between the client and the worker and clearly states that it is not responsible for the agreed deals between the client and the worker and any consequences thereof. Quite often there is no formal contract between the client and the worker, but their relationship is based on a bilateral agreement.

In practice, crowd employment is based on carrying out individual tasks or projects rather than on a continuous employment relationship, and a larger task is usually split up into smaller, independent and homogenous subtasks or 'micro tasks' (Felstiner 2011; Kittur et al. 2013). However, crowd workers can also be employed for 'macro tasks' (less automated and requiring more discretion on the worker's part), 'simple projects' (not automated and demanding more worker investment) and 'complex projects', although these are rare (Felstiner 2011). It is important to point out that crowd employment is not suitable for all types of tasks or jobs, but it is highly likely that some part of almost any job can be performed through crowd employment (Kittur et al. 2013).

Tasks that more frequently are commissioned through crowd employment platforms are, for example, development of web content and software, building and cleaning of databases, classifying web pages, transcribing scanned documents and audio clips, classifying and tagging images or videos, reviewing documents, checking websites for specific content, validating search results and designing logos and drafting of slogans for the advertizing industry (Horton and Chilton 2010; Felstiner 2011).

The mapping exercise conducted in this project displayed that crowd employment is emerging in 11 Member States (in terms of platforms

having been/being established there), among a mix of large and small countries and geographic locations. Interestingly, few of the Northern European countries often linked to a high level of adoption of new technologies show indications of this employment form. Among the Eastern European Member States, crowd employment platforms have been established in the Czech Republic, Latvia and Lithuania (Fig. 3.2).

Wexler (2010) describes working in crowd employment as a process in which a client launches a call or competition accompanied by instructions, rules or expectations on an online platform, inviting a loosely defined public to provide a service. The call can be broad, inviting an undifferentiated mass, or narrow, inviting a specific group of people

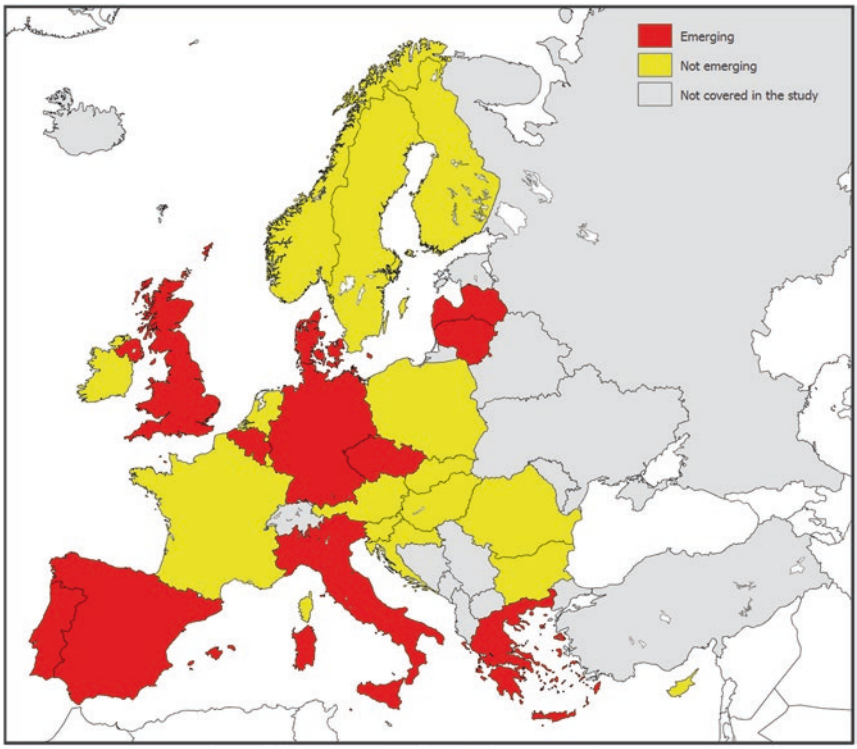

Fig. 3.2 European countries in which crowd employment is new or of increasing importance (*Source*: Eurofound, based on national contributions)

able to deal with a specific task. The client gathers proposals from the crowd, and upon evaluating them selects the proposal most suitable for the intended purpose. Clearly, both the process and the actors differentiate crowd employment from traditional employment. In crowd employment, there is a client (also referred to as crowd sourcer, buyer, requester or similar) and a crowd worker (or seller, provider or similar) (Wexler 2010; Green et al. 2013; Felstiner 2011; Kittur et al. 2013) who exchange a specific type of service through a virtual, online platform. Compared to more traditional ways of approaching potential service providers, crowd employment refers to addressing a 'virtual', unknown and undefined group of potential workers, using the platform as an online intermediary and therefore potentially approaching workers all over the world. Accordingly, it is rather common that client and worker do not meet physically but just virtually, and might not even know personal details of each other.

The evidence collected by Eurofound (2015) displays some more detailed characteristics of crowd employment. First of all, while crowd employment platforms have to follow general legal frameworks such as commercial codes, civil codes, consumer protection acts and data protection legislation, no legal or collectively agreed framework specifically addressing crowd employment in Europe could be identified. In addition, there are no central organizations administering or monitoring crowd employment platforms. For Germany, Klebe and Neugebauer (2014) clarify that the worker acts as if self-employed, and economic independence is assumed. Consequently, labor law does not apply, and the worker is not entitled to a minimum wage, annual leave or pay in case of sickness. The case studies for this Eurofound study indicate the same is true for the other European countries in which crowd employment has been found to be emerging. In general, the employment relationship between the client and the worker is based on individual agreements, hence pay, working conditions and other issues, notably intellectual property rights, are determined either by the two parties or the terms and conditions of the platform (Klebe and Neugebauer 2014).

Secondly, some crowd employment platforms allow everybody to use their services, while others require clients or workers or both to register first. Also, to ensure the quality of the services provided, there are

platforms, such as Czech Topdesigner.cz or the German Clickworker, which verify each worker and have samples of their work assessed by experts before they are allowed to participate in platform activities. They are rated and subsequently offered tasks that match their score. It can be noted, however, that the platform administration does not check the legal status of the worker (i.e., whether or not they are registered as self-employed or freelance) and does not interfere in any obligations for taxation or social protection. It is also widely acknowledged that this is not the responsibility of the clients.

Thirdly, tasks on offer can be published unfiltered or first checked by the platform management, depending on the design of the platform. The terms and conditions of platforms such as Topdesigner.cz or the Danish Boblr, for example, establish their right to refuse publication of any task considered inappropriate in terms of content, morality, rules of competition or rules of award, or ask for tasks to be presented in an understandable manner.

Furthermore, platforms, such as the already mentioned Topdesigner.cz, Boblr, Clickworker, or the Portuguese Idea Hunting and the Spanish Adtriboo.com, act as a full intermediary between the client and the worker, ensuring communication can go only through the platform, while others allow direct contact between the client and the worker.

The study identified two prevalent funding models for the platforms, with possible combinations. Some platforms charge a publishing fee for the launch of each competition. In the case of Boblr, for example, clients have to pay about €3,000 to the platform for each competition launched. Others take a percentage of the pay agreed between client and worker. Examples are Topdesigner.cz and Idea Hunting, which charge the client a commission of 20 percent of the worker's pay. Boblr and the UK Taskub.co.uk charge 15 percent of the task's value, and Lithuanian site Lingjob charges 12 percent of the workers' remuneration on completed tasks.

Lastly, some platforms leave payment from the client to the worker to the discretion of the two parties, whereas other platforms apply a minimum or even fixed price for specific tasks. In the latter case, the minimum levels are based on market prices and the assumed number of hours spent by the average worker on this kind of task. It is worth mentioning that some of the platforms, including Topdesigner.cz and Adtriboo.com, act

as an intermediary for payment: the client transfers the payment to the platform, which forwards it to the worker after the service they provided has been approved, in order to safeguard that the worker will be paid.

Crowd employment platforms can be operated either by an independent enterprise whose business is the matching of supply and demand for services or products, or by a company, usually large, running the platform for its own recruitment or task fulfillment (e.g., LEGO Ideas in Denmark). The Eurofound study reveals some heterogeneity in how crowd employment platforms operate, and combinations of the following models are possible. In one approach, platforms allow clients to launch a competition for the services required: workers are invited to carry out a task according to some specifications, and the client selects the solution they like best, which will be the only one to be paid. This might be problematic if no protection of intellectual property rights is in place because a client could use workers' ideas without paying for them. Following a different approach, the client specifies the services required and invites workers to submit their proposals of how to fulfill the task (but not to complete the task itself). The client selects the solution they prefer and arranges the details of having the work done with the worker. The 'hire-a-freelancer' service of Spanish site Adtriboo.com works this way. On some platforms the workers start the process. They describe their activities and skills and offer these to potential clients. A further model has been identified: it is the case in which only the matching between client and worker is done online, but the actual service provision is carried out 'in person', as in the case of the platform Taskhub.co.uk.

In most of the countries where crowd employment is operating, it is quite a new phenomenon, emerging since the late 2000s or early 2010s. In Greece and Spain, for example, the recent increase is explained by the economic and financial crisis, which has resulted in lack of liquidity and the need to find alternative (and cheap) ways of marketing one's services. However, the impact of the short-term economic developments should not be overemphasized. The opportunities offered by modern technologies, difficulties in reconciling private and working life, and the existence of well-educated young professionals looking for alternative forms of employment have strongly contributed to the growth of crowd employment.

The crowd employment platforms analyzed within the Eurofound study appear to be very new. The Lithuanian platform Lingjob, for example, was established in 2013, the Czech Topdesigner.cz and the UK Taskub.co.uk in 2012, the Latvian Academy of Ideas and the Spanish Adtriboo.com in 2011, and the Danish Boblr and the Portuguese Idea Hunting in 2010. The German Clickworker, started in 2005, appears to be more established and among the pioneers in the German crowd employment scene.

Due to crowd employment's newness, its spread across the European Union and Norway seems to be rather limited, and there are hardly any reliable data for usage. Anecdotal evidence suggests that more widespread use of crowd employment is hampered by a lack of platforms and uncertainties around the new concept, such as whether they give competitors access to sensitive information, offer protection of intellectual property rights or address data protection issues. There is also little awareness that such platforms exist, and Eurofound (2015) shows that, particularly in the start-up phase, word-of-the mouth promotion through the networks of the founders and social media is crucial. Nevertheless, Kaganer et al. (2012) describe a 'skyrocketing annual growth' in global revenue of crowd sourcing platforms by 53 percent in 2010 and 74 percent in 2011, showing the potential of this employment form. The potential of crowd employment can also be exemplified by Amazon Mechanical Turk, on which more than 350,000 tasks are offered at any point in time.

Employers and Employees in Crowd Employment

As an industry built by and dependent upon the Internet, crowd employment has become quite popular primarily in online-friendly and online-exclusive sectors of the economy (Felstiner 2011). Many businesses with large amounts of data use crowd employment to create metadata and remove duplicate entries from their databases. Moderation of user-generated content on collaborative websites is another popular application of crowd employment (Silberman et al. 2010). This is confirmed by the evidence collected within Eurofound´s study. For example, Danish experts report that the services covered by crowd employment mainly

relate to the IT sector, marketing, product development or various problem-solving tasks. Hence, jobs are generally connected to the creative industries (e.g., translators, proofreaders, copy editors, web design, software specialists and journalists). This was also observed in Latvia, Spain and the UK. A large number of crowd employment clients seem to be small and medium-sized enterprises (SMEs), larger companies lacking internal capacity for specific tasks and nongovernmental organizations (NGOs).

From the employers' perspective, the main motivation to use crowd employment is access to a huge source of knowledge and experience and a potentially quicker completion of the job under consideration (Klebe and Neugebauer 2014). Recruitment of employees can be avoided, and there seems to be potential to reduce costs as crowd employment tends to be associated with lower pay and little or no personnel administration costs, and the employer does not have to provide facilities, material or support for the workforce (Felstiner 2011). On the other hand, a number of reasons to not engage in crowd employment from a client's perspective include the risk of losing in-house competences and control over the process (Klebe and Neugebauer 2014). Also, tasks have to be explained very clearly and this appears to be sometimes difficult. In addition to that, the client has little control over the quality of the service provided, and as the pay-per-task structure is similar to piecework compensation in manufacturing, it can 'offer an invitation for gaming behaviour which can negatively influence quality' (Kittur et al. 2013, p. 2). If a larger task is split into several micro tasks, it can be challenging to coordinate and combine the individual subtasks (Klebe and Neugebauer 2014).

In terms of workers' characteristics, the evidence collected suggests that crowd employment requires workers with a high level of qualifications—such as in the case of Spanish Adtriboo.com where crowd workers have a university diploma or even a master's degree—creativity and soft skills, and this is also confirmed by Howe (2008), Brabham (2012) and Ipeirotis (2010). At the same time, it is observed in Germany that crowd employment involving micro tasks tends to attract people in need of additional income such as students, unemployed people or people on parental leave. Furthermore, crowd workers appear to be relatively young. For example, Ipeirotis (2010) surveyed 1000 workers active

on the Amazon Mechanical Turk platform in February 2010, finding that approximately 45 percent of the US workers and 66 percent of the Indians were born after 1980. Similarly, about 80 percent of the workers using the Czech site Topdesigner.cz are younger than 30; workers on the Lithuanian Lingjob platform are aged 18–35; about 65 percent of the crowd workers on the Portuguese platform Idea Hunting are younger than 35; and the typical worker on the Spanish Adtriboo.com is described as a 26–35-year-old male. Evidence collected displays as well that workers do not intend to make crowd employment their main job, as it appears to be rather a spare-time activity alongside another job, education or care responsibilities.

In conclusion, the motivation of crowd workers includes the fun in doing this type of work, learning opportunities, social exchange, recognition by other crowd workers and clients, the opportunity for self-marketing and a better combination of work and private life (Klebe and Neugebauer 2014). Furthermore, people get involved in a crowd employment platform as a source of (additional) income (Klebe and Neugebauer 2014; Silberman et al. 2010). Nevertheless, workers may be reluctant to engage in crowd employment due to concerns about data protection and fair pay (Klebe and Neugebauer 2014).

Working Conditions and Labor Market Implications of Crowd Employment

As mentioned above, crowd workers are freelancers and self-employed, hence in general characterized by the working conditions of this group of workers. This refers to both aspects that are positive from the point of view of the workers (e.g., autonomy, flexibility, decision power) and effects that tend to be more negative compared to salaried employees (e.g., social protection or income stability, often also extent of working time).

Nevertheless, due to the particularities of this new employment form, there are also some implications on working conditions and the labor market that go beyond those discussed for other forms of self-employment.

As regards **pay**, this tends to be very low in crowd employment. For example, 90 percent of the tasks offered at Amazon Mechanical Turk

are paid less than $0.10 (€0.07), equaling an hourly rate of around $2 (€1.44) (Irani and Silberman 2013). According to Silberman et al. (2010), the yearly income of a 'Turker' amounts to less than $10,000 (€ 7,000). A similar low income is found in the analyzed case studies. The tasks offered at the Czech Topdesigner.cz are offered for an average pay of €200. For the German Clickworker, it is estimated that a worker can earn €200 to 400 per month for about 30 hours of work. However, there are also examples of larger tasks. The competitions launched through Danish platform Boblr range from about €2,000–€20,000, with an average of around €6,000.

Another related negative aspect is insecurity about pay, as access to work is not guaranteed at a continuous or regular basis, and employers might in some cases only pay if they are satisfied with the results (Felstiner 2011; Silberman et al. 2010; Klebe and Neugebauer 2014), with limited possibilities of the workers to provide evidence that they did the job as initially agreed and hence would be entitled to the payment.

Another issue related to the low and intermittent income refers to the **social protection** level of crowd workers. As they are widely considered as self-employed, they are themselves responsible for their insurance coverage. However, due to the low income, it can be assumed that only a minority takes care of social protection issues themselves which might not only be problematic in the short run (e.g., in case of sickness) but also in the long run (pension entitlements).

Concerning **working time, work-life balance, work intensity and stress,** it is to be highlighted that crowd workers have full autonomy to decide for how many and which tasks they submit an offer and in many cases are only given a deadline if they win a task, but can decide themselves when to work on the assignment. Consequently, the effects on these aspects of working conditions partly depend on the self-management and organization skills of the crowd workers, their ability to opt for tasks which are most suitable for them and their capacity to realize them as envisaged. However, due to the fact that many crowd employment platforms operate competitions (i.e., requiring crowd workers to submit many proposals for tasks in order to have the potential of winning at least some of them) and the small scale of many crowd employment tasks and the thereby related need to do many of them, working time might be

higher compared to other forms of self-employment. This can result in situations in which there are no longer any boundaries between work and private life (Maschke et al. 2014; European Commission 2010; Popma 2013; Unionen 2013). Furthermore, it requires crowd workers to deal with a multitude of different tasks in parallel, and hence increases work intensity and stress.

On the positive side, the increased level of **flexibility and autonomy** to choose when and where to work is often singled out as the main advantage of crowd employment. If managed well, this can result in a better work-life balance and personal productivity gains because the work can be better adapted to their personal work patterns (Felstiner 2011; Howe 2008; Klein and Ratier 2012; Deutscher Bundestag 2013; Vinnova 2007).

Another negative aspect of crowd employment pointed out by Felstiner (2011) and Klebe and Neugebauer (2014) is the **information** asymmetry. As the matching of supply and demand is based on the service description provided by the client, workers might be confronted with a lack of full information about tasks to be performed and might base their offer on assumptions which turn out to be incorrect and result in a much higher workload than anticipated.

Furthermore, the possibility of **privacy** violation is another potential issue (Felstiner 2011; Klebe and Neugebauer 2014). Crowd workers often have to disclose personal information without a clear guarantee of confidentiality.

Furthermore, crowd workers experience professional isolation in terms of a lack of **support from colleagues and managers**. Professional and social isolation results from the work pattern of often working on their own with no face-to-face interaction with coworkers or superiors. This results in a lack of integration into the whole business process and might also impact their commitment to the work as well as their social skills (like team work).

From a labor market point of view, crowd employment might positively contribute to the labor market integration of disadvantaged groups as it offers them **access to the labor market** that might be more difficult otherwise (e.g., if young people do not yet have a track record to attract clients, if ex-prisoners might not be recruited due to their history

or if people living in remote areas do not have an employer company close by). A negative macroeconomic effect of crowd employment might, however, be that the fragmentation of work as experienced through the splitting up of a traditional job into micro tasks becomes more accepted and common in the economy, resulting in the long term in a structural shift from 'jobs' to 'tasks'.

To conclude, it can be highlighted that while crowd employment has a few potential advantages for the crowd workers compared to other forms of self-employment, it involves some severe dangers which should be further explored and addressed by policy makers, notably related to labor market issues but also going beyond that, for example, as regards data protection or intellectual property rights.

ICT-Based Mobile Work

Definition, Work Method and Spread

Recently, 'the virtual, invisible worker working digitally anywhere and everywhere' (Popma 2013, p. 5) has become more widespread as a result of progress in modern technologies and new forms of work organization. The increase in all kinds of communications media, the growing availability of devices such as smartphones and tablets, and the ease of Internet connectivity they allow (Popma 2013; Holtgrewe 2014) are key factors in the growing numbers of mobile workers. Furthermore, the increasing interconnectedness of market participants (allowing for a division of work on a global scale), the growing market power of multinational corporations and the growing number of intracompany transactions across locations have reshaped the organization of production and work (Gareis et al. 2006).

ICT-based mobile work as understood in this paper refers to work arrangements carried out at least partly, but regularly,[1] outside the 'main

[1] Only in one of the available definitions for related employment concepts, the aspect of 'working partly, but regularly outside the main office' was operationalized. Further research on this employment form might require a more specific definition to allow for better data provision.

office', be that the employer's premises or a customized home office, using ICT for online connection to shared company computer systems (Andriessen and Vartiainen 2006; European Commission 2010; Eurofound 2012). Work takes place wherever and at any time it suits the work activities, task, business schedule and lifestyle of the worker, not necessarily at a specific place but also 'on the road' (Andriessen and Vartiainen 2006; European Commission 2010). ICT-based mobile work happens in ever-changing situations, but with a need to collaborate with other workers or clients through access to shared resources (Corso et al. 2006; European Commission 2010).

ICT-based mobile work is relevant for both employees and the self-employed. Among the 16 European countries where it is emerging, in four (Finland, France, Hungary and Slovenia), it is dominated by employees. In seven countries (Belgium, Cyprus, Denmark, Lithuania, Portugal, Spain and Sweden), it is used more by the self-employed. In the remaining five countries (Germany, Greece, Latvia, the Netherlands and Norway), there are indications of this employment form being used by both employees and the self-employed (Fig. 3.3).

For most employees, mobile work could be considered as a variation of teleworking. However, in contrast to traditional teleworking, work does not take place in a fixed location, but more flexibly, in various places or even on the road.

The case studies suggest that employees' mobile work is generally conducted on the basis of standard work contracts, in most cases related to full-time positions of indefinite duration. Some case study evidence even hints that the employer deliberately links mobile work to permanent contracts to ensure that the increased flexibility for both employer and employee should not result in reduced security for the workers.

In the Greek Microsoft Hellas, for example, mobile work was enabled for the staff in the marketing, human resources and public relations departments in 2011. Like all staff, these employees are on permanent full-time contracts since it is considered to be the only form of contract able to make them feel secure enough to want to invest their skills into the company. The management thinks that any other contract form would reverse the intended positive impacts of such flexibility measures like increasing productivity and employee satisfaction.

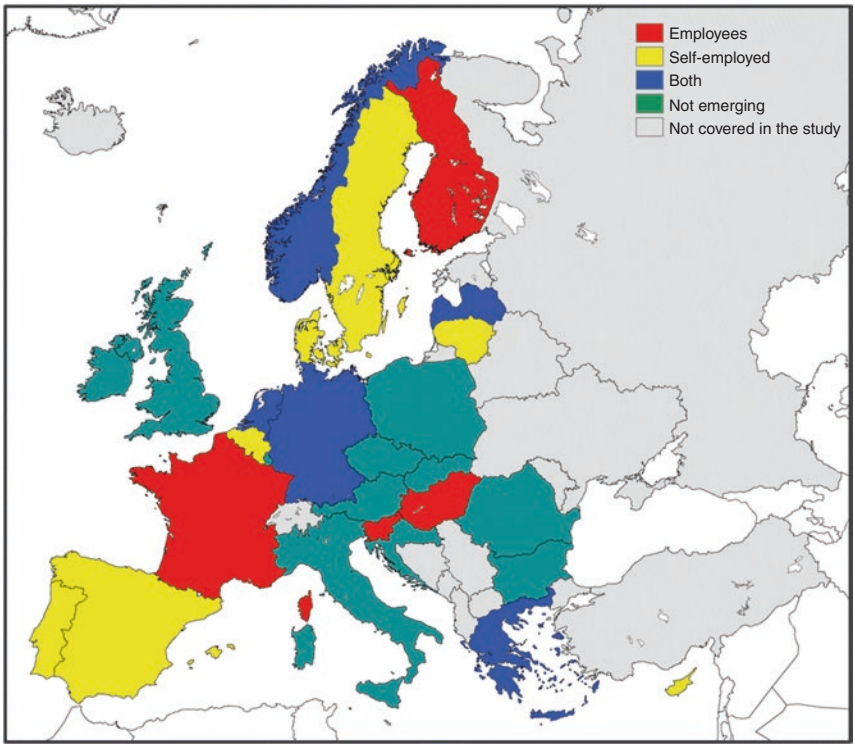

Fig. 3.3 European countries in which ICT-based mobile work is new or of increasing importance (*Source*: Eurofound, based on national contributions)

Implementation of mobile work is done in an informal way, covered by the general element of flexibility in the company agreement or work contract.

For ICT-based mobile work to be implemented effectively and efficiently, it has to be observed that certain preconditions need to be met. Firstly, it must be possible to do the tasks away from the premises of the employer or another fixed workplace. Mobile workers' activities vary considerably according to sector and occupation. Telephone calls, the exchange of emails, and connecting to the Internet are part of the role of office and knowledge workers particularly (European Commission 2010), while non-office workers in sectors such as field maintenance and healthcare mainly connect to their company's computer systems using special applications.

Secondly, workers need to be able to access company communications systems and exchange work-relevant information irrespective of place and time. This requires some kind of cloud computing system for data storage with virtual access from mobile devices and the related infrastructure as well as agreed procedures for communication and information exchange.

For example, the Finnish advertizing company Suomen Pienyrittäjäin Mainostoimisto provides its employees with laptops preloaded with software that gives them secure access to company information over a virtual private network (VPN). Employees can go online on the 3G mobile communications network using their mobile phones, and this can be connected to laptops. All the employees may also use Skype for video conferences.

Thirdly, the work culture needs to incorporate a sufficient level of trust of staff by the employer so that they can delegate responsibilities and accept a certain loss of managerial control. Workers, in turn, must be able to self-organize and self-manage their work and be willing to do so. An example comes again from Microsoft Hellas, which in 2011 introduced Microsoft's 'New world of work' program, including the possibility of flexible working hours and working outside the employer's premises. Management encouraged staff to take advantage of this new model. An interviewed employee said that in the beginning people felt that it was better to work from the office. However, as the CEO and department heads increasingly worked outside the office, others started to follow suit. Employees now say they decide independently how to organize their work, where they do it and the hours worked.

ICT-based mobile work among the self-employed is often linked to other new employment forms, such as crowd employment (as in Denmark, Germany, Greece, Portugal and Spain), coworking and other forms of cooperation among the self-employed (as in Cyprus, Germany, Italy, Lithuania and Spain) and portfolio work (as in Latvia and Norway).

With the exception of Sweden, where mobile work (*IT-driven arbetsplats*) has been linked to the integration of ICT in the workplace since the late 1990s, the emergence of this employment type is quite recent. The case studies conducted in this project, for example, focus on ICT-based mobile work that was introduced in the mid to late 2000s. The novelty of this employment form might be one of the reasons why

it is not specifically regulated in most of the countries. Only in Hungary specific legal regulations covering 'outworkers' have been included in the Labor Code in 2013. In Denmark, the Act on Working Conditions has identified various locations where work is typically performed and provides some guidelines on which type of work should be done where. For example, it recommends that employees do not perform large writing tasks on laptops in trains or hotels where the working conditions for ergonomically correct positions might not be ideal. Rather, while travelling the employee should handle tasks such as reading or phone meetings.

Employers and Employees in ICT-Based Mobile Work

A study conducted in 2003 in 28 European regions finds that, on average, 5 percent of workers can be classified as a 'mobile teleworker', ranging from 13 percent in the Berkshire/Buckinghamshire/Oxfordshire region in the UK to 0.5 percent in Central Macedonia (BISER 2004). The 2010 European Working Conditions Survey finds that about one quarter of the workers can be considered e-nomads (Eurofound 2012). A more recent Norwegian employers' poll on mobile work estimated that 62 percent of companies made all of their working documents accessible to their employees via mobile devices outside the premises of the workplace and that 91 percent of companies provided workers with mobile devices (Nordialog 2013). These differences in the observed spread of mobile work could be attributed to various aspects, from differences between countries and actual use of ICT-based mobile work to methodological issues like definitions and survey methods. Hence, the limited data available should be interpreted with care.

The future potential of ICT-based mobile work is shown in a survey in an EU project promoting ICT-based work in December 2012. According to this, 81 percent of 1335 respondents would be willing to work at a distance from their employer's premises, at home or from telecenters (Diena 2013).

Evidence from the case studies shows that ICT-based mobile workers tend to be younger, highly skilled specialists, knowledge workers or in

management. This might be related to the preconditions for mobile work of a high level of trust between the employer and the worker, and the employer's willingness to give up direct control over the worker: in the case of managers or specialists, such control is likely to be more limited in any work location.

The sectors where mobile workers are more likely to operate are ICT, engineering, healthcare and manufacturing (Schaffers et al. 2006; European Commission 2010) as well as the creative industries. A Slovenian study finds that most mobile workers there were employed in the service sector (70–80 percent) (Drobnjak and Jereb 2007). Interestingly, Swedish and Norwegian experts see it as an emerging trend across a wide variety of sectors and occupations (Vinnova 2007). As these are countries where ICT-based mobile work has more tradition than in the other countries, this could be an indication of the applicability of this employment form in a wide variety of sectors or occupations once it becomes more established on a specific labor market.

According to the case study evidence, employers use ICT-based mobile work to increase flexibility in work organization and to introduce innovative work practices. Thereby, they aim to reduce costs (less office space needed) (Popma 2013), to achieve efficiency and productivity gains through the best use of available working time and at better attracting specialists, knowledge workers and managers who increasingly are looking for such employment options.

Workers' motivation to engage in ICT-based mobile work is the wish to commute less and use the time saved for different activities (Popma 2013), hence to increase their flexibility and improve their work-life balance.

Working Conditions and Labor Market Implications of ICT-Based Mobile Work

ICT-based mobile work seems to be more common among the 'top segment' of salaried employees and specific groups of self-employed who generally are characterized by favorable working conditions. These are partly further improved by operating these jobs in a 'mobile way'. At the

same time, the specific characteristics of this employment form also raise concerns regarding some aspects of working conditions.

As regards **pay**, the effects of ICT-based mobile work are not straightforward. There are cases in which employers have changed from time-based to result-based wage systems in order to compensate their loss of direct control over the workers' working time. If this is the case, the required working time largely depends on the worker's self-organization skills and hence relative hourly wage might increase or decrease compared to a time-based system.

Related to such self-organization and time management skills is the effect of ICT-based mobile work on **working time, work intensity and stress**. Due to the expressed or perceived expectation toward ICT-based mobile workers to be available 24/7, working time might be higher compared to standard employment. This can result in situations in which there are no longer any boundaries between work and private life (Maschke et al. 2014; European Commission 2010; Popma 2013; Unionen 2013).

Popma (2013) highlights better **access to work-relevant information** of ICT-based mobile workers due to the high level of use of modern communication technologies, while Paridon and Hupke (2009) point out that the quick and continuous access to work-related information can lead to information overload. Interestingly, the evidence from Eurofound's case studies highlights ICT-based mobile workers' lack of information on company-related 'soft facts' (e.g., where colleagues spend their holidays or when a coworker expects a child) as a disadvantage of this employment form.

Related to this, ICT-based mobile workers experience professional isolation in terms of a lack of **support from colleagues and managers**. Professional and social isolation results from the work pattern of often working on their own with little face-to-face interaction with coworkers or superiors. This results in a lack of integration into the whole business process and might also impact their commitment to the work as well as their social skills (like team work). An example in this respect is the Faculty of Social Sciences at the University of Ljubljana reports that team work suffers as a result of ICT-based mobile work. The interviewed employees said they missed social and professional contact with colleagues, and this reduced their identification with the organization.

One employee observed that some issues and work-related problems are more easily resolved by face-to-face contact, and it was impossible to do team work outside the workplace. Furthermore, the possibility of **privacy** violation is another potential issue for ICT-based mobile workers (Felstiner 2011; Klebe and Neugebauer 2014). It happens that employers implement technically advanced monitoring systems to capture whether a worker is logged on to the company network and how long they work on each task to make up for their reduced level of control over employees not working in their premises.

A number of **ergonomic** risk factors seem to be inherent in ICT-based mobile work. These include poor visual interfaces on small display screens and controls, problems related to reflective glare or an insufficient level of ambient light, excessive noise levels to compensate for background noise, wrong posture when devices are used in an unsuitable environment and continuous exposure to radiation and electromagnetic fields (European Commission 2010; Popma 2013). As the worker is not acting on the premises of the employer for a good part of the working time, the employer has no control over the physical work environment and can only give recommendations to the worker. Consequently, traditional employer responsibilities are somewhat 'outsourced' to the worker.

On the positive side, the increased level of **flexibility and autonomy** to choose when and where to work is often singled out as the main advantage of ICT-based mobile work, and in many cases the main driver for workers to request this employment form. If managed well, this can result in a better work-life balance and personal productivity gains because the work can be better adapted to their personal work patterns (Felstiner 2011; Howe 2008; Klein and Ratier 2012; Deutscher Bundestag 2013; Vinnova 2007). For example, an employee at the Norway-based branch of Hewlett-Packard describes how he came to appreciate the flexibility inherent in his ICT-based mobile work when his priorities shifted toward his young family. He values his professional independence, being able to work from wherever he wants, including while staying home with his children. This was one of the key reasons he has stayed with Hewlett-Packard Norway rather than moving on to other firms.

Another positive aspect of ICT-based mobile work is its potential to provide opportunities for **skill development** and learning by doing. The case study evidence shows some increase in the workers' knowledge related to computer and modern technology skills because they routinely work on modern devices. An example of this comes from Microsoft Hellas. The mobile work program implemented by Microsoft Hellas—using a variety of Microsoft products—resulted in employees becoming more familiar with the products they are promoting and selling. This is seen to be a good promotional strategy for the company.

To summarize the above, it should be mentioned that ICT-based mobile work is found to be rather demand driven that is requested by workers—often those who benefit from good working conditions—to improve their flexibility and work-life balance. As a consequence, several aspects of working conditions are quite favorable for ICT-based mobile workers. Nevertheless, particularly the effects of this employment form on working time, physical health and safety and privacy issues should be further explored and considered by policy makers.

Overall, little can be said about the effects of ICT-based mobile work at macro level, that is on the labor market. Certainly, this employment form cannot be applied in all occupations, but there is some potential that at least some tasks inherent to many occupations could be realized in a remote way, and that workers will increasingly opt for such. Accordingly, this employment form could contribute to more flexible employment forms as regards the place and time of work. Due to this increased flexibility, it could also contribute to a more inclusive labor market as people requiring more autonomy about the place, time or scheduling of their work could be attracted by this employment form.

Conclusions and Policy Pointers

Across Europe a variety of new employment trends is emerging which affect either employees or self-employed or both. While there are some considerable differences among them as regards employment status, employer-employee relationships or work methods, flexibility is the key concept inherent in all: they have been emerging due to an increased demand from employers, employees or both for enhanced flexibility.

ICT-based mobile work has evolved from the growing opportunities for innovative HR practices that modern technologies offer to employers and employees likewise. In contrast to this, crowd employment seems to be mainly emerging as an effective means for employers to access a wider number of workers or skills and reduce costs. Both employment forms discussed in this paper offer advantages not only for the employer but also for the workers. These mainly refer to a high level of flexibility, autonomy, task diversification and empowerment as well as the potential for learning-on-the job. However, they are also related to some potential disadvantages as regards working conditions. There are some dangers such as work intensification, higher stress levels, increased working time, blurring boundaries between work and private life, outsourcing of traditional employer responsibilities (particularly related to health and safety aspects) to the worker and partly income insecurity as well as privacy and data protection issues.

As there is some anecdotal evidence that ICT-based mobile work and crowd employment are increasing employment forms on the European labor markets and have the potential of transforming the labor market in the future, these inherent negative elements should not be ignored. The current research shows the need for some safety nets for workers. These mainly refer to privacy and data protection issues as regards both employment forms, the clarification of the legal status of the worker (and therewith related rights and obligations of both worker and client) as regards crowd employment and working time and health and safety issues as regards ICT-based mobile work. Currently, legislation and collective agreements on these issues, specifically taking into account the characteristics of these new employment forms, are either absent or not specific enough. This raises concerns about potential exploitation of the workers—counteracting the attempts to improve working conditions realized in Europe for the last decades.

Designing and implementing regulations for crowd employment is, however, deemed very difficult due to the potential involvement of various actors in various countries. As, for example, the platform management could be located in one country, the client in a second and the worker in a third—with the potential of various workers in various

countries being active for a single client—it is challenging to establish which national legislation should apply. Also European regulations could fall short, bearing in mind that crowd employment is a global phenomenon, also prevalent in other continents. Accordingly, a kind of 'global regulation' would be required. ICT-based mobile work could be better considered in national or European legislation or collective agreements as it is a more 'local' employment form and also easier to be related to individual and collective labor law as at least a part of the ICT-based mobile workers are employees. For both employment forms, monitoring and control mechanisms might also be better designed or applied.

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4

Regulating the Void: Online Participatory Cultures, User-Generated Content, and the Digital Agenda for Europe

Bjarki Valtysson

Culture, media, and communications policies are formulated and implemented with specific objectives in mind. These objectives can vary greatly, depending on the general policy of a given region, nation-state, or supranational body, such as the European Union (EU). These purposes are greatly affected by dominant discourses and discursive formations at a given place and time (Foucault 2002). These discursive formations are vibrant constructions that take on different forms in different contexts. This is the case within the various nation-state contexts—and within culture, media, and communications policies in the European Union. The word 'construction' is of particular interest here since policies do not

This article is written in relation to the work conducted by WG4 of the IS1202 COST project *Dynamics of Virtual Work*, chaired by Professor Ursula Huws. Earlier versions of the article were presented at *The Dynamics of Virtual Work: The Transformation of Labour in a Digital Global Economy* conference in Hatfield, 3–5 September 2014, and the eighth *International Conference of Cultural Policy Research* in Hildesheim, 9–12 September 2014.

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*,
Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_4

appear out of the blue. Rather, they are the result of competing political, economic, social, and cultural interests.

The notions of user-created content, user-generated content, social media, the participatory web, and online participatory cultures have disturbed the constructions underlying many policies within the culture, media, and communications sectors. New forms of production, consumption, and distribution intensify the necessity of treating the fields of culture, media, and communications policy in a unified manner, rather than separately. This is particularly true when the case treated in this chapter—the EU's *Digital Agenda for Europe*—is scrutinized. As will become evident, the EU's Digital Agenda is an example of policymaking that cuts across regulatory frameworks that traditionally have been treated separately. This is due to cross-media communication and the technological convergence, regulatory convergence, mediatizing convergence, Web 2.0 convergence, and network convergence (Dwyer 2010) that influence not only how regulation is tailored but also how this tailoring affects users operating within digital environments.

On the Internet, patterns of production, distribution, and consumption challenge traditional conceptualizations, exemplified in this case with much of the user-generated content created, mixed, remixed, and redistributed by *produsers* (Bruns 2008), *prosumers* (Toffler 1980), and *creative audience* (Castells 2009). These 'creators' imply a different relationship between senders/producers and receivers/consumers/users—not to mention the dispersion (Jenkins et al. 2013) of content. For instance, user-generated content travels through different social media services, some of which are capable of acting as venues for social networking; publishing; exchanging TV streams; live casts; mixing different semiotic expressions; and challenging notions of transmission, content, jurisdiction, sender/user/audience, medium, platforms, and public/private communications (Drucker and Gumpert 2010).

This user-generated content is shaped by technologies and as Winner (1986) argues, technologies are inherently political since their functionalities foster particular forms of appropriation and particular modes of production and consumption. Nonetheless the cultural, communication, and media landscape described here cannot be fully understood without taking into account other factors as well. In this context, it is also

necessary to consider perspectives from political economy, which suggest that it is insufficient to look only at how technology impacts users. One must also consider underlying business models, governance, and ownership (van Dijck 2013) when seen, for instance, through the lens of user-generated content on social media. This is the case for government policy within nation-states, and it is also the case for supranational bodies such as the European Union. Indeed, it is argued here that this is particularly relevant for the regulatory frameworks of such bodies since the user-generated content that is being channelled through the Internet cuts beyond both regulatory *and* national borders. International regulatory frameworks on a macro-level are thus crucial in designing the environment encountered by today's Internet users on a micro-level.

This chapter aims to determine the kinds of environments that are constituted within regulatory frameworks related to production, consumption, and distribution in online environments, using the EU's *Digital Agenda for Europe* as a case. More concretely, the goal is to examine how processes of convergence and cross-media communications affect regulation and how users in digital participatory cultures are impacted by these regulations. The notion of user-generated content receives particular attention as this paper scrutinizes its treatment from the macro-perspective of the Digital Agenda; how this manifests itself on a meso-level in two vital regulatory frameworks within the Digital Agenda (the *Telecommunications* Directives and the *AVMS* (Audiovisual Media Service) Directive); and how users and user-generated content are tailored from a micro-perspective in everyday online activities on digital platforms, such as social media. Finally, the paper inspects whether the Agenda can be considered to be successful in its outspoken aim to simplify regulatory frameworks within the field.

Case and Methods

The Digital Agenda is one of seven flagship initiatives under Europe 2020. With its 7 pillars, 13 specific goals, and 101 action points, the strategy is vast in scope, reaching across economically, politically, socially, and culturally grounded categories. In the Commission's online communications

(European Commission n.d.),[1] these pillars, goals, and action points are presented under the overall themes of *Living Online* (environment, energy, mobility, smart cities, eHealth and ageing, trust and reliance, public services); *Growth and Jobs* (startup Europe, grand coalition, education, innovation, open innovation); *Science and Technology* (emerging technologies, language technologies, digital science, digital futures, robotics, components and systems, future Internet); *Telecoms and the Internet* (open internet, broadband Europe, telecoms, cloud computing, trust and security); and *Content and Media* (digital culture, media policies, data, collective awareness).

As the aim of this chapter is to scrutinize how user-generated content is treated within the Agenda (particularly from the perspective of telecoms, cultural, and media regulations), the focus will rest on the categories of *Telecoms and the Internet* and *Content and Media*. In the official Communication from the Commission issued in 2010 (COM (2010) 245 final), the seven pillars are: A vibrant digital single market; interoperability and standards; trust and security; fast and ultra-fast Internet access; research and innovation; enhancing digital literacy, skills, and inclusion; and ICT-enabled benefits for EU society. This is a key document for revealing the primary discursive formations guiding the Agenda and will therefore receive special attention since it forms intertextual and interdiscursive relationships with other central documents.

Methodologically, this chapter applies critical discourse analysis as developed by Norman Fairclough (1992, 2003). According to this approach, the text itself—in this case, mostly official key documents that concern the Digital Agenda—and the discourse practice that results from it in terms of production and consumption allow for a wider societal perspective, which Fairclough refers to as social practice. As the object of analysis lies on a macro-level, specific attention will be given to orders of discourse, 'to specify the relationship of the instance of social and discursive practice to the orders of discourse it draws upon, and the effects of

[1] These external communications on the web change over time. The corresponding categorization as of 9 May 2014 was *Life and Work, Entrepreneurship and Innovation, Science and Technology, Telcoms and Internet*, and *Content and Media*. Even though these changes can be said to demonstrate certain shifts in emphasis in the Commission's external communications, it is still the official communications from the Commission that constitute the primary object of analysis.

reproducing or transforming orders of discourse to which it contributes' (Fairclough 1992, pp. 237–8).

What, then, can be said to be the dominant discursive formations guiding the Agenda? Which interests are being pursued (or protected)? The Commission's? The Council's? The Parliament's? Civil society's? The industries'? Or those of the users, who perform as produsers/prosumers creating and distributing user-generated content in online participatory cultures?

In order to answer these questions, this chapter's analysis will start by scrutinizing the Commission's Communication on the Digital Agenda for Europe and the different responses it generated from the Council, the Parliament, the Committee of Regions, and the European Economic and Social Committee. The reason for this is that these bodies safeguard different interests representing the member states, the voice of the people, the regions, and civil society, respectively. Collecting these different inputs makes visible the intertextual and interdiscursive battle as well as which discursive formations are dominant—and how these frame users and user-generated content on a micro-level. In order to obtain a fuller picture, special attention will be given to the AVMS directive and the Telecom directives as these are inherent and important sectors of the Digital Agenda as such and are instrumental in determining the manoeuvrability of users and the regulatory framework that guides the creation and distribution of user-generated content.

But first, a few words on the participatory potentials of these so-called produsers/prosumers/creative audiences and how these relate to the term *user-generated content*.

Participation and User-Generated Content

It is important to illuminate the role of regulatory frameworks in framing communicative manoeuvrability and users' participatory potentials as well as the actual content that users can, or are made to, produce in online environments. Regulatory frameworks are thus regarded as one component of many that condition participation in online participatory cultures. There has been a recurrent claim that user-generated content

empowers users since the relationship between production and consumption is altered. This has been conceptualized differently from scholar to scholar but often indicates a shift from, for instance, *read-only cultures* to *read-write cultures* (Lessig 2008) or from *sit back and be told cultures* to *making and doing cultures* (Gauntlett 2011). Castells (2009), though acknowledging the concentration of power and capital in global communication systems, still argues for the potentials of diversified content and formats of communications practices. These potentials do theoretically provide what he refers to as the 'creative audience' with certain tools to remix and resend a multiplicity of codes and messages, thereby keeping its voice alive through processes of mass self-communication.

This empowering, participatory dimension is celebrated not only within academic circles but also within institutional circles on a macro-level. For instance, in 2007, the Organization for Economic Co-Operation and Development (OECD) published a report on the participatory web and user-created content. According to this institutional approach, the participatory web 'is based on an Internet increasingly influenced by intelligent web services that empower users to contribute to developing, rating, collaborating and distributing Internet content and customizing Internet applications' (OECD 2007, p. 9). This empowerment of the users is strongly related to discourses of creativity and communication and feeds directly into the report's definition of user-created content—which, according to the OECD, requires publication, a certain degree of creative effort, and the framing of creations outside of professional routines and practices. In terms of value, the users must add their own value to the work, and their motivation factors must not be financial but should instead concern 'connecting with peers, achieving fame, notoriety or prestige, and expressing oneself' (18).

Again, the focus is on the potentials of user involvement through carefully crafted interfaces, such as those of social media services and other digitally mediated portals. However, another less optimistic, less empowering view is certainly prevalent as well. This view does more justice to the history of the Internet as 'a chronicle of contradiction' (Curran 2012, p. 48) in which early formations have increasingly been subject to commercial interests. Critical voices are therefore inclined to emphasize the fantasy of participation materialized through technological fetishism, where 'frantic contributing and content circulation, may well involve a

profound passivity, one that is interconnected, linked, but passive nonetheless' (Dean 2005, p. 60). Other scholars look at this from the perspective of fandom as free labour (de Kosnik 2013); estranged free labour (Andrejevic 2013); or as the category of produsage/prosumer commodity, which 'does not signify a democratization of the media toward a participatory or democratic system, but the total commodification of human creativity' (Fuchs 2010, p. 192).

But as Carpentier (2011) maintains, there are different dimensions to the concept of participation, particularly when treated in terms of its interrelations with power and digitally mediated communication. Here, Carpentier makes useful distinctions between participation in media production, participation in society through media, and interaction with media content. He further supports the first component—participation in media content—with three elements: *access to*, *interaction with*, and *participation in* media organizations or communities. This approach allows for a more nuanced discussion of participation and the very nature of user-generated content as well as how this relates to participation in media production, interaction with media content, and levels of passivity and activity. The strength of Carpentier's approach lies in its demonstration of how these elements relate to organization, power, technology, quality, and identity, emphasizing the complexities inherent in the concept and at the same time providing useful starting points for further empirical analysis. However, it is important to be attentive to the fact that user-generated content is closely linked to participation, production, and consumption facilitated by the media—whether mass media, social media, or (the approach used in this context) cross-media communications. In such media surroundings, many user interactions go through mediated channels of communication. It is important to bear in mind, as Dahlgren (2013, p. 22) maintains, 'that the media never serve as neutral carriers that simply mirror something else, but always, through their various logics and contingencies, impact on the relationship between media user and that which is mediated'. Users' articulations are thus shaped by the tools provided by the interface of a given technology, thereby conditioning users' participatory potentials. However, as previously claimed, it is not only technology that shapes the conditionality of participation but also regulatory, economic, and policy interests.

In the same vein, the drivers of user-created content are identified, as in the aforementioned OECD report, as technological, social, economic, institutional, and legal, exemplifying the potential power struggles reflected in these drivers' different interests. It is particularly interesting to note the report's emphasis on user-generated content and copyrights, in which discussion is much more focused on users' potential violations of existing legal frameworks—rather than on whether users themselves are being violated as consumers.

Cross-Media Communication and Convergence

As discussed above, the participatory potential of user-generated content is significantly affected by technology and regulation. Although this might sound banal, the framing of the term 'user-generated content' is surprisingly often detached from the platforms that facilitate and shape the manifestation and distributional potentials of this content as well as the regulations that govern it. Van Dijck (2013) provides a useful approach by focusing on platforms as mediators rather than intermediaries. This approach underlines the fact that platforms not only facilitate the performance of social acts but also shape them. Van Dijck (2013, p. 28) therefore advocates an approach that does more justice to cross-media communications, convergence, and what she refers to as 'the context of a rising culture of connectivity'. This approach entails considering platforms as sociotechnical constructs and socioeconomic structures, emphasizing the urgency of inspecting technology, users/usage, and the content that is created and distributed as well as the platforms' ownership, governance, and business models. This approach thus advocates not only inspection of how technology frames user manoeuvring and user-generated content, but also its economics and regulation. This is important when scrutinizing the Digital Agenda since these components cut across the Agenda's different strands and provide useful theoretical tools for conducting the analysis.

Raboy and Padovani (2010) offer another useful toolkit in their mapping of global media policy (*GMP), which emphasizes its complex ecology. As a result, their approach is attentive to broadcasting, telecom-

munications, Internet governance, cultural policies, cultural diversity, digital divides, and the regulation of Internet-critical resources. Their terminological clarification of GMP focuses on interrelationships between the global, media, and policy. When analysing a macro-initiative such as the *Digital Agenda*, this approach thus advocates a nuanced version of the 'global', in which the media is convergent and interconnected. The focus is therefore on the interoperation of infrastructures, the coexistence of different media platforms, the different institutional forms of media systems, media content, and media uses. Furthermore, Raboy and Padovani underline the importance of analysing the processes through which media and communication are regulated and how these policies cut across a number of related policy areas, such as economy, trade, technology, communications, culture, and development. Indeed, their definition of 'convergence' suggests the need to apply macro-analytical frameworks to macro-subjects, such as the Digital Agenda: 'What used to be multilateral arrangements amongst state actors has now turned into a highly complex landscape, where states and intergovernmental institutions share the stage with private corporations, standard setting entities, civil society organizations, epistemic, and technical communities' (Raboy and Padovani 2010, p. 161).

Processes of convergence and the corresponding cross-media communication patterns have intensified this global aspect. In this context, it is useful to further consider how another supranational body, the International Telecommunication Union (ITU), defines convergence: 'Convergence is facilitated by the transition from analogue to digital, voice to data, narrowband to broadband, circuit switched to packed switched, one way to interactive, scarcity to abundance, and the accompanying digitalization of all content' (ICT Regulation Toolkit n.d.-a, p. 3). Here, the ITU is attentive towards digitization of content, whether user-generated or otherwise, since content formerly aimed at specific networks can now be conveyed via different platforms, using different communications infrastructures. As is the case with the Digital Agenda, this presents a regulatory challenge since different content regulations are applied to telephony, audio and television broadcasting, print media, and Internet. The ITU furthermore identifies a need for regulatory change caused by convergence in the following manner: 'With convergence,

policies may need to be changed to achieve the common social objectives of promoting and protecting cultural traditions, public service, and protecting citizens from harmful material across all types of networks and delivery platforms' (ICT Regulation Toolkit n.d.-b, p. 32).

I have drawn upon three macro-institutional structures (the OECD, ITU, and EU) in order to demonstrate and provide actual examples of how convergence processes cut across the global and the national, the macro and micro—along with different regulatory frameworks treated within international and national regulation. This is, for instance, exemplified in much user-generated content on different social media services where notions of transmission, content, jurisdiction, medium, platform, public and private, global and local are challenged. This calls for analytical tools akin to those advocated by van Dijck as well as Padovani and Raboy, not to mention an approach that is attentive to policy actors on a national level, supranational bodies, regional and local administrators, transnational and translocal networks, and of course corporations. This last enumeration is that of Chakravartty and Sarikakis (2006, p. 11), who claim that historically 'communications reform is clearly an economic issue, and raising questions of allocation and distribution are crucial to understanding the technical processes of expansion, distribution and efficiency'. Although media and cultural policies have always had dimensions of economy and administrative effectiveness, they traditionally also serve other interests, such as those of intrinsic values, cultural heritage, public service, cultural participation, and cultural diversity. Here, Chakravartty and Sarikakis identify a challenge brought about by convergence processes as well as cross-media and cross-mediated forms of communications. From this perspective, the challenge is more precisely that EU telecommunications directives have been treated from the perspective of *transmission* while audiovisual and broadcasting directives have been treated from the perspective of *content*.

In their work on regulating convergence, Drucker and Gumpert (2010, p. 7) make this one of their key points, noting that cross-media multipurpose networks have replaced the landscape of single-purpose media: In short, 'convergence provides transparency or ease of movement in and between media and their content, thereby obliterating the intrinsic differences between delivery system/connection making this

basis of regulation awkward as well'. Cross-media communication is thus closely interlinked with convergence processes, not only in how content is moulded differently from one platform to the next but also in how regulation affects these transformations and how user-generated content flows from one platform to the next in what best can be described as a *communication spiral* or *communication matrix*. To give an example, user-generated content on a smartphone can begin as a 'selfie' on Facebook, but since Facebook is not only a facilitator of content but also mediator of content, the communication rarely ends there but is taken further in a potentially endless stream of cross-media communication, moving from Facebook to Twitter to YouTube to Pinterest to Instagram to blogs, and so on. These communications can be generated by users (produsers, prosumers, a creative audience, if you prefer) or by mass media (potentially reaching from micro-spheres to macro-spheres, between the local and the global, between nation-states, and—importantly from the perspective of this article—between different regulatory frameworks).

One of the main purposes of the Digital Agenda was in fact to simplify the regulatory frameworks and bring the communicative processes of transmission and content closer to one another. However, the question remains how the Agenda achieves this in practice; which dominant discourses it seeks to enhance; which interests different EU institutions tried to protect; and how this affects the user and the content he/she creates, distributes, and redistributes in online participatory cultures.

The Commission's Communication

As noted above, when analysing the *Digital Agenda for Europe*, emphasis on context and 'the big picture' is particularly important since communication, media, and cultural polices are always intertwined in an intertextual and interdiscursive 'dialogue' with other actors in the field. In this case, the analysis will begin with the *Digital Agenda for Europe* Communication issued by the Commission of the European Parliament, the Council, the European Economic and Social Committee (EESC), and the Committee of Regions (CoR). By comparing the different views of these EU institutions, a fuller picture emerges concerning the inter-

ests these actors are promoting and how this relates to user-generated content and users operating within online participatory cultures. As the Commission's Communication is the 'agenda setter', it will receive the most attention. The responses from the other institutions thus represent reactions to this document, thereby illustrating dominant discursive formations, orders of discourse, and the intertextuality and interdiscursivity that can be identified in these documents.

The Communication (COM(2010) 245 final) issued by the Commission on 26 August 2010 starts out by claiming that its objective is to maximize the social and economic potential of ICT, specifically mentioning the Internet as a vital medium for economic and social activity. Economically focused discourses and socially focused discourses are present from the very start, symbolized in terms such as 'economic and societal activity' (3) and 'innovation, economic growth and improvements in daily life for both citizens and businesses' (3). Furthermore, 'new media opportunities and easier access to public services and cultural content' (3) are highlighted as key aspects of ensuring better quality of life. Users are likewise regarded from a similar angle, that is they are commonly referred to as 'citizens, consumers or workers' (5), as those affected by social and economic activities. This is again confirmed in the Agenda's action areas, which emphasize the importance of addressing fragmented digital markets, lack of interoperability, rising cybercrime, risk of low trust in networks, lack of investment in networks, insufficient research and innovation efforts, lack of digital literacy and skills, and missed opportunities in addressing societal challenges.

The section on a vibrant digital single market is particularly interesting as it claims that it is now time for a new single market to deliver the benefits of the digital era. It is considered untenable that online markets be separated by multiple barriers, affecting both access to pan-European telecom services and global internet services and content. The example of setting up a pan-European online music store is used in order to demonstrate that Europe lacks a single market in the content sector. In contrast to a much simpler regulatory environment in competing markets, such as that of the USA, the current EU reality is that such initiatives involve negotiations with a range of rights management associations in 28 countries. This regulatory fragmentation thus stifles competitiveness in the

digital economy. It is also maintained that 'more uniform and technologically neutral solutions for cross-border and pan-European licensing in the audiovisual sector will stimulate creativity and help the content producers and broadcasters, to the benefit of European citizens' (8). Finally, it is emphasized that there is a need to push forward with creation, production, and distribution of digital content along with a need for corresponding business models.

Unsurprisingly, in a chapter on a vibrant digital single market, users are mainly treated as consumers. This becomes even clearer in the actions that the Commission wishes to take, which focus on the challenges of convergence and cross-media communication and the need to simplify copyright clearance, management, and cross-border licensing. Specific steps include issuing a framework for a directive on collective rights management, a directive on orphan works, and a review of the Directive on Re-Use of Public Sector Information. This re-structuring, updating, writing, and re-writing of new and existing directives are a key focus in the Agenda's remaining action points. Examples include revision of the eSignature Directive; evaluation of the impact of the e-Commerce Directive; implementation of key directives supporting the digital single market, such as the Services Directive, Unfair Commercial Practices Directive, and Telecoms Framework; and the transposing of the VAT Directive. Other directives include the Distance Marketing of Financial Services Directive, the proposed Directive on Consumer Rights, and of course the directive governing the telecommunications package and the Audiovisual Media Service Directive. Apart from the actual directives, the Agenda identifies programmes, regulatory frameworks, and strategies that are intended to simplify the complexities of current frameworks. These examples however illustrate the complex issues at stake and the challenges to follow and react to technological advancements in a converging, cross-mediated communication landscape.

Another area of particular importance is the action point on enhancing digital literacy, skills and inclusion, and ICT-enabled benefits for EU society. Here the focus is placed on the aforementioned categories of *Telecoms and the Internet* and *Content and Media*. Interestingly, in these sections, users are not treated as an empowered creative audience, but as disempowered users who need assistance to gain the necessary skills to be active contributors in

an economic sense: 'ICT cannot function effectively as a European growth sector and as a motor of competitiveness and productivity gains across the European economy without skilled practitioners' (25). Indeed, according to this understanding, users are skilled consumers or a skilled workforce. Therefore, on the economic front, the Agenda focuses on e-business skills as 'the digital skills necessary for innovation and growth' (25), and on the societal front, it focuses on bridging digital divides and helping the disadvantaged participate on a more equal footing, for instance, by emphasizing categories such as eLearning, eGovernment, and eHealth. As important as these categories may be, the Agenda fails to address the regulatory gap affecting many users of social media and platforms that enhance online participatory cultures, and also does not consider the user-generated content that is produced and distributed on these platforms.

Indeed, when the action point on ICT-enabled benefits for EU society is scrutinized, focus is on ICT for environment; sustainable healthcare; and ICT-based support for dignified and independent living, eGovernment, and intelligent transport systems. The section including the promotion of cultural diversity and creative content starts by referring to the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, emphasizing that digital media can permit wider distribution of cultural and creative content. This is primarily seen from a distribution perspective, and it is welcomed that authors and content providers can reach new, larger, global audiences. In its framing of the Internet, access, and media pluralism, the Agenda chooses to present an optimistic view, somehow at odds with Curran's 'chronicle of contradiction' or Dahlgren's sceptical view of the media as neutral carriers: 'The internet is also a driver of greater pluralism in the media, giving both access to a wider range of sources and points of view as well as the means for individuals – who might otherwise be denied the opportunity – to express themselves fully and openly' (COM(2010) 245 final, p. 30). The other three pillars are on supporting the digitization of cinemas, problems inherent in fragmentation, and the complexity in the current licensing system affecting the digitization of Europe's cultural heritage. The latter is specifically linked to the EU's public digital library, Europeana. Finally, the Audiovisual Media Services Directive is mentioned as the directive governing EU-wide coordination of national

legislation on all audiovisual media. These include traditional TV broadcasts and on-demand services. However, as will become evident below, the AVMS Directive faces the same challenges as many other regulatory acts within the converging, cross-mediated communication, media, and cultural landscape: It risks becoming obsolete before ever being implemented due to rapid technological and infrastructural developments. In terms of actions, focus remains on the economy as the Commission proposes a sustainable model for financing Europeana and content digitization as its only key action within this category.

It is thus safe to say that, from the perspective of Fairclough's text, dimensions of discursive practice, and order of discourse, the Commission's Communication on the Digital Agenda for Europe focuses mainly on discourses involving the digital single market and simplification of regulatory frameworks. In terms of societal discursive practices, the Communication is attentive to trust and security, right to privacy, digital literacy, skills and inclusion, sustainable healthcare, and ICT for environment. However, even though the Agenda is attentive to how processes of convergence and cross-media communication affect regulation, it pays no attention to how users in digital participatory cultures are framed within these regulations. Indeed, the dominant discursive formations are, on the one hand, economic, and on the other hand, societal, seen from the perspectives of environment, sustainable healthcare, eGovernment, and intelligent transport systems. Users are therefore recognized as consumers, citizens, or workers. This hardly comes as a surprise given that the Commission safeguards the interests of the EU, in which the single market has always played a prominent role. In this case, focus is on the single markets' digital potentials. There are, however, other voices within the EU, and we will now focus on how the Parliament, the Council, the CoR, and the EECS frame their discourses on the Digital Agenda for Europe.

The Other Voices

The European Parliament's Resolution on the Commission's Communication identifies similar regulatory challenges as does the Commission in its Communication. The need for a more coherent regu-

latory framework concomitant to convergence processes and cross-media communication is thus clearly identified in the Resolution. And just as is the case with the Commission's Communication, the Parliament emphasizes discourses focused on economic growth and social added values, skills, and trust in ICT technologies and infrastructures. This framing of the economic discourses of the cultural and creative industries is interesting since financial growth, participatory democracy, and media pluralism are somewhat effortlessly reshaped into a coherent line of thought. The dominant discursive formations can thus be said to reside within this duality of economic growth and societal issues related to trust and enforcement of fundamental rights. This is clearly manifested in the Resolution's articles that, for instance, underline the necessity of strengthening high-speed and mobile broadband infrastructures 'safeguarding competition to the benefit of consumers' (P7_TA(2010)0133, p. 3) while simultaneously insisting that 'digital competences are crucial for an inclusive digital society and that all EU citizens should be empowered and have the incentives to develop the appropriate digital skills' (5). What is meant by 'digital skills' in this context is not explained further, but in another article, there is a call for 'respect for transparency, accessibility and equality of opportunity in the use of ICT systems, with a view of improving their user-friendliness for the largest possible number of European citizens' (6). In this case, digital skills and accessibility are defined in terms of user-friendly interfaces, again emphasizing the importance of participation rather than the consequences of such participation and what role regulatory frameworks play in user-generated content in online participatory cultures.

The Parliament does, however, take one step further than the Commission's Communication with its emphasis on basic digital rights and obligations through a European Charter of citizens' and consumers' rights in digital environments. More precisely, the article focuses on 'users' rights relating to the protection of privacy, vulnerable users and digital content as well as guaranteeing adequate interoperability performance' (7). Furthermore, the Parliament stresses the need for users to be in control of their own data, including the right to be forgotten. It therefore calls on the Commission to adapt the Data Protection Directive to the current digital environment. In terms of digital content, the Parliament's Resolution underlines that greater attention must be given to digitiza-

tion of and improving of citizens' access to Europe's cultural heritage. At the same time, it expresses deep concern regarding the European digital library project Europeana and calls for radical changes in the project's 'management, efficiency, practicability, usefulness and large-scale mediatization' (10).

These considerations feed into a larger dilemma identified by the Parliament, which concerns the cultural and social maximization of digital technologies. However, here too it is seen through the eyes of consumers, rather than users, as it focuses on changing consumer behavior; reduced VAT rate on the distribution of online cultural goods; and 'more efficient, and more consistent transparent rights management and clearance system for both musical and audiovisual works and for more transparency and competition between collecting rights management organizations' (10).

Finally, the Parliament opens up an important issue, from this article's perspective, as it points to the complexities of constructing and implementing regulatory frameworks that respond to processes of convergence and cross-media communication. More precisely, the Resolution 'takes the view that, almost a decade after their adoption, the Directives constituting the legal framework for the information society appear out of date due to the increased complexity of the online environment, the introduction of new technologies and the fact that EU citizens' data are increasingly processed outside of the EU' (8). It therefore proposes updates and fundamental revisions to key Directives. One of these is the package of directives regulating the telecommunications sector, which the Resolution refers to as the new electronic communications regulatory framework. This framework and the AVMS Directive will receive further attention in the next chapter, but it is important in this context to note the Parliament's worries concerning the fact that technological and infrastructural developments move faster than the negotiation and formation of regulatory frameworks for a supranational body like the EU. This is due not only to the negotiations taking place within the different EU institutions but also the varying efficiency of implementation amongst the different member states.

I have dwelled so much on the Parliament's Resolution both because of the views presented in the Resolution (since the Parliament represents

the voice of the people) and because the Parliament holds a crucial role in the EU's processes of accepting laws. The Parliament's most prominent discourses are therefore more representative than those of the European Economic and Social Committee and the Committee of Regions, which play advisory roles. However, the discourses that emerge within these institutions' Opinions do provide a fuller picture of the dominant discursive formations and intertextual relations. The EESC, for instance, agrees with the Commission that policy initiatives within the field of ICT and the Digital Agenda 'need to be unified and managed under a coherent plan of action' (OJ C 54, 19.2.2011, p. 58) and specifically mentions that the section dealing with ICT-enabled benefits for EU society, which has received special attention in this chapter, is too vaguely formulated in the Agenda's action plan. The EESC also laments that challenges concomitant with cross-media convergence and processes of convergence have been under policy focus for a long time but without much success. In terms of the economically centred discursive formation and socially centred discursive formation, the EESC claims that the market cannot properly regulate itself and calls for a balanced regulatory framework that promotes the interests of a greater number of citizens. This is formulated in the following generalized way in EESC's recommendations: 'The Commission must be mindful to protect the interests of the citizens when working with global ICT companies to implement the Digital Agenda' (60) and again 'as a general principle of policy, the public interest—the 'public good'—should be balanced with private and business interests' (60).

The EESC thus falls prey to the same criticism it aimed at the Commission, that is, its recommendations are extremely vague. As in so many documents and policy initiatives that try to address the challenges of converging regulatory frameworks, it is easier to identify challenges than to propose solutions. This is also the case with the Opinion issued by the Committee of Regions, which leans towards similar discursive formations as those discussed above, that is a combination of economic and social interests. Concepts such as 'work methods', 'work cultures', 'information validity', and 'media literacy' stand side by side, along with the encouragement for EU work communities and the general public 'to play an active role in creating a substantially more innovative and productive

Europe' (OJ C 15, 18.1.2011, p. 36). In this case, focus is sharpened on regional authorities and SMEs, as these are important stakeholders in the CoR's work.

Even though the CoR writes itself effectively into this order of discourse, it is the only institution that addresses participatory platforms and prosumers. It thereby 'emphasizes that the new participative platforms and interactive co-creation services (Web 2.0 and beyond), in which users have become active players, producers or 'prosumers', offer an unprecedented opportunity to unleash the creativity of Europe's citizens' (38). Furthermore, it maintains that it 'is essential to create an environment and culture of openness and trust that fosters this development' (38). However, even if the CoR succeeds in identifying this, it does not come up with any regulatory suggestions on how to create this environment.

Finally, the Council of the European Union discussed the Agenda at its 3046th meeting on 18–19 November 2010, when focus was on the cultural and audiovisual dimensions of the digital agenda. Here, it was maintained that these dimensions were crucial to the agenda's success. Furthermore, delegations stressed the importance of increasing legal access to cultural and creative content, intellectual property rights, and media literacy in order for citizens to fully benefit from the digital single market. Finally, '[a]ll ministers underlined that the cross-cutting nature of the digital agenda requires an integrated rather than a compartmentalized approach and horizontal coordination between institutions at EU and at national level' (Press release, 3036th Council meeting).

In summary, the Council and the other law-making EU body, the Parliament, can be said to generate similar discourses as the agenda-setting Commission. This is again mirrored in the Opinions of the advisory bodies, the EESC and CoR, which although opening up to challenges caused by and to online participatory culture, remain very vague in terms of how to address these challenges. Finally, in order to illuminate these regulatory challenges from within the telecommunications and audiovisual sectors, we will take a quick look at the complexities involved, mainly through the Directive on electronic communication networks and services, and the AVMS Directive.

Conclusion: From Macro to Meso to Micro—and Back Again

At the start of this chapter, the scope of the Digital Agenda was said to be limited to the categories of *Telecoms and the Internet* and *Content and Media*. However, as the analysis showed, this distinction has been difficult to maintain due to the subject at hand. Indeed, processes of convergence and cross-media communication are characterized by their cutting across different regulatory frameworks, technological platforms, and protocols—or as Drucker and Gumpert would have it, cross-media multipurpose networks replace the prior need for regulation that covers single-purpose mediums. This is why the theoretical approaches of van Dijck, Drucker and Gumpert, Sarikakis and Chakravartty, and Raboy and Padovani have been useful for demonstrating the 'macro-issue' at hand. Issues of cultural policy, communication policy, and media policy that relate to the Digital Agenda should thus include a variety of topics and approaches, whether economic, social, cultural, infrastructural, and political. This somewhat resembles the approach taken in the Digital Agenda, as it cuts across a variety of regulatory frameworks and topics, ranging from strengthening a digital single market to digitizing Europe's cultural heritage. However, although this macro-approach can be theoretically inspiring, it falls prey to being quite generalized on the input side. This is clearly identified particularly by the Parliament and the two advisory bodies, the EESC and CoR. In short, challenges are identified, but solutions are harder to grasp.

However, processes residing within macro-spheres affect processes in the micro-sphere. In this context, attention has particularly been given to user-generated content and the supposedly empowering participatory potentials that users encounter in online participatory cultures. As previously remarked, much of the user-generated content is mediated by digital media portals in which different semiotic expressions, formats of text, video, sound, and pictures are mixed and in which the technology allows for social networks, various publishing formats, TV streams, and live casts to go hand in hand. As Drucker and Gumpert (2010) note, this challenges what have hitherto been understood by the terms transmission, content, jurisdiction, sender/user/audience, medium, platforms,

and public and private communications. This is why the EU has initiated the Digital Agenda and why bodies such as the OECD and ITU are so preoccupied with issues related to convergence and user-generated content. But as noted above, much of this resides at the macro-level. And even though the different EU institutions have identified the need to converge regulatory frameworks by upgrading older ones or making new ones, this has proved to be a difficult process. This is exemplified by the transition from 'macro' to 'meso', which from the perspective of this paper can be said to be the Audiovisual Media Service Directive and Telecommunication package, which is a bundle of directives commonly referred to as the regulatory framework for electronic communication in the European Union. It is beyond the scope of this chapter to scrutinize these directives in detail. I briefly touch upon them here in order to illustrate the complexities at hand when moving from a macro-approach such as that of the Digital Agenda to the legislative directives, which exist within specific domains on a meso-level, to the micro-level of the users and the user-generated content produced and distributed on cross-media platforms.

In the Commission's Communication about the Agenda on the web, the *Content and Media* section specifically mentions the AVMS Directive and the audiovisual field as a venue for creating a single European market for these services. Furthermore, it is maintained that it 'is also required to take cultural aspects into account in all its policies' (Digital Agenda for Europe n.d.). This Directive thus touches upon both of the dominant discursive formations—the economic and the social—already identified, but since the AVMS Directive has 'content' under its auspices, it also concerns the narrower definition of 'cultural content'. When scrutinizing the Directive, however, it becomes obvious that it has various definitional loopholes, for example, caused by its intertextual and interdiscursive relationships with previous key documents, such as the two generations of the Television without Frontiers Directives. This means that even though it was designed to simplify the audiovisual regulatory framework and respond more adequately to convergence processes and cross-media communications, its core definitions of the difference between linear and non-linear services, European works, and audiovisual material do not respond to digitally mediated participatory cultures, as described above.

The EESC is attentive to this in its Opinion (OJ C 318, 23.1.2006, p. 205) on the AVMS Directive, but once again, the more economics-oriented, market-friendly discursive formations gain the upper hand, and the definitions remain as the Commission tailored them. To make a long story short, the AVMS Directive fails on the meso-level to live up to the technological and infrastructural developments from the perspective of user-generated content. Indeed, its focus is mainly on creating a single European market for audiovisual media services (OJ L 332, 18.12.2007). This is also the case for the regulatory framework for electronic communications in the European Union, which from the very start focuses on transmission rather than content. This is clear in the Directive for 2002 (OJ L 108, 24.4.2002, p. 33) and is not resolved in the recent amending of the 2002 Directive on a common regulatory framework for electronic communications networks and services (OJ L 337, 18.12.2009).

These discrepancies are taken as examples of how, despite the good intentions behind it, the current EU regulatory regimes prove too complex and institutionally anchored to respond to convergence processes, cross-media communications, and user-generated content. This example of treating content and transmission separately from a regulatory point of view completely overlooks a core trait of user-generated content travelling within online participatory cultures, that is, that it does not differentiate between transmission and content. Therefore, on a micro-level, user-generated content and associated patterns of production and participation as described in this paper simply do not fit any of the regulatory regimes currently operating within the EU. Indeed, there seems to be a regulatory void. Moving back to the macro-level, the Digital Agenda is certainly successful in identifying many of the issues raised in this chapter. But none of the EU institutions instrumental in forming the Agenda offer viable proposals for resolving these problems. Indeed, when the dominant discursive formations are drawn together on a social practice level, none appear to be particularly interested in the user. They are, however, interested in the consumer, in the worker, and in the citizen. There is thus focus on skills and trust—both in getting Europeans online and ensuring their skills in the workforce. However, there is less focus on the creative audience, the users, produsers, and prosumers, who are already skilled and already producing and distributing, and already active

in online participatory cultures. In other words, there is focus on developing the market, and there is focus on closing the digital divide and enhancing citizens' digital skills. But interest in already-skilled users and their user-generated content which is circulating within digitally mediated participatory cultures is strangely lacking.

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5

The Imperative of Code: Labor, Regulation and Legitimacy

Shenja van der Graaf and Eran Fisher

The following snippet tells the story of events unfolding in an early text-based Internet environment called LambdaMOO[1] where users adopted assumed personalities and engaged in various role-playing scenarios. One night a user named Mr. Bungle broke some of the unwritten social norms in this virtual environment by taking over other users' female avatars and made them perform actions against their will: 'he entered sadistic fantasies into the "voodoo doll," a subprogram that served the not-exactly kosher purpose of attributing actions to other characters that their users did not actually write'. As one woman, 'whose account on the MOO attached her to a character she called Starsinger', experienced, she 'was

[1] MOO is short for Multi-User Dungeon (MUD), Object Oriented.

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*,
Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_5

given the unasked-for opportunity to read the words "As if against her will, Starsinger jabs a steak knife up her ass, causing immense joy. You hear Mr. Bungle laughing evilly in the distance"' (Dibbell 1993).

His actions instigated a debate in the small community about the need for regulation. This incident—a classic case in Internet regulation studies—points to several intertwined trends that have emerged since the mid-1990s underpinning debates about the social and legal implications of the persistent co-evolution of technological progress and usage associated with the Internet, and the economy more broadly (Gitelman 2006). The power of the Internet, in fact, can be found in its ability to connect people across time and space, facilitating an ever-growing range of easily accessible and scalable digital platforms through which one-to-one, one-to-many and many-to-many interactions can occur. Particularly, the current generation of digital platforms increasingly offers people platforms to gather and to participate in practices such as adding to existing and creating new digital contents, attracting their own publics. This so-called participatory turn (OECD 2007) highlights a convergence of production, distribution and consumption practices and a blending of creativity, collaboration and sharing-enabled and sharing-assisted network technologies associated with pervasive knowledge-intensive and information-rich user-created content activities (OECD 2005; United Nations 2012).

One stream of thought links these changes in technologies, social (production) practices and economic organization to user creativity and knowledge that characterize multisided business models. More specifically, digital platforms such as Facebook build different commercial niches of sociality and user creativity (or labor), and often, they can be seen to starting out in one particular domain and, overtime, developing a multi-platform strategy trying to contain and cater to (various) user groups. For example, Google bought YouTube (2006) and Waze (2013), and Facebook bought Whatsapp (2014) and Instagram (2012). In this way, they added hugely popular user-driven video, navigation, messaging and photo service applications to their spectrum, supported by bringing in expertise and a fast growing user community. Rather than being finished product or service platforms, they are tweaked in response to their users' needs and their owners' objectives as well as in reaction to competing platforms (Feenberg 2009). Such a strategy of getting two or

more distinct sides on board and enabling interactions between them is increasingly referred to as 'multi-sidedness'. How far or close an organization is from a multi-sided economic model carries significant economic trade-offs (Hagiu and Wright 2015). As a result, the boundaries and the main interface of platforms like Airbnb, Uber and Facebook are in constant flux, underpinning various competitive efforts which may not necessarily benefit or support an unbundled and open market (Ballon and Van Heesvelde 2011).

A second stream of thought engages with reworking the logic of consumption by looking at content (or data) curation practices so as to capture the changing dynamics of this 'participatory turn' along the axis of user labor. As a result, many terms, concepts and models have been developed such as 'convergence culture' (Jenkins 2006), 'culture of connectivity' (Van Dijck 2013), 'like economy' (Gerlitz and Helmond 2013), 'collaborative consumption' (Belk 2014), 'produsage' (Bruns 2008), 'prosumption' (Ritzer and Jurgenson 2010), 'sharing economy' (Martin 2015; Sundararajan 2016) and 'wikinomics' (Tapscott and Williams 2006). Widely adopted in the literature, however, is the term Web 2.0 (O'Reilly 2005; Beer and Burrows 2007). It points to a shift from a static to a dynamic perspective on Internet content delivery, where digital tools, applications and services are put into the hands of regular people. What these terms have in common is approaching users as active Internet contributors who put in a certain amount of creative effort, or 'labor' such as in sharing intimate details of their personal lives online, contributing content for YouTube or Wikipedia and producing code for the Google community (Van Dijck 2009). This 'user environment' is currently either somewhat under-regulated, leaving, for example, issues of personal information in the hands of, mostly, (large) organizations who own or host the platform, and use this information to their own benefit (e.g., third party sales, target advertisements), or it tends to be subjected to near-automatic overregulation.

As a result of this continuous co-evolution of technological progress and usage dynamics, a third stream highlights the issue of regulation. Regulation is generally understood as the enactment of sustained and focused application of control over social activities, be this governmental, market or social norm driven (Baldwin and Cave 1999). Looking at the

history of Internet regulation in particular, arguably, when presented with new digital platforms that seemingly are not subject to any or sufficient rules, the response has been to try to exert control in the shape of legislation, case law or even stringent controls on speech (Goldsmith and Wu 2006). In particular, the last decade seems to be marked by a legal standoff between established organizations, such as the music and film industry, and robust communities of users (especially, in terms of copyright). Today, however, many elements of the corporate media world and many new digital organizations such as Facebook have taken a different approach, embracing the new technological use rather than attempting to outlaw it.

In short, we can detect a series of practices involving digital platforms marked by a transition from a user-based to market-based entity, thereby highlighting a migration between digital organizations, user labor practices and regulation. Understanding this enables us to investigate the trajectories of 'community and monetization' that are emergent aspects of the so-called platformization of the Internet, so as to get to grips with a growing constitutional legitimacy gap in multi-sided business models. In this chapter, therefore, we attempt to unravel this delicate balance associated with the digital platform (or intermediary) as an attractive regulatory target, and the notion of co-regulation. The term 'co-regulation' supports the idea that a regulatory regime is made up of a dynamic of general legislation and a self-regulatory body. Hereby the interests of multiple actors are taken into account, incorporating different incentives for participation across the 'value chain', which likely results in an adequate response to economic and socio-cultural environments to be(come) self-sustainable (Marsden 2012). The move toward co-regulation points to a kind of return from self-regulation, where a wider stakeholder group of representatives, such as digital organizations, public interest groups and governments, are said to produce greater transparency, pluralism, trust-inducing competition and respect for fundamental (human) rights such as privacy. The remainder of this chapter is designed to grapple with this. First, attention is paid to the development and mainstreaming of digital platforms in conjunction with user-generated content, thereby highlighting the issue of labor vis-à-vis multi-sided business models. This is followed by looking at several implications of the continuous platformi-

zation trend for users leaving their digital footprints across the Internet. Then by describing some legal representations surrounding Facebook, the challenge at hand is drawn out to make a case for a co-regulatory framework.

Platform Mainstreaming

With past and current key enabling sites such as Geocities, Gnutella, MySpace, Second Life and Instagram, the Internet is marked as locus where cultural, social and economic value is produced and extracted (Helmond 2015; Sapnar Ankerson 2015).[2] Particularly, since the 2000s, 'user-generated' practices have truly been named a distinctive and core feature, and involve the creation of rich (media) content that is shared across complex digital platforms—often hosted by digital organizations that would not exist without it. Several studies have shown a broad spectrum of user engagement from low-level inputs such as simple communication interactions (a 'like' on Facebook) to high levels of participation or creativity such as the generation of elaborate code to produce total conversion modifications of games (à la Counterstrike, Valve Software Inc.).[3] Moreover, debates about such user-generated content practices have been marked by questions of value and power (Bruns 2008; Striphas 2015). In fact, users are well known to engage in the production of meaning, whether of cultural texts, corporate intentions or the technology itself. Especially since the 1990s, researchers have shown an increasing interest in this linkage between new technologies and users, looking in particular at the formation of new social collectivities and 'bottom-up' redefinitions of creative practices, often vis-à-vis corporate-produced/provided content (Ang 1991; Jenkins 1992; Klein 1999). More specifically, these studies have tended to yield insight into practices where users take basic materials provided by commercial organizations and actively re-appropriate and redistribute those materials as creative products, accounting for

[2] Early forms of sharing content can already be seen as early as in the 1970s such as via Bulletin Board Systems and Multi-User Dungeons; however, the communal aspect took off only in the 1990s via the countless user communities (Burgess and Woodford 2015).

[3] See for some statistics EC (2012) and PEW (2013).

the seemingly changing social and economic arrangements between the more traditional division of labor between production and consumption (Benkler 2006; Hesmondhalgh 2010); the Organisation for Economic Co-operation and Development (OECD) put it aptly: it has become 'increasingly clear that the Internet is not only embedded in people's lives but that with the rise of a more "participative web" its impacts on all aspects of economic and social organization are expanding' (2007, p. 15).

Just as significant as the emerging reconfiguration of digital platforms (and business models) vis-à-vis user creativity transforming the roles, identities and politics of content creation and sharing on the Internet is the parallel evolution of platform objectives. For example, YouTube (2005) started out by offering a platform for a community of video creators, to one targeting users who are mostly interested in viewing content (Burgess and Green 2009). What is more is that, increasingly, these videos are being produced and owned by organizations, while at the same time, claiming copyrights over user-generated videos (such as over the use of an image or sound track). This has given rise to ongoing debates about Google's monetization practices of YouTube content in terms of ownership and exploitation. In fact, it highlights the continued formalization or regulation of 'free labor' which has also led content creators to abandon the platform as Jason Calacanis stated in June 2013: 'I ain't gonna work on YouTube's farm no more'.[4]

This practice of so-called 'platform mainstreaming' has also provoked a significant shift, or even disruption in existing boundaries between work and non-work and places of work. With creativity as a key element of user engagement, 'work' and 'play' have become increasingly blurred, suggesting that the organization of work cannot be understood separately from personal (and social) interests. Moreover, a growing number of people that (occasionally) work from home seems to coincide with a scholarly interest in new ways of organizing work that is more decentralized and associated with ICTs (Huws 2014; Malone 2004). For example, Lee (2007) has shown that 'creative workers' in London increasingly have a 'portfolio career' stressing a work-leisure flexibility underlying a perpetual entrepreneurial outlook to work where they 'commodify' themselves. Deuze et al. (2007) have studied the working lives of 'gameworkers' and

[4] See http://www.launch.co/blog/i-aint-gonna-work-on-youtubes-farm-no-more.html.

found that many make substantial sacrifices (particularly concerning working hours and copyright issues) to 'call themselves game developers'.

This kind of mixture of the private and public/professional has raised questions about (free) labor and exploitation. Approaching user creativity on digital platforms as a kind of labor is not new, yet it has become salient in contemporary society. The kinds of inputs provided by users are said to provide 'value' to the digital platform and/or the corporation hosting it as well as to the (extended) community at large through their—often, freely shared—knowledge and labor contributions. Thus, user practices are understood as 'free labor' that through value-adding practices are somewhere between paid and voluntary work (Terranova 2000). Indeed, work on digital platforms has divergent motivations: the host seeks to benefit through, for example, free brand creation, extensions of the product's shelf-life, increased loyalty and recruitment, while users seem to be drawn by activities such as self-expression, portfolio building, problem solving and hacking.

Overall, user creativity has been mostly understood in facilitating generative features. Inviting users to participate, connect and 'co-create', a shift can be detected from a more closed production and innovation model to a more open, distributed and modular model, and which, arguably, offers a greater potential for (market) growth as is discussed next. In particular, an interest can be detected in multi-sided platform business models where an organization can be seen to strategically access user knowledge that once was outside its boundaries. While such a multi-sided platform is characterized by a more collaborative setup, at the same time, it can also be a more competitive one, and currently pointing to a destabilization of the dominance and rhetoric of user-generated content and user (social) connections in emerging business models. The blurring boundaries between 'content creation' and 'social connection' warrant an examination into the blossoming market in data produced by users.

Platformization of the Web

As the Web 2.0 evolved, and platforms and users moved more and more activities to digital platforms, emphasizing the mutual constitution of the construction of platforms and social practices, a shift can

be detected from providing a utility to providing a customized service (often associated with 'sharing' as its main feature, John 2012). This mutual constitution stems from the principle that everybody (organizations and users) can contribute ideas, content, information and the like, and these may be taken up and dispersed and retained by commerce rather than a linear or causal 'chain' of production associated with a supply-driven approach. This is called 'multi-sidedness' and, currently, attention is being given to the role that users play in this context. They are said to act voluntarily, and often freely, providing (personal) information, and other complements such as content and add-ons, thereby providing value to the entire (and extended) platform. Yet, it is usually the organization rather than the user that may effectively deal with such information costs by directly economizing on the acquisition of information supporting them in delivering a product (or service) tailored to users' specific needs (von Hippel 2005). Also, it is typically only the organization that can claim full rights and determine what can and cannot be done with products or services (cf. Ritzer and Jurgenson 2010; Wauters et al. 2014). The legal pay-off then for users is pretty marginal in terms of legal protection, ownership rights and opportunities for entrepreneurship.

The current changes seen in these digital platforms from user-based to market entity seem to represent a shift away from the 'creative' user to the socially connected user, signaling an ever-more controlled, curated and surveilled system of monolithic, proprietary platforms. In fact, digital organizations seem not so much interested in the 'ideals' of user-generated content (anymore) as they are in the data that users of these services deliver, as a by-product of maintaining connections online (Van Dijck 2014; Striphas 2015). They make use of algorithms that can be seen to engineer and manipulate the social connections. This is what Van Dijck (2013) has called connectivity: an automated process behind real-life connections, which make it possible for people's desires to become apparent. As such, a profitable form of sociality has come about where human sociality is brought to these platforms and, at the same time, is mediated by them. Thus, a 'culture of connectivity' is a culture where perspectives, expressions, experiences and productions are increasingly mediated by digital (social) platforms.

It is this mediation and manipulation of social relationships and the gathering of people's preferences (across the Internet) that impacts on, among others, the privacy of individuals online. In particular, personal information about users is being collected, accessed and used as they leave digital footprints with every click they make online, such as when using search engines, social network sites, location-based services, and transactional services.[5] Online expressions or outings of sociality have thus become structured and tracked due to their release onto online platforms, and, arguably, resulting in far-reaching and long-lasting effects. Particularly, as all kinds of existing and emerging companies can be seen to collect and process these personal data streams on an unprecedented scale and generally serve as input for their economic and social activities, this 'platformization' of content curation extends the (social) platform into the rest of the Internet and to external Web data available. More specifically, current technology is getting more and more effective in storing and analyzing vast amounts of personal data and consumer information on multiple Internet sites across devices (supported by, e.g., tracking mechanisms, automatic logins), while the costs for doing this consistently decrease. Also, it is increasingly feasible to store the information for an indefinite time. Other consequences of the platformization of information are the ease by which it can be combined with other data and how it can reach larger and scattered audiences without much effort (Pötzsch 2009), or the 'recontextualization of self-disclosure'. Thus, from volunteered and observed (behavioral) data, numerous online services automatically infer new information and build user profiles that are sold to third parties. This underpins the core of emergent business models (cf. Pierson and Heyman 2011). And, with often-changing Terms of Services, users have to remain diligent about the public nature of their personal information (directly via the platform or third-party services and applications such as extraction techniques, aggregators and advertizing networks) and understand, if allowed, how to configure their privacy settings (Turow et al. 2015).

[5] So-called 'volunteered' data, such as Web queries, photos, videos, texts, likes, are 'shared' and 'observed' by a variety of Web services through various applications like browser cookies or location trackers which record a gigantic mass of online behavioral data (or 'inferred data').

Users are often not fully aware of the (economic) potential of their participation and contributions. Hence, increasingly an appeal is made and tools developed that raise this awareness in order for people to understand and control the way their data is being repurposed through automatic inference and subsequently monetized. This is coincided by examining the role of algorithms that is seen as a key logic of the information ecosystem governing the flows of information on which people and organizations seem to increasingly depend (Beer 2009; Halavais 2008). Generally, data processing capabilities available to organizations and those available to users are imbalanced in favor of the organization, drawing attention to a situation that determines a democratization of content production and sharing but not of the means for users to manage and control content. This kind of 'platform' surveillance reduces individuals' control over the information they disclose about themselves in different (social, political and economic) contexts. In fact, with or without individuals' (explicit) consent, information that is persistent, searchable and replicable can be shared, limiting their ability to regulate their social interactions and position themselves in relation to available social and economic identities (Brown 2015).[6] This is evidenced, for example, by some 74 percent of Europeans that find that they do not have enough control over their shared data, while some 70 percent are concerned with the way their data are handled by organizations that have access to it (EC 2012). Given the unwanted consequences mentioned, one might expect people to be cautious when providing personal information online. Many users even state that they are concerned about privacy in general (Pötzsch 2009). However, it has been observed that people's actual behavior does not necessarily correspond to these claims about their own privacy concerns (Deuker 2010). More specifically, in using platforms, such as Google or Facebook, people trust their personal data to corporations, and increasingly also to the state deployed for social, economic, environmental or political governance (Brown 2015).[7]

[6] People are found to make inconsistent privacy-relevant decisions and assign different values to their data privacy (Acquisti et al. 2013), and which is often referred to as the 'privacy paradox' (Barnes 2006).

[7] Increasingly, governments are collecting, analyzing and exchanging information about their citizens. As a result, human rights watch organizations including watchdogs such as the EU Data

Against this backdrop, voices can be heard including those of policy makers that are looking out for individual rights and to protect people's privacy and personal data vis-à-vis these commercial practices (Nissenbaum 2010). Up to this day, however, large quantities of personal information are (too) easily transferred between jurisdictions and are not well-balanced, for example, global data flows between the United States and Europe are quite asymmetrical (Brown and Marsden 2013).[8]

A Regulatory Tale

The ubiquity of content curation practices is both an opportunity and a challenge for users but also for regulators, and important shifts with regard to current data handling practices are to be seen in the context of legislation around the globe.[9] Let's take a look at a seminal illustration of Facebook and the ways its users have been informed about their role in value creation, not only in terms of content provision (such as via user profiles), but also through the social monitoring techniques that are built into the platform, and which have also led to a class action suit. Guided by a critical discourse analysis (Fairclough 2003) of Facebook's S-1 form[10]

Protection Supervisor can be seen to critically address possible government abuse of surveillance powers, making a case for greater transparency.

[8] Note that over the last three decades or so, the study of personal information-driven markets has evolved, it is currently not an easy task to keep track of what is happening in real markets. For example, already in the 1980s, the Chicago school of economics explicated privacy as a cause for information asymmetries, creating inefficiencies in the marketplace. Currently, debates differentiate between the economics of privacy at the stage of information disclosure and later stages of information use as well as, increasingly, connections are made between personal information markets to the concept of multi-sided markets (Hildebrandt and van den Berg 2016).

[9] For example, the European Commission passed the General Data Protection Regulation (GDPR) and which from mid-May 2018 onward will replace the current Data Protection Directive (95/46/EC). It sets out to provide a legal framework that enables European users to better control the use of their content—volunteered, observed or inferred—by third parties, such as via default settings and understand the way their data are handled online as well as what international businesses can and cannot do in handling personal data outside of Europe. See http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0679.

[10] The S-1 form contains basic business and financial information based on which investors make informed investment decisions (by researching the prospectus prior to an IPO). Thus, the S-1 form requires an organization to make its business plan explicit including, among others, its value propo-

to enter the stock market and verdict of the class action lawsuit,[11] we aim to unpack the challenging dynamic between user and market-driven ambitions.

Facebook

While starting out as a platform that facilitates sociability, Facebook has developed into a digital organization that thrives on analytics and data mining techniques to increasingly monetize user participation via user-generated content, more generally, and personal information, more specifically. In fact, when Facebook started out, it seemed to prioritize user growth over monetization by facilitating content curation practices to draw users to its services; and, by improving and developing new services and support mechanisms, an ever-expanding loyal user base could be sustained overtime. This focus on users can also be supported by the seemingly long lapse between the launch of the platform and the filing of its 'Initial Public Offering' (IPO), to enter the stock market. Facebook launched in 2004 and filed for its IPO in 2012 indicating a move from establishing a user base with venture capital toward monetizing numerous sets of available data.[12] The continuous engagement and growth of the user base, however, remains of the utmost importance for maintaining the business. At the same time, the company has to prove how it can offer value for advertisers and other third parties. For example, as the platform went mainstream, content sharing was made increasingly public, and Facebook started to invite people to develop Facebook applications which enable Facebook users to curate and share content across the Internet into and out of their Facebook profiles to other sites. Hence, a complex business ecosystem comes about of multi-directional dependencies (in contrast to more traditional value chains), where a net-

sitions to different parties (such as users, advertisers, websites, platform partners), market opportunities, product and services and possible risk factors.

[11] Case No. 11-CV-01726-LHK, United States District Court for the Northern District of California.

[12] The 'monetization' trend appeared to intensify one year prior to its IPO filing so as to demonstrate that the platform is (financially) self-sufficient, sustainable and profitable.

work of actors and stakeholders—Facebook itself, investors, users and multiple intermediaries, such as advertizing agencies, demand- and supply-side platforms, ad exchanges, ad networks, ad servers, buying solutions, analytics and so forth—is interrelated and mutually dependent, defined and demarcated by their relation to a common interest (Moore 1993). Its strength and weakness depend on how each actor contributes to ('adds value') and benefits from the ecosystem. What seems increasingly to be at stake however is the potential threat to transparency and legitimacy for the different stakeholders involved, particularly users, with regard to how data mining techniques operate, what and whose information is being collected and monetized, by whom, and with what implications for (data) ownership.

The S-1 forms of Facebook[13] reveal that terms such as 'data monitoring', 'mining' or 'aggregating user data' are not commonly used: terms such as 'targeting' and 'personalization' are utilized for advertisers and/or other partners (e.g., website or platform partner). For its users, the more positive sides or benefits of personalization are deployed, and a different wording and outlook are used than when addressing advertisers. Facebook strongly advertizes its social character to users (and, at the same time, also to investors); 'each person's experience on Facebook is unique and completely personalized – akin to reading a real-time newspaper of stories compiled just for them' (S-1, p. 71). Moreover, Facebook's user value proposition is posited as 'social and personalized', offering people 'experiences that are centered on people, their connections, and their interests' (S-1, p. 73). For its advertisers, Facebook offers targeted advertizing by reaching 'relevant and appropriate audiences for their ads, ranging from millions of users in the case of global brands to hundreds of users in the case of smaller, local businesses' (S-1, p. 76).[14] It does so by facilitating ads that can be specified according to demography and particular inter-

[13] See http://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc, and http://www.sec.gov/Archives/edgar/data/1326801/000119312512175673/d287954ds1a.htm (amendment).

[14] Risk factors are also provided and point out the crucial role of advertizing—that a reduction in spending or loss of advertisers could severely harm the business as well as that products and services are subjected to, often, changing, US and foreign laws and which can also (negatively) affect the business. In particular, laws and regulation about privacy, data protection and so forth are increasingly 'subject to change and uncertain interpretation', and which can 'result in claims, changes to

ests that are shared via 'Likes' on Facebook but also Internet-wide. One such practice called 'Sponsored Stories' made the symbiotic relationship apparent between user creativity as labor and commerce, laying bare the complexity of transparency and legitimacy for the different stakeholders.

The legal case was filed in April 2011 (only four months after Sponsored Stories was introduced) with a class action lawsuit filed to the US district court, Northern District of California, San Jose division. Plaintiffs, who represented the class of Facebook users in the United States, accused Facebook of using their names, photos and identities to advertize products and services through Sponsored Stories without seeking their permission and without remunerating them. A major watershed in the case was a December 2011 court decision to partially accept the plaintiffs' arguments regarding remuneration. Since then, both parties have been engaged in extra-court negotiations and have reached two settlements. The first was denied by the court in August 2012; the second settlement was approved in August 2013.

The December 2011 verdict clearly lays out the arguments made by Facebook users: they created value which was reaped by Facebook for which the users did not grant permission and received no compensation. The plaintiffs' assertion that users created economic value is backed by Facebook's own enthusiastic declarations about Sponsored Stories. The Plaintiffs cite public statements by Facebook's Zuckerberg and Sandberg regarding the benefits of personalized advertizing. In these statements, Zuckerberg highlights the value of *familiarity* with the person and linking this value to advertizing. Sandberg literally describes the kind of work that users are doing as *marketing* and gives a quantitative valorization to their work. The conclusion that the plaintiffs drew from Sandberg's estimates was that 'the value of a Sponsored Stories advertisement is at least twice the value of a standard Facebook.com advertisement, and that Facebook presumably profits from selling this added value to advertisers' (Farley vs. Facebook 2011).

Drawing on Facebook's declarations about the personalization benefits of Sponsored Stories, users, then, redefine the platform as a form of 'factory', mobilizing the labor of millions of 'workers' (Scholz 2013).

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our business practices, increased cost of operations, or declines in user growth or engagement, or otherwise harm' (S-1, p. 18) these firms.

Sponsored Stories, they argue, is 'a new form of advertising which drafted millions of [Facebook members] as unpaid and unknowing spokespersons for various products' (Farley vs. Facebook 2011). Based on this redefinition, the plaintiffs assert their entitlement to be compensated for their labor. In addition, the plaintiffs argued that while Facebook's terms of use do give the company permission to use personal information for commercial purposes, they joined the service before the introduction of Sponsored Stories and so were unaware of the monetization of their personal information for advertizing. In sum, the plaintiffs made two legal claims pertaining to their right to control what they consider to be *their* personal information: their right to authorize the publicity of this information (i.e., privacy) and their right to profit from the value created by this information (i.e., ownership).

The court's discussion offers some important insights regarding the link between privacy and ownership. After discussing previous court cases involving the 'commercial misappropriation' of online personal information, the judge concluded:

> Plaintiffs have articulated a coherent theory of how they were economically injured by the misappropriation of their names, photographs, and likenesses for use in paid commercial endorsements *targeted not at themselves, but at other consumers*, without their consent. (Farley vs. Facebook 2011)

The court asserts that in contrast to previous cases,

> The plaintiffs did not allege that their personal browsing histories have economic value to advertisers wishing to target advertisements at the plaintiffs themselves, nor that their demographic information had economic value for general marketing and analytics purposes. Rather, they alleged that their individual, personalized endorsement of products, services, and brands to their friends and acquaintances had concrete, provable value in the economy at large, which can be measured by the additional profit Facebook earned from selling Sponsored Stories compared to its sale of regular advertisements. (Farley vs. Facebook 2011)

Users, then, did not launch a general critique of the use of personal information for commercial ends, but rather a more particular critique

of the exploitation of their persona. The thrust of the argument was not anti-commercial per se, but went against the shift from commodifying disparate bits of personal data (such as age, or browsing history) to commodifying the persona of users as a whole. The argument made by the plaintiffs (and accepted by the court) is that by merely participating on the platform, users create a measurable economic value. This alludes to the special kinds of labor (or value-creating activities) that users carry out on the platform. In the first place, this labor entails the production of information: from 'Liking' a page or posting a comment, to creating meta-data regarding their activities online and offline. However, according to users, the value they create involves an even more subtle and intangible form of labor, involving their very persona, their 'human capital', in Feher's critical appropriation of the term (2009). To explain this kind of value, users liken their position in social media to that of celebrities, in whom case value emerges from 'being', rather than 'doing':

> … in the same way that celebrities suffer economic harm when their likeness is misappropriated for another's commercial gain without compensation, Plaintiffs allege that they have been injured by Facebook's failure to compensate them for the use of their personal endorsements because "[i]n essence, Plaintiffs are celebrities—to their friends". (Farley vs. Facebook 2011)

The maintenance of an online persona (updating photos, publishing posts, commenting, liking or simply moving in real space with location services activated on a mobile device) is redefined by users as a form of labor, since maintaining this online presence creates economic value. Users equate themselves with traditional (i.e., mass media) celebrities, appearing in advertisements, due to the fact that like celebrities, users' personas—on which they labor online and offline—are commodified. Thus, the personalization of ads, facilitated by the platform, receives an interesting twist in the audience's interpretation: users claim that once their persona is mobilized for advertizing in social media, the users, in fact, become media personalities or celebrities. The value they produce emerges from their mere presence in the media, a media which has become social (i.e., inclusive in terms of production and consumption)

and personalized (where each user can be identified). This new media ecology is in tune with a new multi-sided economy, where, according to users, 'personal endorsement has concrete, measurable, and provable value in the economy at large' (Farley vs. Facebook 2011), an assertion upheld also by advertizing scholarship (Spurgeon 2008).

To counter this argument, Facebook asserted that users' celebrity status is in fact preconditioned on the use of the platform: '[Facebook] does not deny that [users] may assert economic injury, but insists that, because they are not celebrities, they must demonstrate some preexisting commercial value to their names and likenesses…' (Farley vs. Facebook 2011, emphasis mine). Facebook attempts to define mass-personalized communication users in terms that strip them of their mediated subjectivity. It urges the court to see users as pre-mediated social beings that have no legitimate claim to fame. In contrast, users underscore the already mediated nature of all celebrities; the notion of the 'celebrity' is preconditioned on media exposure. A celebrity is a mediated subjectivity, since familiarity on a large scale can only occur via mass-media exposure; and the commercial value of celebrities increases the more familiar they are to the audience, that is, the more mediated their subjectivity is. Users suggest that the personalized nature of, particularly, social media (in contrast to the massified nature of traditional media) redefines what a celebrity is, how it is used in advertizing and how it generates value, and so ushering new opportunities for commodifying personalities.

From these arguments it is apparent that users are stakeholders that want to be heard, and perhaps even paid; the platform, other stakeholders and they themselves can benefit from their labor. In this context, it is useful to consider how Facebook has currently organized its user trust vis-à-vis its privacy and sharing business, where it is their objective 'to give users choice over what they share and with whom they share it' (see Zimmer 2015, about privacy law and policy in the United States and Europe); 'this effort is fundamental to our business and focuses on control, transparency, and accountability.'[15] At the end of January 2015, Facebook explicated its updated or new Terms of Service (ToS) and policies: it clearly states that the core of the business is to track users across web-

[15] See https://www.facebook.com/about/privacy/.

sites and devices, to deploy user profile pictures for both commercial and non-commercial purposes and to gather information about users' whereabouts on a continuous basis. Users can either consent or leave Facebook. In addition, it is noteworthy that Facebook via so-called social plug-ins,[16] such as Like, Share and Follow buttons, embedded posts and comments, seems to impact not only Facebook users but also non-Facebook users. These practices of online tracking enable firm-hosted product and service sites to draw in and increase users when they share content on the platform; for example, Facebook's Like Button can be seen on over two million live websites[17] other than on Facebook itself (so-called 'third-party' tracking vs. 'first-party' tracking) and, in this capacity, can track user's browsing activities across different websites.[18] User can opt out; however, they will need to navigate a rather complex set of settings. In fact, when looking at the default privacy settings, Van Alsenoy et al. (2015, p. 7) have concluded that 'according to the Article 29 Working Part, consent cannot be inferred from the data subject's inaction with regard to behavioural marketing. As a result, Facebook's opt-out system for advertising does not meet the requirements for legally valid consent. In addition, opt-outs for "Sponsored Stories" or collection of location data are simply not provided'. For example, when using a mobile device, the location settings can only be altered on the system level. Moreover, it is questionable whether users fully understand when and how their (user) content is being used for what commercial practices and by whom. What's more, removing one's provided formation from Facebook seems also questionable as it may no longer be visible, yet it may still be deployed for purposes the company sees fit.

[16] See https://developers.facebook.com/docs/plug-ins.

[17] See http://trends.builtwith.com/widgets/Facebook-Like (Retrieved on 13 July 2015).

[18] In itself this is not unique. However, in contrast to many other tracking services, Alcar et al. (2015, p. 2) argue that Facebook 'can easily link the browsing behavior of its users to their real world identities, social network interactions, offline purchases, and highly sensitive data such as medical information, religion, and sexual and political preferences'. In addition, they found that the use of certain cookies on non-Facebook pages facilitates tracking via its social plug-ins of non-Facebook users. Also, in combining data from various sites, such as Whatsapp and Instagram, Facebook can yield more robust insights into user profiles. Yet, its users can only opt out of profiling activities for third-party advertizing (Van Alsenoy et al. 2015). Note that when users remove cookies from their device that previously entered opt-out preferences are deleted, and need to be re-entered.

Conclusion: Co-regulation as Practice

Facebook's strategy tells a story of Web expansion cutting across corporate boundaries while pointing to seemingly transcending boundaries between development and usage associated with mere production and consumption practices. And it is exactly these qualities and roles of users(stakeholders)-as-participants and the digital organization-as-platform/intermediary that supports the development and maintenance of this particular configuration between the platform and user base. In this view, Facebook is indicative of a redefinition of the relationship between sociality and economic production associated with a kind of 'multistakeholderization' promoted by ICTs. More specifically, the platform is grounded on the principles of productive behavior and sociality demonstrating a complex interdependent dynamic encompassing both commercial and non-commercial interests and, in varying degrees, a shared know-how, know-what and, arguably, passion (Bowrey 2005; van der Graaf 2015). User creativity can be characterized by a professionalization or digital entrepreneurship. This, in combination with other stakeholders such as advertisers and publishers (Popescu et al. 2016), points to multiple centers of activity, compensation and competition occurring on the platform where current regulation does not seem to do justice to the complexity of the reciprocal dynamics among contributing stakeholders (Hildebrandt and van den Berg 2016). In fact, the focus has tended to be on other (structural and behavioral) regulatory means such as content (Flew 2015). The increasing multistakeholderization, however, is currently not adequately reflected in Internet governance of such platforms, and certainly not in the closed business-government dialogue. The idea and practice of co-regulation could possibly remedy this and seems to fit with a more recent regulatory agenda that, arguably, focuses on so-called (platform-based) intermediaries such as Facebook, Google and Internet Service Providers, as a regulatory mechanism (Kohl 2012). In this view of 'platform as intermediary', content curation practices are seen as mediated by (third) parties on a platform and involve multiple stakeholders, warranting a call for co-regulation as practice.

Co-regulation has a high claim of legitimacy since the state and other stakeholder groups such as users (or consumers) are directly involved

in the regulation process (Verbruggen 2009). In Europe, the concept and practice of co-regulation has been discussed mostly in terms of how much the government should be involved versus transferring rule-making to private actors: therefore, the operationalization seems to balance somewhat between state-provided regulation and self-regulatory forms (Hirsch 2011; Marsden 2011). In 2003 a European co-regulation framework came into effect, defining it as a kind of a monitoring role, 'whereby a Community legislative act entrusts the attainment of the objectives defined by the legislative authority to parties which are recognized in the field (such as economic operators, the social partners, non-governmental organisations, or associations)' (para 18),[19]and voluntary agreements may be deployed to ascertain practical arrangements. 'The Commission will verify whether or not those draft agreements comply with Community law (and, in particular, with the basic legislative act)' (para 20).[20] Sanctioning powers are in the hands of the government as well as determining what is/not appropriate for state regulation. This may undermine the goal of legitimacy for users (or citizens) who have an interest in gaining more control, or even ownership, over their contributions in the digital domain. The more the state 'supervises and reviews', the less tractable the benefits of multiple stakeholder participation are. Against this backdrop, co-regulation is a kind of 'smart regulation' or 'good regulation' fitting the trend to harness the capability of citizens (or users) captured by the notion of 'goodness of governance' which has been associated with terms such as (user) participation, consensus-driven, accountable, transparent, responsive, effective and efficient, and inclusive (UN 2012; van der Graaf and Veeckman 2014).

However, Marsden's (2012) seminal work on co-regulatory decision-making has shown via multiple case studies in Europe and United States that co-regulatory success is mixed and many elements can put its success at risk. Evidence can be detected of 'much earlier stage regulatory intervention by government into forms of governance that had formerly been considered self-regulation' (220). Moreover, he points to the conceptual

[19] See http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2003:321:0001:0005:EN:PDF.

[20] Ibid.

boundaries of self-regulation and co-regulation (and soft law)[21] that are perhaps not so clear-cut. As pointed out earlier, self-regulation is based on voluntary agreements and in itself is not a legislative act, whereas co-regulation is considered an implementing mechanism. Here, the 'legislature first sets the essential legal framework for the relevant stakeholders or parties, then fills in the details. Public authorities, usually the Commission, monitor the outcome or possibly the European legislature validates the more detailed rules by turning them into binding legislation' (Senden 2005, p. 23). In this practice, based on various legal definitions, taxonomies and practices of co-regulation,[22] voices can be heard that call for judicial review of co-regulatory arrangements. When looking at the US context, for instance, co-regulation—which could be a mechanism to overcome the issues surrounding information privacy—seems to be a kind of foreign concept (Hirsch 2011).

Against this backdrop, co-regulation 'in the abstract' could be a robust answer to address the increasing platformization of the Web and its associated emerging challenges as Facebook illustrated above. Arguably, co-regulation as practice could remedy or, at minimum, tackle the challenges involved in a multi-sided ecosystem. To date, however, the operationalization of co-regulatory forms seems to be somewhat 'impure' and can 'also lead to exposure of unconstitutional bargains and trade-offs made in the shadows that are exposed to the sunlight of regulatory scrutiny' (Marsden 2012, p. 220). Rather a seeming preference can be detected to approach platforms-as-intermediary as an attractive regulatory vehicle for remedying regulatory control. This may be explained by enforcement practices that are far easier to impose on intermediaries than on first-line offenders. Also from a compliance perspective, intermediaries can be set up in such a way that potential wrongdoing can be averted (Kohl 2012). So while the merits of co-regulation as a practice have been some-

[21] Soft law is considered to be not legally binding yet can have in/direct legal implications in the real world.

[22] See, for example, The Court of Justice of the European Union vis-à-vis the Charter of Fundamental Rights (which incorporates the European Convention on Human Rights into European Union law) regarding the rights of privacy of people (see, e.g., http://ec.europa.eu/justice/fundamental-rights/files/2014_annual_charter_report_en.pdf); or, the E-Commerce Directive in the context of (ECD) 'safe harboring' and Codes of Conduct.

what downplayed, now is a promising time to refocus on the issue. It is necessary to have an equilibrium between (economic) efficiency of regulatory instruments and arrangements and protection from loopholes of regulation such as the protection of freedom of expression, and from the commodification and monetization of data produced by means of virtual labor.[23]

In sum, this chapter has sought to address the present challenges of a fast-changing environment of 'sociality and commerce'. With Facebook as the most noteworthy example of platformization, it highlighted the complex dynamic associated with user-based to market-based trajectories and with what this may entail for users as stakeholders in particular. At present, what seems to be at stake is the lack of a holistic approach toward content curation and personal information rooted in a multi-actor setting. In general, various literatures tend to provide fragmented views of salient and complex issues underpinning the interplay between multiple stakeholders operating in competitive digital platforms (or markets), without sufficient attention for a 'just' multi-disciplinary approach benefitting most, if not all, endeavors.

With rapid developments in technology, such as Internet of Things, which lead to continuous changes in markets and sociality (including personal information being complemented by contextual information, etc.), regulation can be seen to be frequently lagging behind in its ability to address what is happening. And, hence, there is a risk of applying yesterday's solution to tomorrow's problems. In practical terms, what is called for is developing and maintaining an understanding and approach of how to better reconcile community and commercial concerns and preferences of the different stakeholders with well-balanced social and economic dimensions and benefits, supported by legitimacy-enhancing policies and mindful co-regulation.

Acknowledgments We are indebted to Chris Marsden for his inspiration on numerous occasions and Rob Heyman for sharing his intel on online advertizing.

[23] Data are not simply 'there', waiting to be gathered, stored and analyzed, rather data are generated in a particular historical, social, cultural and economical circumstances (Gitelman 2013).

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6

Assessing Music Streaming and Industry Disruptions

Daniel Nordgård

Digital Change in the Cultural and Creative Industries

Digital progressions in the cultural and creative industries have long been the focus for debate, drawing on theories of disruptive technology and innovations and issues of market transformations and alterations. It has been a field characterized by differing accounts of how to interpret change. And while many of the early accounts at the beginning of the millennium offered a somewhat optimistic interpretation of these developments (see Hesmondhalgh 2013, pp. 310–40), much of this has been countered by current data and evidence (Elberse 2013). In particular, this is the case with the music industries and expectations that digitalization would enhance the economic and creative freedoms for smaller, independent stakeholders at the expense of major, incumbent

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*,
Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_6

companies (Moreau 2013; Nordgård 2013, 2016). The music industries were early in facing the challenges and opportunities provided by online digital production, dissemination and consumption of music, albeit not without conflict and tensions. And perhaps more importantly, the music industries now seem to have found a format and a model that resonates with consumer expectations and willingness to pay. Spearheaded by the new streaming economy, the music industries seem to have found a format and a model that has re-established economic growth in the sector of recorded music. However, looking at the Norwegian market, where streaming today adds up 77.4 per cent of the recorded music market (IFPI 2016), evidence suggests that this new economy has an enhancing effect on incumbent positions in the market. Hence, drawing on earlier discourse of how to interpret digital change in the music industries and building on evidence from the Norwegian market, there are four particular issues I wish to argue in this paper, namely, (1) that digital disruptions in the music industries are limited to significant economic turbulence, (2) that value chains and structures remain intact although channel functions within the value chains have reallocated internally in the music industries, (3) that these two developments have had significant impacts on the economy and labour framework conditions for musicians and artists and, finally, (4) that the streaming economy seems to be re-establishing the positions of incumbent firms.

Digital Disruptions

Digitalization as a phenomenon has attracted strong claims of transformation, which makes it all the more important that these processes are assessed carefully and soberly (Hesmondhalgh 2013, p. 310). Initially, these processes were accompanied by claims of production-, marketing- and distribution efficiencies and eroding barriers to enter markets (Waldfogel 2012). Arguments have been put forth that digital developments would disrupt markets by strengthening artists and creators at the expense of corporate business (Anderson 2006; Lessig 2008). Similarly, there have been growing references to theories of *disruptive technology* (Christensen 1997), *creative destruction* (Schumpeter 1942) and the expectations that the adoption of new formats, platforms and models

of distribution would result in market alterations and leadership turnover. This latter point is described and discussed by Francoise Moreau (2013) in his article *The Disruptive Nature of Digitalization: The Case of the Recorded Music Industry*. Here, Moreau refers to theories of disruptive innovations/technologies, elaborating on the embedded expectations of market alteration resulting from technological and innovating progress. A key feature in these theories is that technological disruptions will provide products and services that underperform on certain values, while providing new features that may resonate well with new customers and may eventually outperform old products and services (Bower and Christensen 1995, p. 209). It follows from this analogy that while incumbent firms may be more reluctant to testing and introducing products that may undermine the current business of core products, challengers in the market may be more open to this. And when new products manage to create big enough of a market, the expectation is that you will see market alterations with new entrants repositioning themselves on the expense of the incumbents—a leadership turnover.

However, as recognized by Moreau, this has not yet happened in the music industry—in fact quite the opposite (although Moreau still expects this to happen in the near future). And while not dismissing the digital potential in the cultural- and creative industries, it seems much of the initial claims on the digital disruptions have been too optimistic (Hesmondhalgh 2013, pp. 313–21). At least this seems to be the case in a short-term perspective and, in particular, based on current empirical data and findings from the music industries (Elberse 2013; Hammond 2016; Mulligan 2014; Nordgård 2013, 2016; Wikström 2009). There are considerable uncertainties on whether digital developments generate greater artist control and participation (Snickars 2016), or whether it actually erodes the powers of industrial, professional and institutionalized cultural production (Hammond 2016; Hesmondhalgh 2013; Nordgård 2016).

Understanding the Music Industries

A critical issue in understanding the impacts from digital change is to understand the music industries' internal structures and dynamics particularly in light of its power-relations and economic base (Nordgård

forthcoming). It seems many assessments on the effects from digitalization are limited by inadequate understanding of the complexities of the music industries, and in particular the degree to which the music industries have been understood as a monolithic coherent structure. Historically, the music industries have been defined in different ways, but most notably they have been deemed *the* music industry—a singular term primarily meaning the recorded music industry and the major labels in particular. Such a singular use of the term has generally referred to a limited (but historically powerful) construction of the multi-national record companies (today totalling only three entities). It is a term limited to a distinct part of the music economy, and it very much raises associations of corporate business and specific logics. It also maintains an image of a monolithic and homogeneous sector aligned around agendas and goals. However, the music industries are actually comprised of a complex set of stakeholders and businesses that don't necessarily align around shared objectives. And if anything, the recent turmoil resulting from the digital impacts on the sector has clearly demonstrated that any singular use of the term seems inadequate and even misleading (Nordgård forthcoming).[1] '*The* music industry' is rather an assembly of industries that are not only built around different businesses, but to some extent also with opposing agendas.[2] This is an important acknowledgement, not so much in order to downplay the significant role of the major labels, but more to highlight the importance of understanding the dynamics, the structures and the logics that constitute what we commonly refer to as the music industries.

As a very rough outline, a common way to describe the music industries is to list their three different areas: live music, recorded music and publishing (Wikström 2009, p. 49). However, one can expand the analysis and organize stakeholders along different variables such as organizations (Engström and Hallenkreutz 2003), networks (Leyshon 2001) or activities (DCMS 1998). Common to all of these models is that they build upon various types of categories and very much upon the different activities or stakeholders' proximity to the creative part of the

[1] See, for example, Barnett and Harvey's (2015) special issue *Recording industries, technologies and cultures in flux* for a different discussions on these issues.

[2] This becomes very evident in my forthcoming text where I have analysed the structural dynamics internal in the music industries in a period of disruption and change (Nordgård forthcoming).

process—music. This is especially evident in models provided by the UK Government's Department for Culture, Media and Sports (DCMS) and Engström and Hallenkreutz' where categories are labeled *core*, *supporting* and *related* (DCMS) or *music industry organizations* and *related industries* (Engström and Hallenkreutz). Central in both models is a concept of distance to the core of the cultural or creative industries: namely, culture and creativity itself. David Hesmondhalgh elaborates on some of the same when he argues that the cultural industries comprise stakeholders that are involved in the 'production and circulation of texts' (Hesmondhalgh 2013, p. 16). He further argues that there are differences in levels of contributions to the creative part and hence adds to the concept of distance to the creative process as a key criterion for where to place the different stakeholders in the structure or model.

A Complex Sector with Much Friction

It is important to acknowledge that the music industries comprise different actors and stakeholders, with differing agendas, objectives and functions. It follows that not having a sufficient appreciation of these complexities may also lead to an over-simplification of developments and their effects. Much of the premises in early discourses on digitalization and cultural industries build upon analogies that seem to have misunderstood or completely disregarded some of the complexities in the industries and sectors being examined. And although the debates around digitalization have matured and progressed, some of the founding principles seem to have been maintained. This is not least the case in the continuous references to digital offsets where unified and hierarchical structures break up into smaller entities—often with the related claims of more participation, more diversity and a broader field of actors and stakeholders. This line of argument is perhaps most evident in discussions around the symbiosis between the artists and the record labels, and in particular the major record companies and how these are losing control over distribution and attention—their gatekeeping functions. It follows from this that artists are increasingly moving centre stage in an economy built upon a multitude of economic models and partnerships with businesses not previously

considered part of the music industries (Tschmuck 2016). It is also an analogy building on the above-mentioned expectations of market alterations and the demise of the incumbents' position in the market.

In his central, and much cited work *Being Digital* (1995), Negroponte asserts how 'the monolithic empires of mass media are dissolving into an array of cottage industries' (1995, p. 57). Such optimistic prophecies (depending of course on where you stand) have long ago been countered or at least curbed by scholars arguing that the major actors have obtained their market positions (Jenkins 2006), that the anticipated market alterations have yet to be observed (Moreau 2013) or simply that the predictions are built on inaccurate models and theories (Hesmondhalgh 2013). Nevertheless, the essence in Negroponte's core argument, the depiction of conglomerate demise and the rise of niches, still influences much of the academic and public debate on these issues. And as argued above, these changes and alterations have yet to be observed, and one must then ask why this has not yet happened, and whether it will in any near future.

Intermediaries and Channel Functions

As argued above, I believe part of the problem in much current analyses of the digitalization of the music industries stems from simplifications of the structures and anatomies of the sector. This relates partly to the limitations following from not adequately appreciating the complexities of the music industries, but furthermore, it seems also to rest on misconceptions of the roles and functions of central stakeholders. Much of the early contributions on how the recorded music industry was responding to digital change diminished the record companies to mere distribution systems which were deemed to be outdated and replaceable (Graham et al. 2004, p. 1089).

Graham et al. define the supply chain in the recorded music industry (drawing on Handfield and Nichols 1998), as 'all activities associated with the flow and transformation of goods from the raw material stage through to the end user'. By looking specifically at the recorded music industry, they argue that there has been a significant shift from what is defined as the traditional supply chain in the industry, to a more com-

plex and dynamic one. They define the traditional supply chain in the recorded industry as static and consisting of three levels of intermediaries between the creator and the consumer: the record company, the distributor and the retailer (2004, p. 1093). Furthermore, the record company is described as providing a range of different attributes or values to the process, such as initial capital and marketing. However, the central contribution from the record companies, and in particular the major record companies, is argued to be their role in controlling distribution. And hence, the suggestion from Graham et al. is that digitalization and the Internet will dramatically alter the supply chains in the recorded music industry and render the major record companies obsolete.

Looking at today's recorded music market, the economic developments seem to be the exact opposite: the major record companies are increasing their dominance in the market. I have described and discussed these developments elsewhere (Nordgård 2016; Nordgård forthcoming) in relation to theories of disruptive innovation (Christensen 1997; Moreau 2013) and suggested that either the expected effects of market alterations and/or substituting effects on the record companies must be somewhat delayed or that the theoretical frameworks deployed must be somewhat inadequate in assessing the digital change on the music industries. The latter of these seems a plausible explanation, in particular when it comes to the complex nature of functions performed by the various partners in the music industries. These are specialized tasks that don't seem to be adopted by new stakeholders, or at least only a limited part of their functions.

As an example: while a central function for the record labels can be found in its role in distributing and disseminating recorded music, an equally important function has traditionally been to provide risk capital and investments in album releases and the marketing of music and artists. Music production, distribution and marketing are still a considerable cost, as I will elaborate further on below, and it has traditionally been the domain of the record company to divert the economic risks following these activities. Other functions of the record company can also include administrative support and accounting and legal advice, and in many aspects it can even entail creative and artistic support and input (the function of A/R).

The point I want to make here is that by not sufficiently acknowledging the functions performed in a value chain such as that of the recorded music industry, one can wrongly assume that the need for certain partners and stakeholders would cease to exist if certain functions become obsolete or—more correctly—change in their nature.

The Reallocation of Channel Functions

Anita Elberse (2013) elaborates on the nature of the music industries' value chains in her book Blockbuster, where she describes the effects from digitalization, looking at a broad range of entertainment- and cultural industries. Elberse argues that the disruption in the value chain occurs in the recorded music industry, where important parts may have their positions diminished or severely challenged. However, Elberse argues that despite digital disruptions and change, core functions in the music industries, also related to the record company, may still be intact. With reference to 'The Iron Law of Distribution', Elberse argues that different parts in a value chain perform particular 'channel functions' and that if these functions are still relevant and needed, they will be allocated to other stakeholders: '*it is only possible to eliminate a channel partner if someone else steps up and takes over the essential functions performed by this partner. This is the "iron law of distribution", which dictates that while you may be able to work around a channel partner, you cannot simply eliminate the function that the partner performs*' (Elberse 2013, p. 192). Elberse's argument is that functions don't simply disappear but can be taken over by someone else that can provide a substituting service or function.

And hence, while avoiding a difficult and complex discussion on the record labels' challenging digital transitions, or (needed) debates around its position and degrees of exploitation of the artist, it seems important to point out that the channel function of the record label is far from limited to distribution—or granting the access to such. An interesting feature in literature on the subject is that while descriptions on the record label's functions include risk capital, marketing and the provision of competences on sound and tastes (see Graham et al. 2004, p. 1093), these attributes are diminished to mere distribution when linked to debates

about the processes of digitalization. And although this too could be discussed—whether it has really been substituted by digital stakeholders and entrepreneurs—a significant part of the record labels' channel functions seems to be left on the table. Elberse points out a selected list of what she considers the record labels' traditional functions to be, which includes giving the artists advance money, covering expenses for recording and production, market the music (including radio and in-store promotion), distribution, handling royalty issues and accounting (2013, p. 192). She argues that while digitalization may have decreased the expenses related to some of these activities, the majority of functions are still as required and still expensive (2013, p. 194). And more important: someone still needs to fulfil these functions in the value chain.

The Rise of the Artist

It seems obvious that much of the functions in the traditional music industries have been taken over by the musicians and artists themselves. It resonates with a variety of scholarly contributions on the issue, describing an 'increasing amateur activity' (Wikström 2009), or an increasing entrepreneurship among musicians and artists (Tschmuck 2016). Albeit covering a wide and complex set of processes, much of the contributions argue a positive development where artists and musicians are allowed more freedom over their careers. Peter Tschmuck in many ways advocates the latter point, underlining the advancement of new hybrid roles and functions in the music economy, such as the 'artrepreneurs' or the 'prosumer' (Tschmuck 2016, p. 25). Tschmuck's argument represents a broader set of approaches to the digitalization of the music industries, emphasizing the potential in digitalization in restructuring power dynamics and logics, particularly with regard to the position and role of the record company. Tschmuck describes the music industry as a value-added network and argues that while the traditional one was centred around the record label, the new ones are centred around the artists and the artist management (2016, pp. 15–16). New digital possibilities represent a plethora of possible partnerships and collaborations that can be exploited in different ways by a creative artist and his/her management.

And while former value-added networks had the label as its centre-piece, these new models centre around the artist and the artist's management with a range of new and old business partners.

However, while it is difficult (and quite unnecessary) to object to such a description of present developments, a more interesting question is perhaps whether it represents a positive and desired change for the artist, or whether it represents a further complication and disruption in the role of the artist. In other words, given very vocal concerns from a range of stakeholders on digital developments (Nordgård 2016)—including artists—it may be suggested that developments also represent a considerable challenge.

The Curse of the Amateur

In 2012 Hendrik Storstein Spilker (2012) published his article *The Network Studio Revisited: Becoming an Artist in the Age of 'Piracy Cultures'*. Spilker's analysis builds on 22 in-depth interviews of Norwegian amateur musicians/artists in the making, all of whom are familiar with and use home studio facilities. His work extends the work of Kristian Larsen Moen (Moen 2007). The ambition in both texts is to assess the extent to which new digital platforms and tools truly represent new ways to produce and disseminate music, and whether these opportunities represent a substitution to traditional industry. Both Moen and Spilker demonstrate that while digital platforms and channels for peer production and communication provide new ways to record and communicate recordings cheaply, these opportunities don't represent altered value chains and channel functions in the music industries. On the contrary, their studies show that despite having resources to do most of the recording processes in one's own home studio, his interviewees regard this as mere preparatory work, supplementing traditional processes. They still seek to work in professional studios, and they still seek to partner with professional industry. Spilker's and Moen's point is that while digital change definitely opens up a range of opportunities, it doesn't necessarily replace the traditional industries and career patterns.

A study on the processes of digitalization in the music industries reaches a similar conclusion. The objective of the research has been to

unfold the difficulties the music industries have had with adapting to digital change, external pressures and political ambitions (Nordgård forthcoming). Based on discussions and debates among central, international stakeholders within and outside the music industries over a six-year period, the analysis shows that disruptions in the music industries' value chains are limited.[3] Not so much in economic terms—the recorded music industry has in fact experienced a dramatic economic decline since the turn of the millennium—but more in terms of disintermediation and the substitution effects of digital entrants. There is little evidence for new digital entrants overtaking core functions in the traditional music industry. On the contrary, the concern is rather that these innovations definitely have an impact on the sector; however, the new digital entrants don't seem to be willing or able to substitute central functions in the value chain.

Streaming Economy and Revenue Alterations

Lately, and in a few particular markets,[4] on-demand subscription-based streaming has grown to become the dominant format and the main economic driver for recorded music. Initially, music streaming helped eliminate piracy by offering cheap (or free) and user-friendly access to music, which also helped position on-demand streaming services vis á vis major record companies with varied experiences from combating illegal digital offers and hence in search for legal offers that would alter consumer behaviour (Marshall 2015, p. 184). On-demand streaming has proven successful in converting illegal consumer behaviour into legal. And, more importantly, the streaming format has spawned significant economic change, turning a dramatic economic decline of recorded music revenues

[3] The research build on a qualitative analysis of an annual Roundtable Conference in Kristiansand Norway, where key international stakeholders from the music industries have gathered for over 6 years to discuss the music industries' difficulties adapting to a digital, online era. The conferences have been initiated and managed by Peter Jenner, Bendik Hofseth and Daniel Nordgård.

[4] This relates particularly to the Scandinavian markets, and especially Sweden and Norway, together with a handful of others as thoroughly described by Peter Tschmuck in his report (Tschmuck 2015).

into a long awaited rise (IFPI 2016; Nordgård 2016). However, parallel with this significant economic growth, the streaming format has also generated a range of discussions on the economic sustainability following new business models and new consumer behaviours (Marshall 2015; Nordgård 2016). The complaints on royalty payments from artists have been coming from amateur musicians as well as from the more established artists such as Thom Yorke (Dredge 2013), Billy Bragg (2014) and David Byrne (2014). Furthermore, labels, and in particular independent labels, have also had concerns with how their businesses would fare in this new streaming economy.

In 2013 and 2014, these debates and concerns formed the backdrop for two related initiatives aiming to assess more thoroughly the effects from music streaming on the Norwegian music economy. The first study was a government-initiated committee appointed by the Minister of Culture[5] to describe thoroughly the nature and logics of the streaming economy and, following from this, what effects streaming would have on the Norwegian music economy. The second study was initiated by the Norwegian Musicians' Union (MFO) to follow up on the work done in 2013 and to proceed with trying to describe and understand the revenue streams in the new economy. The former of the two studies, the Nordgård-committee,[6] was constituted by the central stakeholders in the Norwegian music industries. This implied representatives from the record companies (including the majors, the independent labels, IFPI and FONO), artists (including the two major musicians and artist organizations, GramArt and MFO), managers, collecting societies and the Norwegian music aggregator Phonofile. The work had the form of a focus group, and the dialogues were used to reach some sort of consensus

[5] https://www.regjeringen.no/no/dokumenter/rapport-fra-nordgard-utvalget/id734716/.

[6] The committee was chaired by Daniel Nordgård and consisted of Marte Thorsby (IFPI), Larry Bringsjord (FONO), Hege Marit Folkestad (Kirkelig Kulturverksted), Knut Schreiner (artist), Cecilie Torp-Holte (Circle Management), Christian Wadahl Uhlen (GramArt) and Renée Rasmussen (MFO-Norwegian Musician's Union). The committe also got valuable input from Eivind Brydøy (Vox Artist), Joachim Haugland (Smalltown Supersound), Terje Pedersen (Warner Music), Jarle Savio (EMI), Inger Elise Mey og Willy Martinsen (TONO), Martin Grøndahl (GRAMO), Erik Brataas (Phonofile), Kjartan Slette (WIMP), Bugge Wesseltoft (artist og platedirektør), Rudolf Reim (Petroleum Records), Violet Road (Artist) and Jan Erik Haglund (Igloo Management).

on economic conditions and developments. The latter of the two studies were aiming to describe the new revenue streams accurately and constituted a series of interviews with the most central stakeholders in the Norwegian recorded music economy. This implied all three major record companies, the music aggregator Phonofile, Spotify and WiMP/TIDAL.

Central Features in the Norwegian Music Economy

The Norwegian music market has truly adopted the streaming format where in 2015 it accounted for 77 per cent of the overall recorded music market. Norway, together with Sweden, constitutes the world's leading markets when it comes to streaming; hence, when specific developments are identified, it's considered a result of streaming more than anything else. And in Norway, there are two features in particular that have gained attention and have been associated with the streaming model and new consumer behaviour. First of all there has been a considerable surge in the overall recorded music economy starting in 2012 with a 7 per cent increase and followed by an 11 per cent increase in 2013. 2014 had less than 1 per cent while 2015 was back to a 7 per cent rise, meaning that Norway's recorded music economy has experienced four continuous years of growth. Seen in light of the long period of economic decline from the turn of the millennium, this represents a significant and positive development. However, parallel with this rise, our data suggests a significant shift in revenue distribution at the expense of Norwegian artists: the Norwegian local share dropped significantly with initial numbers indicating a decrease of 25–30 per cent to 10–12 per cent (this is described and discussed more thoroughly in Nordgård 2016).

The initial point with looking at a variable such as the Norwegian local share of the recorded music market was to have a potential benchmark against the Anglo-American repertoire of International hits and hence be able to assess streaming's impact on local artists vis-à-vis international artists or vice versa. Also, the initial study (the Nordgård-committee in 2013) was commenced by the Norwegian Ministry of Culture, hence Norwegian music and Norwegian rights holders were considered impor-

tant variables. However, this proved somewhat difficult, with unclear definitions on what constitutes 'Norwegian music' (language, performers, rights owners, etc.). And perhaps more important, critical data on the streaming economy have become political as it fuels a debate with opposing views on the streaming format's economic sustainability. This latter issue is also elaborated upon by Marshall (2015, pp. 177–8).

Nevertheless, the main conclusion in both studies was that the economic gaps in the recorded music industry were widening and that the economic and labour conditions for artists and musicians were becoming less sustainable. An objective then was to identify and describe factors that could explain these growing differences.

The two studies identify and describe two particular issues that seem to have an impact on the revenue distribution in the Norwegian streaming economy. First of all, it is suggested that the increasingly skewed distribution of money is caused by the models constituting the streaming economy, in particular the so-called pro-rata model (Maasø 2014; Nordgård 2013, 2016; Pedersen 2014). The pro-rata model divides money based on shares of overall streams within a given period, as opposed to a user-centric model that divides money based on a user's (fan) listening profile. The latter meaning that money follows the subscriber and is divided based on what he or she listens to. It's widely regarded by independent labels and musicians and artists that the pro-rata model favours catalogues with a broad international appeal, and that a user-centric model may benefit artists and rights holders with a dedicated and passionate fan-base. However, the effects from changing the models of money redistribution are contested (see Maasø 2014; Pedersen 2014 and Nordgård 2016 for elaborations on this) and disputed among music industry stakeholders, as well as academics and neither of the studies concluded on this matter.

The second issue that stood out as important was the effects from marketing. Very much in accordance with the works of Elberse (2013) and Schwartz (2004), and very much based on the dialogues and interviews in the two studies, it seems likely that marketing has an important role in the increasingly skewed distribution of money in the digital economy. This applies to both traditional marketing and new forms of marketing, placements and visibility on streaming platforms. Marketing constitutes a growing proportion of a record's production- and release budget, some-

thing that was elaborated upon by the major record companies, and in particular Universal Music. It's simply much more expensive to release and market music in an era where tens of millions of tracks are available. The American psychologist, Barry Schwartz, elaborated on the phenomenon already in 2004, terming it 'The Paradox of Choice', demonstrating that in a market with an ever growing amount of options, choosing becomes more difficult. In such environments, marketing becomes paramount. Hence, it is likely that an explanation to the growing income gaps lies in marketing budgets and economic strengths among the major record companies.

Digital Developments and Digital Turbulence

In both studies of 2013 and 2014, a core ambition was to provide an accurate description of what the streaming model actually looked like and what revenue streams it provided. This implied describing what factors affect the revenue distribution and the economic sustainability for the broader range of stakeholders. It also implied to assess whether political guidelines could affect developments for the better. Part of the reason for the political initiative to commission a committee and the following report (Nordgård 2013) was pressures from the music industries (and in particular the record labels) to balance an earlier report, NOU: 2013: 2—Digitalutvalgets *Hindre for Digital Verdiskaping*. The title translates: 'Hindres for Digital Value Creation' and a conclusion in the report was that music copyright was a considerable hinders for digital value creation. The report was broadly considered by stakeholders in the music industries (again, particularly by the record labels) to be biased towards the new digital companies, and could undermine critical institutions in the music economy (such as copyright). There was a widespread concern that policy makers, and the public in general, had little understanding of the structures and dynamics of the music industries and that important parts/functions of it could be deemed unimportant or obsolete.

Due to this, a significant part of the two studies were directed towards describing and assessing the sustainability of Norwegian music and music industry stakeholders in the new streaming economy. Importantly, the

government-initiated report displays a shared concern among central stakeholders in the Norwegian recorded music industry that the economic models and the marketing logics in streaming would have a very negative impact on Norwegian music. However, there were also significant differences between the different stakeholders on what the impacts were and how to respond. This was particularly evident between the International Federation of the Phonographic Industry (IFPI), which represent rights owners of big international music catalogues on the one side, and the independent labels and the musicians and artists on the other. Hence, beyond suggesting that the digital music economy is developing contrary to initial expectations, the two studies also illustrate considerable disagreements among central stakeholders in the music industries on what the current status is, as well as what preferable actions are.

In addition to these differences, both studies experienced great problems with accessing reliable data for good analyses on revenue distribution. It seems to be a general problem with many studies on the digitalization of the music industries in that critical knowledge is inaccessible due to non-disclosure agreements (NDAs) and a general reluctance for transparency on certain data. There are two issues in particular that are hard to assess and which have a critical impact on the distribution of revenues: the economic principals governing the relations between labels and streaming services, and the economic relations between artists and labels. Both issues are poorly described—there's a lack of consensus on how things work—and both issues provide significant tension and conflict among central stakeholders.

Arguably, it's not a new feature of the music industries that there's conflict and tension over revenue streams—in many ways, it can be regarded a defining feature of the music industries (see also Negus 1999 for a thorough elaboration on this). However, the level of the conflicts and the nature of the disputes seem different and seem to increase.

The Ambiguous Streaming Economy

The streaming economy poses something of a dilemma. It represents a long awaited economic growth; however, it also seems to contribute to an increasing inequality in the redistribution of money with the top titles

making up a growing proportion of the revenues. It thus represents a problem for a substantial number of artists and independent labels for whom it has become increasingly difficult to find a sustainable economic model for their businesses (this is more thoroughly elaborated upon in Nordgård 2016). In researching the two reports on the Norwegian market (2013, 2014), I found that a very explicit feedback from artists and independent labels was that the streaming economy for them represents a significant drop in revenues, and for the majority of stakeholders, it represents an unsustainable development. For some of them, on-demand streaming was an insignificant/non-existing revenue source (Nordgård 2013, pp. 10–11), and they voiced very articulate concerns about their future in a streaming economy.[7]

Also, the participants in both studies described an economic reality where costs for producing, distributing and marketing music were still very high. Much of the discussions and debates around digitalization and streaming are characterized by claims of cost savings on the production and distribution of music, and much of these arguments are held to support claims of disintermediation and altering of value chains. But while this may hold true for some artists and their releases, an important aspect in both studies was that stakeholders, ranging from major record companies to independent labels, to artists and managers, felt the need to counter these claims. Digital distribution is still a considerable cost if you're a major record company handling this yourself, or if you're an independent label, or a do-it-yourself (DIY) artist having to go through an aggregator. The same goes for production. Although a lot of music can be produced more cheaply and simply using new digital tools and platforms, much music production is still dependent on professional studios, which still represent a considerable cost. Marketing is considered by most of the participants increasingly expensive and important. This became even clearer in the second study, commenced by the Norwegian Musician's Union (MFO), where we interviewed the streaming services (Spotify and WiMP/TIDAL) and all three major record companies. In the new streaming economy, marketing is paramount! And thanks to a

[7] This does not, however, mean that they were pessimistic about the future, on the contrary, they just had little faith that on-demand streaming would be the economic driver for them.

very open and trustful dialogue with the major record companies, it was evident how much investment that went into marketing major releases and how important these investments were on streaming numbers and market shares. Interestingly, this implies an economic framework favouring deep pockets and heavy investments. It very much coincides with Anita Elberse's elaborations on blockbuster economy and suggests a reinforcement of incumbents' positions in the music economy.

The discussions on digitalization and music streaming are concerned with economic redistribution, more than disintermediation and the replacement of traditional stakeholders. Neither of the two studies represents arguments that traditional, professional partners are obsolete in a streaming economy. The discussions were on revenue distribution and fair compensation. However, the studies did address a reallocation of functions, but this was primarily related to artists being forced into adopting a multitude of roles and functions formerly undertaken by professional music partners (Nordgård 2013, p. 13). There's a flipside to the DIY mantra, namely the time and skills needed to perform specialized functions satisfactorily. In the two studies, artists, managers and labels considered this a challenge and a negative development. And while DIY culture and increasing amateurism have benefits and potentials, this must be considered against the economic anatomy of the streaming economy—it's difficult to perform these functions with so little economic certainty and reward.

A New Economic Rationale

An important point here is that while there is a well-grounded enthusiasm for the aggregated economic surge that stems from on-demand streaming, there are also well-grounded concerns about the economic sustainability for the broader range of actors and, in particular it seems, the artists and independent labels. These concerns are mainly related to two economic issues, namely, (1) the small royalty payments from streaming services and, following from this, (2) the time needed to recoup costs. A very central issue in the debates around the streaming economy suggests that while on-demand streaming may only pay out fractions compared to old

models, it nevertheless provides a stream of fractions that may eventually add up to the same (or more).[8] The argument describes a fundamental economic shift from traditional purchase and consumption, to access and rent, and hence that much of the complaints and frustrations stem simply from a confusion/misunderstanding of these changes (Marshall 2015, p. 181). Although long-term economic income from the new streaming economy may provide a sustainable future, we don't really have any experience with the time span needed to reach former economic levels, nor what level of investment (marketing) is needed for the streaming of a particular track, album or catalogue to maintain a certain level of income for a long enough time. It also seems to leave artists and smaller record labels with a particular dilemma of investment and recoupment. If it takes more time to recoup your investments, it becomes all the more important to have cash reserves—a situation that once again puts the larger record companies in a valued position (Marshall 2015, p. 183). Furthermore, it adds a difficult economic dimension to the smaller actors in the music industries—the nature of the revenue streams from streaming leaves the smaller actors in a vulnerable and difficult economic situation.

Conclusion

In my conclusion I wish to return to my opening arguments regarding the nature of the digital disruptions in the music industries. While not underestimating the severe economic impacts from new legal and illegal models for making available recorded music, I argue that the nature of these disruptions are more limited and restricted than initially argued by a broad range of academics and opinion makers. First of all, it seems that digitalization has not really bypassed or substituted central parts in the value chain, such as the record label, or the manager, but rather reallocated functions and responsibilities within existing structures. More important, it seems that much of the traditional functions and responsibilities of the record labels are transferred to the artists and creators them-

[8] See, for example, Sinnreich (2016) for a representative example of such an optimistic approach on the streaming economy.

selves. And while such a transformation can be considered positive for artists gaining more control over ones' career, it also implies an increasing responsibility for artists and musicians to handle risk and a broader range of special competences. Furthermore, as Spilker demonstrated in his research on amateur musicians in Norway, such a development may be contrary to artists' ambitions and plans. However due to the economic turmoil, artists and musicians are finding it harder to partner with the professional music industry and to have them invest in building music careers.

Any positive outcome of this transition of functions and responsibilities towards the artists and creators is nonetheless diminished by the economic developments in the recorded music market over the last 10 to 12 years. One evident feature in today's streaming economy is the fact that access to recorded music delivers only fractions of money so that sustaining income lies in generating great volume and considerable market shares (Elberse 2013; Nordgård 2013, 2016; Marshall 2015). Quite contrary to the optimistic anticipations that were delivered in the early 2000s (see Hesmondhalgh's elaborations on this in 2013, pp. 310–30) in which digital platforms and channels for distribution and marketing would favour smaller actors and niche genres, we now see a market that sustain the domination of the incumbents rather than challenging it. The current developments don't seem to support the anticipated disintermediation of the music industries' structures and functions. Rather, the economic dynamics in the recorded music market seems to concentrate further towards the top, encouraging a further isolation of investments and partnership with a smaller number of blockbuster releases (Elberse 2013).

I believe these realizations are important for understanding more thoroughly the music industries' digital adaptations, and I believe they have obvious policy implications. Although not meant as a comprehensive or full overview over such implications, I will nonetheless end my conclusion by pointing to three issues that I find important based on my findings.

First of all, it seems that the current digital developments represent a threat to cultural diversity. The initial study, the Nordgård-committee, commissioned by the Norwegian Department of Culture, worked with a mandate to identify who/which actors were suffering from digitalization

generally and streaming in particular. And as demonstrated in the study (Nordgård 2013, 2016), there's an economic concentration towards international hits, in many ways representing a type of mono-culture, leaving Norwegian music in an economically more difficult position.[9] However, the fact that Norwegian rights holders seem to be losing their market share should not be regarded as an indicator of Norwegian culture's decreasing popularity, or significance, but rather that current models seem to benefit music made for an international market and great volumes. These developments may in the long run have implications for local/national cultural policies with objectives to enhance/secure language, culture, national identity, history and so on. This is particularly the case with regards to smaller nations that constitute smaller markets and hence a limited spread on language and culture.

Arguably, these challenges may be temporary as partners in the music industries and new digital stakeholders are continually negotiating terms and conditions. However, it may be necessary to take political actions, temporarily, in order to secure diversity in a transitional phase.

Based on my elaborations above, I believe it's necessary foremost to concentrate such efforts towards two parties: the musicians and artists and the labels. The former of the two parties, because their economic conditions have worsened and their portfolio of functions has expanded with a growing and complex landscape of specialized labour. The latter is because the labels are important producers and risk-takers in music and hence important premise providers for Norwegian music. Also, by directing political actions towards the labels, this may have an indirect effect on the artists, as it may have an economic effect (selling more music) and a reallocation of functions.

Secondly, there's a need for more transparency on central data and critical issues, such as the governing factors for revenue distribution and the division of money in the music economy. This applies to both the traditional music industries and new digital entrants. There are intelli-

[9] Very recent evidence from the Norwegian market (IFPI 2016) suggests that this is changing, and that the Norwegian market share is on a rise. On the other hand, these developments coincide with a significant international success of some select artists within Electronic Dance Music (EDM) and may rather be evidence of Norwegian music successfully working with a genre, rather than evidence of changes in the laws and logics of the streaming economy.

gible reasons for withholding information on contracts, discount deals and subscriber numbers; however, these insights form the backbone for any sufficient understanding of the new streaming economy. Not having a coherent and shared understanding of these issues engenders anxieties and conflict among stakeholders in the value chain. Also, not having a more transparent system on these issues provides opportunities for misconduct and exploitation from digital entrants, as well as incumbents in the traditional music industries.

Efforts to enhance transparency could be taken on local/national levels, although it seems more likely to have an impact if taken on a supranational level, such as an EU-level. These issues should be considered integral to any ambitions for a Digital Single Market. The Digital Single Market represents an appealing proposition for stakeholders outside and inside the traditional music industries; however, it also represents challenges that echo problems with transparency.[10] And hence, further progress on these issues may also provide opportunities to coordinate European and national/local ambitions to provide more transparency on the digital economies.

Finally, there's a need for more thorough research on the music industries and its digital transitions in order to provide a coherent understanding of developments and central issues. The very divergence of understandings and descriptions on the dynamics and logics that form the new digital music economy is itself a considerable problem—and a basis for further exploitations. In line with my concerns above, much of the current analyses on digitalization suffer from inadequate understandings on how the music industries work, the complex matrix of stakeholders and the many functions performed in the music industry value chain. There's a need for a more sober approach to the processes of digitalization, and there's a need for reaching a broader consensus around critical issues in the processes of digitalization.

It is my perception that this can best be achieved through focused research in close partnership with music industry-stakeholders. Scientific methods can provide the necessary frameworks needed to honour contracts and legal obligations, while at the same time producing a coherent

[10] This is particularly evident in the failed efforts with creating a registry for meta-data like the initiative for a Global Repretoire Database.

and shared perception of reality. This again would provide a platform for the needed discussions and negotiations on economic conditions and revenue distributions. Most importantly, research should to greater extent be conducted in partnership with the music industries in order to ensure the necessary understanding of how these industries work, the functions performed and the effects from change.

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7

Information and Communication Technologies, Citizens, and Parliament in Portugal: The Continued E-Democracy Gap and Lessons from the Obama Experience

Carlos Cunha and Filipa Seiceira

Introduction

Our goal is to analyze the use Portugal's members of parliament make of information and communication technologies (ICT) in their daily work as well as the role these technologies play in a democratic system. We specifically focus on the virtual work aspects of ICT factors (Web 1.0 emphasizes one-way communication, while 2.0 focuses on two-way interactivity) affecting elected officials, both in terms of their use of new media (such as social media, the ability to share information through social net-

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Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_7

works such as Facebook, YouTube, or Flickr) to facilitate their representation of and communication with citizens and in performing their duties.

Elected officials/representatives are public servants (e.g., as MPs). As such, they make policy in the public interest, the output of which depends on varied factors such as their political/ideological perspective, party program and party discipline requirements, public pressure from constituents, and lobbyists. How do representatives embrace the 'market' in this new context? What are the political, social, and economic implications of this?

We demonstrate that adaptation to ICT is seen not only through varied examples of civic participation between citizens and parliament, but there is also an absorption of ICT use in the routines and management of parliamentary functions by many entrusted with those duties in Portuguese legislatures of the previous decade.

Our thesis is that ICT, given the potential that media offers with regard to political institutional integration, should enable an increase in public participation vis-à-vis democratic institutions such as parliament. However, this presupposes that the politicians' attitudes toward the public—and of the latter toward the former—change such that two-way dialogue is perceived as desirable and possible. The question is: to what extent is this type of participation actually occurring?

Generally, previous comparative West European results show parliamentarians were still in an exploratory phase regarding the exploitation of the full range of these new technologies to support their parliamentary and partisan activity, to the extent that privileged traditional media (television, radio, and newspapers) were still favored for political communication. Coleman et al. (1999), for example, discuss the different stages through which representatives go as they incorporate ICTs into their daily work routines.

Cardoso et al. find representatives concentrated primarily on internal communication (between deputies of the same party and/or with the party structure), especially via email, and not so much on external communication with constituents. Members of parliament resisted the serious consideration of electronic public participation, whether via email or online forums, for several reasons, including the incapacity/difficulty to respond to the volume of requests, the perceived bad quality of

the messages sent by the public, and the problem of Internet access that restricted its use to only a portion of the population (all legitimate concerns) (Cardoso et al. 2004).

We divide this analysis in two parts. First we begin by examining information and communication technologies' use during Obama's presidential campaigns (2008 and 2012) and in his administration as a paradigmatic case of political use of ICT and of the applications these technologies can have in this domain.

We recognize Portugal differs from the United States and that institutional factors will make adoption of the type of interaction evident in the States challenging for Portuguese deputies. We also recognize a more apt comparison would be with the US Congress rather than with the administration; however, since in this first section we take a normative approach, we place less emphasis on these concerns. The normative purpose is to show how information and communication technologies use in Portugal is far from reaching its potential in the interaction between citizens and politicians.

We then study the results of a 2011[1] survey of members of parliament, which included a set of questions about the use of information and communication technologies by deputies in their daily routine in the Assembly of the Republic in Portugal. These results will be compared with national data to see if the use of these technologies by legislators follows national trends, and with the results of 2001 and 2009 studies to analyze the differences observed during this ten-year period.

Future Trends?

In this first section, we examine potential uses of ICT by looking toward experiences in the United States. The experimentation with these technologies during the Obama campaigns of 2008 and 2012, the transition

[1] This analysis is based on the results of the study 'Elections, Leadership and Accountability: Political Representation in Portugal, a longitudinal and comparative perspective' conducted at CIES-ISCTE by André Freire, José Manuel Leite Viegas, and Ana Belchior in which we were in charge of researching deputies' use of information and communication technologies. In this project a questionnaire was applied to Portuguese deputies serving in the 12th Legislature (230 deputies), in a personal, direct interview.

period, and during the administration demonstrates the technologies' potential uses for Portuguese deputies should they choose to emphasize vertical communication in the future (Harfoush 2009; Harris 2010; Hendricks and Denton 2010; Farrar-Myers and Vaughn 2015).

The democratic deficit has hopes of being narrowed in the United States as a result of the Obama experience. As a candidate, Obama gained a broad level of support through his use of ICT.

On MyBarackObama.com (MyBO), Obama's own social network, two million profiles were created. In addition, 200,000 offline events were planned, about 400,000 blog posts were written, and more than 35,000 volunteer groups were created—at least 1000 of them on the day Obama announced his candidacy for the presidency, 10 February 2007. Some three million calls were made during the final four days of the campaign using MyBO's virtual phone-banking platform. On the MyBO fund-raising pages, 70,000 people raised $30 million (Vargas 2008).

Obama's team also developed a broad volunteer network that was organized via the Internet by collecting email addresses as people made campaign purchases and donations (Wallsten 2008).

With 13 million email addresses, hundreds of trained field organizers, and tens of thousands of neighborhood coordinators and phone bank volunteers, the network has become one of the most valuable assets in politics, and Obama's team may choose to deploy it to elect other Democratic officials, or to lobby congress for his toughest legislative goals, or even to apply pressure on local and state policymakers across the country (Connolly 2008).

While this statement emphasizes the potential, the facts are that federal law insists the candidate's campaign apparatus be separate from government, and the government cannot be used as a de facto extension of the campaign.

Obama had a team of lawyers to check how the president could continue to use his campaign data without breaking federal law. Once he felt comfortable enough in taking the next step, he let Organizing For America (a group created during January 2009, announced by Obama on YouTube, and then overseen by the Democratic National Committee) use his email lists to encourage supporters to contact Congress for passage of his $3.55 trillion budget (Cillizza 2009).

'Just as people hadn't used the internet in campaigning to this extent before, they haven't really used it to govern before,' said Peter Daou, Internet strategist for Senator Hillary Clinton. 'The challenge here is trying to figure out how to use something that was used mostly for campaign advocacy – and use it in a way to advance policy' (Garofoli 2008).

'He[Obama] doesn't have to wait for CBS to use four seconds of one of his speeches as a sound bite in a story. He can send his full comments directly to his supporters – and everyone else' (Eli Pariser, executive director of MoveOn.org, cited in Garofoli 2008).

More important for our purposes is not how he will use his databank, but how he will interact with his supporters. Clearly, by using the databank, he is interacting with supporters, but to what extent will he 'pay them back' by actually listening to their concerns? How will he 'sustain the network, which grew and thrived in part on open dialogue and online social networking?' (Wallsten 2008).

'I don't think emails or YouTube videos from the president-elect are going to be enough,' Cuauhtemoc 'Temo' Figueroa, a former top Obama field organizer, said. 'These people want to continue to be a part of whatever agenda comes out of the White House, and they want to be active participants in this government that they feel they have ownership of' (Wallsten 2008).

For example, the Open Internet Coalition pressured Obama to follow through with his promises during the presidential campaign to establish net neutrality rules (Gross 2008). At first the administration included language emphasizing net neutrality, but under lobbyist pressures to change the 'non-discrimination and network interconnection obligations' language, there emerged a petition drive (Tell Washington Don't Listen To The Lobbyists: Use Our Money For An Open Internet) to prevent federal agencies from changing the language.

Obama supporters became accustomed to interaction first with the campaign and the transition, and expected the same from the administration. For example, the Obama transition team not only posted the president-elect's weekly addresses on YouTube, it also posted snippets describing the activities of some of its transition groups. A three-minute video, titled *Inside The Transition: Energy And Environment Policy Team*, gave viewers a peek into the mind-set of the incoming government (Inspiredeconomist.com 2008).

But Obama's early efforts on YouTube have not been in the two-way spirit of ICT communication. Comments are not accepted, although people can repost the videos or embed them elsewhere and start their own conversation threads.

Steve Grove, YouTube's head of news and politics, predicts that if the Obama administration is anything like the Obama campaign, it will produce a prolific amount of video. Obama's YouTube channel had more than 1800 videos during the campaign, and they were viewed 110 million times. Many posted after September were seen upward of 50,000 times each, and more than a dozen were seen at least 1 million times. 'Their user base has come to expect a certain level of accessibility,' Grove said. 'But the challenge will be to find that sweet spot now that they're governing.'

> There's no shortage of other ideas on how to engage people online. During the campaign, Obama officials talked about ways to create a 'Craigslist for service', where people interested in doing some sort of public service could be connected with a need in their community. Others have spoken about video streaming all open government meetings. Daou [Peter Daou, Internet strategist for Sen. Hillary Clinton] said to expect a lot of 'trial and error over the next few months as the White House sees what works' (Garofoli 2008).

Obama is certainly aware of the interest in interactivity. He launched Change.gov (the official website of president-elect Obama) during the transition.[2] One example of interactivity was made during the restructuring of the US healthcare system. The transition team asked those interested, 'What worries you most about the healthcare system in our country?'[3] After receiving 3701 comments, the transition team sent out an email update with a video response in early December.[4]

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[2] www.change.gov is still accessible, but as of 21 March 2009 reads: 'Thank you for visiting Change.gov. The transition has ended and the new administration has begun. Please join President Barack Obama at Whitehouse.gov.' Access to the original site is still possible as of this date by clicking on the lower-right corner.

[3] http://change.gov/page/content/discusshealthcare, accessed 6 December 2008 and 21 March 2009 (but discussion had closed by March).

[4] http://www.change.gov/page/m2/3855d400/6851b718/2b861968/5e6bcb78/811534238/VEsH/ around 6 December 2008. Access on 21 March 2009 led to Change.gov with access to the original health care information at http://change.gov/agenda/health_care_ agenda. Additional information is also accessible from Connolly (2008).

And the Obama administration continues its innovations in transparency and interactivity. Comments from the public continue to be encouraged. In mid-February 2009, the administration launched Recovery.gov to track where the $787 billion stimulus money would be spent.[5] Obama, therefore, appears to have realized what Raven Brooks, executive director of Netroots Nation, an annual conference of bloggers and online activists, claims:

'What's most important is that he makes government more transparent,' said Raven Brooks, executive director of Netroots Nation, the annual conference of bloggers and online activists that grew out of the popular DailyKos political blog.

Brooks' idea: He would love to see Obama—or more likely an aide—use the social networking tool Twitter to update citizens on what he is up to throughout the day. 'He wouldn't have to be giving away state secrets or anything, but maybe something like, "I just met with Paul Volcker, and we talked about monetary policy." […] I think a lot of people would appreciate the effort to communicate,' Brooks said (Garofoli 2008).

Another example of the Obama administration's interactivity is the presidential innovation of holding occasional virtual town hall meetings (the first was held on 26 March 2009) direct from the East Room of the White House. In the new feature 'open for questions,' added to WhiteHouse.gov, people submitted and voted on questions to the president. A total of 92,922 people asked 104,074 questions and cast more than 3.6 million votes, which determined the top six questions for President Obama to address (Corbin 2009).

'What's interesting is you usually see innovation in local communities and [then] working its way upward in society,' said Ed Schipul, a social-media expert and chief executive officer of Schipul: The Web Marketing Company. 'What is surprising is that we are now seeing innovation from the executive branch going down' (Beizer 2009).

The techniques pursued by the Obama campaign have already spread not only to other politicians and political parties in the United States but also to other nations (Newton-Small 2009; Magid 2009). In the United States, the Republicans are getting on board by exploring all

[5] http://www.recovery.gov, accessed 22 March 2009. See Edgecliffe-Johnson (2009).

of the Obama techniques, including Twitter, Facebook, Qik, YouTube, Flickr, and other social networking opportunities (Wilson 2009). John McCain's presidential campaign not only embraced YouTube videos but then spammed them, a common strategy to inflate popularity statistics (Silva 2009).

In Australia the Liberal National Party is using the Obama techniques to increase donations (Elks 2009), while in the Israeli election of February 2009, leading candidates, Tzipi Livni of the Kadima Party and Benjamin Netanyahu of the Likud Party, used the Internet's social media functions (Gilinsky 2009), and in the United Kingdom, the Labour Party seems to have jumped on the bandwagon of Internet politics (Helm 2009).

However, just as in the United States, the one issue that re-emerges is interactivity, as noted by Ed Coper, campaigns director at the online activist group GetUp:

'The sooner our politicians see the internet as a vehicle for two-way communication, and not just a new medium for old static press statements, the sooner the inclusive, democratic and liberating power of online engagement will be harnessed in the way Obama harnessed it to such transformative effect' (Moses 2009).

These developments might demonstrate a trend away from the public's disillusionment and loss of confidence in politicians and politics in general. Could this trend lead to higher levels of electoral participation and trust, and increasing participation in traditional civic associations rather than the declines demonstrated by Sennett (1977) and Castells (1997)? If Obama allows this grassroots energy to slip through his fingers by not incorporating Web 2.0 features, it will further frustrate an emboldened and energized force that want to participate in the political life of the country. 'Got hope' may then be responded to by 'Nope!'

The new, participatory forces that Obama awakened in the United States could be harnessed to energize the new administration in an inclusive, two-way fashion. The transformations of political systems throughout the developed world over the last several decades that have been characterized by the decentralization of policy making and of governmental institutions and public administration to other actors inside and outside of the political system would be enhanced. These changes have been described as the 'displacement of politics' (Beck 1997) or the

emergence of a 'plurality of power sources' (Held 1987). It would also demonstrate a trend away from the cartel party to more inclusive politics (Katz and Mair 1995).

Norris (2000a) and Castells (2000) claim that the public has not abandoned the political scene but has become more 'critical' of the disconnect between their expectations, based on democracy as a theoretical ideal, and their negative experiences of actual representative institutional activity. The public may have lost confidence in political processes, rejecting the traditional methods of 'politicking,' but generally continue to believe in the democratic processes, given that they participate in a 'symbolic politics,' which mainly focuses on local issues, the environment, human rights, family, and sexual freedom. Politicians are seen as orthodox and static regarding these issues, rarely showing interest or providing solutions to the concerns.

> With the development of ICT, diverse 'cyberoptimist' (Norris 2000a) views have led to resurgence in discussions of political and civic public participation. In an era of almost unlimited internet access by the public, from their perspective, they can be better informed of public issues; better present their positions via e-mail, discussion groups, and mailing-lists; and be more active in mobilizing for community issues. These optimists also argue that the Internet can strengthen the connection between the public and intermediary organizations, including political parties and social movements, and local, national, and global authorities. In this manner the public space would be broadened and reactivated via these new forms of vertical and horizontal communication, with a spirit of free debate and the exchange of views without hierarchies. Notwithstanding these possibilities and their importance in the political domain, the sole use of these means of information and communication do not in themselves signify an increase in public participation. There are other important contextual factors that are also at work, such as the specific uses of the different media, the strategy of political actors, the representations concerning the role of media in political processes, and so on (Cardoso et al. 2006).

That is the hope the Obama campaign brought to these 'disconnected' masses. As a report from the National Democratic Institute (2014) states:

'For civic participation to take root and deepen democracy, interactions between citizens, civil society, political parties, and government must offer real opportunit[sic]es to deliberate and influence dec[sic]sions. For citizens, accessing information or being heard is important, but it's a far cry from being involved in decision making. Furthermore, a lack of meaningful spaces for citizens to engage public officials inexorably erodes participation, as they see little impact from their efforts.'

Granted, there is political manipulation of ICT to guarantee election, assumed re-election, and everyday politics by President Obama, but it is clear that in many ways he is also committed to greater transparency and deliberation.

Will the Obama administration intensify the disconnection or begin to mend it by fulfilling the expectations of interactivity? Obama is certainly continuing to enhance interactivity. For example, he became the third human and first politician to reach 10 million Twitter followers on 10 September 2011 (which was first achieved by Lady Gaga and then Justin Bieber). Obama even began tweeting his own messages in June 2011 (distinguished from his staff's when followed by his initials) (Bennett 2011). And by November election day in 2012, he had 22,112,160 followers compared to Romney's 1,761,442 (Gainous and Wagner 2014).

In addition, the president did not forget the value of the data collected by all these electronic sources. For his 2012 campaign, Obama hired an analytics department five times as large as his 2008 group. His campaign manager, Jim Messina, stated 'We are going to measure every single thing in this campaign.' By merging all the different databases information, the result was $1 billion in donations, targeting of TV ads more effectively, and producing detailed models of swing-state voters that maximized connecting with potential supporters via Facebook and other means. Obama, for example, answered questions on Reddit because many potential voters were using it. Obama also spent 10 percent of his paid media budget on digital advertizing in 2008 ($8 million) and 15 percent in 2012 (unprecedented amounts) which show his commitment to the new communication venues. By 2013 eMarketer found digital media consumption to have officially overtaken TV consumption (Watkins 2015).

More than half of Web-using adults get their political news through Facebook (Eilperin 2015). And for the presidential elections, Pew found

69 percent of adults used social media regarding the campaign as compared to 39 percent in 2008 (Rainie et al. 2012). And now 63 percent of social media users get their news from Facebook (just two years ago it was 47 percent) (Barthel et al. 2015). A Pew poll from mid-2015 showed that a majority of millennials use social media as their primary news source, with baby boomers preferring local television and gen-Xers somewhere in the middle (Kenworthy 2016).

To garner support for the 2014 economic platform and the midterm elections, the Obama administration began using emoji on social media to reach young adults (Rhodan 2014). And in 2015 it launched @POTUS as the official Twitter handle for the commander in chief (to be used by future presidents as well) rather than staff handlers. Within 45 minutes of Obama's first tweet, 'Hello, Twitter! It's Barack. Really! Six years in, they're finally giving me my own account,' he already had 217,000 followers (Anderson 2015; Rampton 2015).

The Pew Research Center found that '16 percent of registered voters follow candidates for office, political parties, or elected officials on a social networking site' in 2014 for the midterm elections (as compared to 6 percent four years earlier). And if we focus on the 30–49 aged, registered, voter group, 21 percent did so (Anderson 2015). Obama can now speak directly to the public and even target messages to audiences that would not normally be paying attention. He has a 14-member White House Office of Digital Strategy (larger than his predecessor's entire press secretary office) (Eilperin 2015). Ad hoc communities organize around certain hashtags so that it is easy to tailor messages specifically to their concerns (Greyes 2011).

> 'Micro-targeting – the idea of being able to identify exactly the desired audience and aim messages to them directly – has been a critical part of the Obama political operation. More than half of the White House's digital staff worked on one of Obama's presidential campaigns, and the campaign mentality helps guide their messaging strategy now that they're in the federal government.'
>
> 'In the shift from old to new media, the White House has essentially become its own media production company, one that can sometimes look like a state-run news distribution service. This year [2015] alone, White

> House officials have posted more than 400 videos to YouTube, which have been viewed for a total of more than 174,497,605 minutes. They have produced nearly 275 infographics for WhiteHouse.gov and for social media outlets. They have also created and programmed multiple channels on Web sites ranging from BuzzFeed to Instagram and Pinterest.'
>
> 'Perhaps the most vivid example of the White House's new-media ambitions was the president's latest State of the Union address: Leading up to the speech, the White House posted 18 of its own videos – including one of Obama sitting on his desk aboard Air Force One. He used the moment to announce a plan to make community college tuition free for a large swath of working-class and poor Americans. That video alone attracted 8.4 million views.'
>
> 'It was only last fall when the White House posted its first item on Medium, a blog platform established by new White House digital director Jason Goldman and Twitter co-founders Evan Williams and Biz Stone. Now Medium is often the medium of first resort; it has become a routine destination for White House officials to make staffing announcements, explain policy moves and post original content by White House photographer Pete Souza. LinkedIn, which has a major female audience, became the venue for White House senior adviser Valerie Jarrett to unveil the administration's paid leave proposal in January' (Eilperin 2015).

And as the campaign geared up for the 2016 elections, several candidates used Twitter and YouTube to launch their campaigns (e.g., Clinton and Cruz). But can a politician less skilled with new media pull off Obama's success?

> 'A five-minute video of Obama speaking about climate change and other issues with his "anger translator" at the White House Correspondents' Association Dinner has attracted more than 35.8 million views on Facebook, making it the most-watched Facebook video ever published by a U.S. government or political entity.'
>
> 'A few weeks after the "Between Two Ferns" interview aired, […] it was "Ferns" most successful video, and that more than 90 percent of the viewers who then logged onto HealthCare.gov were visiting for the first time' (Eilperin 2015).

Staffers found the Obama campaign allowed them great flexibility to respond to emerging issues because the organizational structure pro-

vided considerable autonomy. This 'performative power' meant they could attempt to alter other actors' definitions of events through 'well timed, resonant, and rhetorically effective communicative action and interaction' (Kreiss 2016).

In 2008 the main social media sites were Facebook, Twitter, and YouTube, and Obama used them actively. By 2012 Obama had added Google+, Instagram, Reddit, FourSquare, Tumblr, Pinterest, and his Obama for America mobile app to his social media toolbox. [wortham nyt 2012]. The Obama campaign used the America for Obama app's geolocation features so that field organizers could locate sympathetic supporters or pay special attention to undecided voters (Scherer 2012).

An additional emphasis was on mobile-based social media given that by 2012 Pew found 46 percent of Americans used cell phones. In addition, 45 percent of those owners read other people's comments on the candidates and/or their campaigns, including 35 percent using them to fact-check what they heard and 18 percent to post their own opinions in social media platforms (Smith and Duggan 2012). And Obama was the first to accept campaign donations via text messages (Petronzio 2012).

But nevertheless, despite the greater trend toward occasionally dabbling in 2.0 techniques, as we will see in Portugal, politicians (including Obama) still mainly use their sources from a 1.0 rather than 2.0 interactive manner ('How…' 2012).

As noted above, these trends and ICT techniques have already spread beyond the United States. The question now is will Portuguese deputies embrace Web 2.0 technologies to improve vertical communication or continue to follow the cartel party model (Katz and Mair 1995)?

We expect some political parties will embrace the new techniques, forcing others—willingly or unwillingly—to follow or be left behind (as has been the case in the United States).

The Portuguese Socialist Party contracted Blue State Digital, the company that designed Obama's multimedia and online campaign, to do the same for its legislative campaign in the autumn of 2009 (Correio da Manhã, 13 May 2009).

Portuguese Deputies and the Use of ICT: Means for the Access and Transmission of Information

While section "Future Trends?" shows that ICTs have been increasingly integrated into the daily routine of members of parliament, we will emphasize nonetheless that an e-democracy gap continues to exist in Portugal. Is there hope for more interaction between legislators and their constituents in the future?

We decided to divide deputies' use of ICT into two categories: *information seeking* and *information provision*. On the one hand, *information seeking* is essential by any means because deputies require this data to make informed choices in the performance of their parliamentary duties (Habermas 1987).

On the other hand, communication and information provision is required in political activity, where the flow of information between the various actors is elementary for decision-making. How could parliament function without the communication of resolutions, information, and other necessary internal and external information? Increasingly, these activities are performed with ever-greater speeds, enhancing communication among ICT users.

ICT is used by members of parliament to access, process, store, manage, and research the daily deluge of information that can quickly inundate their office and staff. Without all necessary tools, deputies would drown rather than navigate in the turbulent contemporary data sea that is lapping at governmental shores. ICT tools are key for efficient performance 'in the three major areas of everyday work of legislators: as electorate representative, as party representative and as national legislator' (Ward et al. 2007).

In this context, we define three hypotheses related to the use Portuguese deputies make of information and communication technologies in the execution of their parliamentary duties.

- Hypothesis 1:
  Since the beginning of the twenty-first century, members of parliament have increased their use of information and communication

technologies for information seeking and information provision in their daily work.

- Hypothesis 2:
  With the emergence of Web 2.0, deputies will increase vertical communication (direct communication with their constituents).

- Hypothesis 3:
  Given that younger, educated, males tend to use ICT more than females, we similarly expect younger, educated, male members of parliament will be most likely to use information and communication technologies as part of their parliamentary activities.

The results of our survey show that Portuguese deputies are well aware of the strengths of information communication technologies and regularly resort to their use (see Table 7.1).

In a scale from 1 ('never use information and communication technologies') to 7 ('always use them'), the average of 6.2 is especially high for *information seeking*, whether on specific themes or individuals or for general searches. The details show 52 percent always use information and communication technologies to search for specificity, while 56.1 percent use them for general information access.

Furthermore, communication and information transmission/provision (via email, forums, chats, newsgroups, blogs, mailing-lists, etc.) is

Table 7.1 Main areas of information and communication technologies use (mean values)

	2011
Search for information	
Search for specific information on issues or persons	6.2
Search for general information	6.2
Communication/information transmission	
Internal communication	6.1
External communication with others	6.1
External communication with the constituency	5.7
Political campaigning	5.3

Note: The scale for each area is between 1 (never use information and communication technologies) and 7 (always use them)
Source: Freire et al. (2011)

also high among deputies. Overall, when compared to *information seeking*, there is a slight statistical decline in this area. Nevertheless, these are still very high values.

Deputies are more likely to use information and communication technologies for internal communication (with other representatives, their party, staff, etc.) and externally with journalists and other political agents than for communication with constituents. Legislators are least likely to use the *information provision* aspects of the technologies in their campaigns, as shown by the 5.3 percentage. This might be attributed to the more temporary and organizationally different (party-based rather than individualistic) aspects of communication provision during an electoral campaign when compared to the more intensive, individualistic, internal, and external uses of the daily, legislative, communicative information and communication technologies function.

During campaigns all candidates drive the electoral strategy from central party headquarters with collective deliberation. In addition, traditional rather than ICT is still favored in this exercise (Cardoso et al. 2005). The survey question referred to individual campaign activity, which was likely interpreted by respondents as complementary to party initiatives as the primary campaign mechanism.

We categorize parliamentarians' use of the *information seeking* and *information provision* aspects of information and communication technologies to better understand their use of ICT.

Are certain types of deputies drawn to the use of these technologies? Is there a correlation between deputies' use of these technologies and the population at large (in such aspects as gender and age) as seen in previous surveys (Cardoso et al. 2003, 2005, 2006; OberCom 2008, 2009)?

We have constructed two indices, *information seeking* and *communication/information provision*, to further explore these questions.[6]

[6] The information seeking index is constructed with the mean of the responses to the 'search for specific information on issues or persons' and 'search for general information.' The information communication index combines the mean of the responses to the topics 'internal communication,' 'external communication with others,' and 'external communication with constituents.' We omit 'political campaigning' for the reasons discussed previously. Both indices vary between 1 (never use information and communication technologies) and 7 (always use them).

Our first observation is that there is no significant difference between the deputies in the two indices. In other words, parliamentarians who use information and communication technologies for *information seeking* also use it for *information provision*. So, for all practical purposes, we are discussing the same population.

The political party for which the member of parliament was elected is not a distinctive element in the use of the technologies among parliamentarians, since there are no statistically significant differences in information and communication technologies' use between members of different parties or coalitions with parliamentary seats.[7]

We also do not find statistically important distinctions in terms of gender in the *information seeking* index[8] with men and women having the same rates.

However, there are statistically significant differences between men and women in the *communication/information provision* index, in which women (6.60) are slightly ahead of men (6.1). Compared to the public as a whole, gender differs between deputies and the Portuguese population. The 2009 study developed by the Observatório da Comunicação (OberCom) shows that men in the population at large use the Internet more than women (43 and 39 percent, respectively) (OberCom 2009). In 2013 the figures were 54 percent male and 44 percent female (Cardoso and Lapa 2014) (Fig. 7.1).

Age, on the other hand, does show significant differences, with younger deputies using information and communication technologies more than older deputies.[9] While 70 percent of deputies under the age of 36 always use information and communication technologies for *information provi-*

[7] Due to the variable characteristics and distribution, we carried out a Kruskal-Wallis test between the variable party and each one of the indices. The results were: 'search for information index' – K-S(4) = 4.63, $p = 0.327$, $p > 0.05$; 'communication index' – K-S(4) = 3.12, $p = 0.538$, $p > 0.05$.

[8] Due to the variable characteristics and distribution, we carried out a t-test between the variable 'gender' and each one of the indices. The results were: 'search for information index' – $t(120) = -1.27$, $p = 0.205$, $p > 0.05$ and 'communication index' – $t(93) = -03.20$, $p > 0.01$.

[9] For this analysis the variable age was recoded in three groups: under 35 years, 35–49, and over 50. Due to the variable characteristics and distribution, we conducted a Kruskal-Wallis test between the age recoded and each one of the indices. The results were: 'search for information index' – K-S(2) = 5.21, $p = 0.074$, $p > 0.05$ (since the p-value is quite close 0.05, the data will be analyzed with some reservations) and 'communication index' – K-S(2) = 8.93, $p < 0.05$.

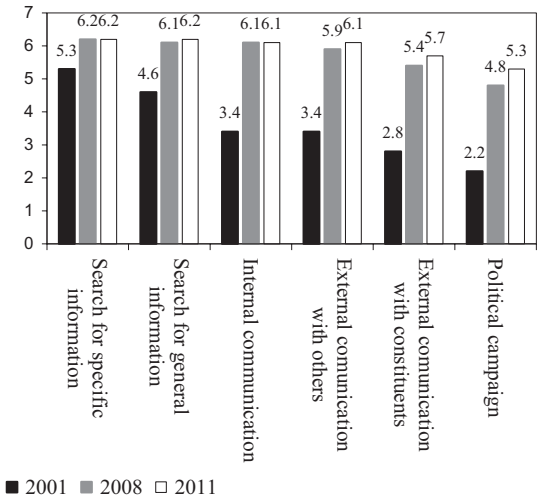

Fig. 7.1 Information and communication technologies use by evolution, 2001–2011 (mean values)
Note: The scale for each area is between 1 (never use information and communication technologies) and 7 (always use them)
Sources: Cardoso (2001), Freire et al. (2009, 2011)

sion (7 on the index), only 33.3 percent of those over the age of 49 claim to do the same. *Information seeking* demonstrates similar tendencies, with 70 percent of those under the age of 36 scoring six or more in the index, while this percentage is 49.1 in those over the age of 49.

This differential also exists in the population at large, where use of the technologies diminishes as age increases. In Portugal in 2011, 95 percent of those aged 15–24 and 85.2 percent of 25–34-year-olds used the Internet. A total of 31.3 percent and 13.9 percent of those aged 55–64 and over 65, respectively, used the technologies (OberCom 2012).

Thus, our third hypothesis is only partially correct in that male deputies are not more likely to use information and communication technologies than female deputies, although younger deputies were more likely to use them than their older peers.

The current data was compared to a 2001 survey of deputies developed under the coordination of Gustavo Cardoso and a 2008 survey developed under the coordination of André Freire e José Manuel Leite Viegas (Freire

et al. 2009).[10] The purpose of this examination is to analyze the level and speed of the penetration of these technologies during this ten-year period.[11]

At first we do not notice much change in the areas in which deputies make use of the technologies, because in 2001 they tended to use them for *information seeking* (general or specific) purposes, followed by internal communication and external communication with others and constituents. Again, campaign use was minimal.

Upon closer examination, most noticeable is the overall increase in information and communication technologies usage in 2008, suggesting deputies were making more frequent use of these tools. In other words, the penetration of the technologies during this period is significant. The increase is particularly evident in communication generally, but especially in internal communication.

While the use of information and communication technologies for campaigning is still lowest, it shows the largest increase between 2001 and 2011, demonstrating deputies' recognition of its potential uses in this respect. The 2.9 percent increase in communication with constituents was the second largest. *Information seeking* also increases, but not by as much, registering the smallest increase compared to 2001. One could argue that members of parliament latching on to this use from the beginning may explain why it would now increase at a slower rate.

Overall, we see that deputies have routinized their use of the technologies in their daily parliamentary duties, recognizing the advantages these tools have for their productivity (Table 7.2).

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[10] The project 'Parliamentary elites and information technologies' under the coordination of Gustavo Cardoso was conducted at ISCTE-Lisbon University Institute, in conjunction with the European Action on Government and Democracy in the Information Age (GaDIA), funded by the European Commission's 'European Cooperation in the field of Scientific and Technological Research' (COST) Action #A14 – Working Group 1/Cyberdemocracy. The quantitative methodology consisted of a data set from a questionnaire sent to all Portuguese deputies in spring 2001 to which 34.8 percent of the 230 deputies responded.

The project 'The Portuguese MPs in comparative perspective: Elections, leadership and political representation' conducted at CIES-ISCTE and coordinated by André Freire and José Manuel Leite Viegas (Freire et al. 2009) was the first study with a deputy's survey that in 2011 was replicated in the project 'Elections, Leadership and Accountability: Political Representation in Portugal, a longitudinal and comparative perspective.'

[11] It should be noted that the questions on information and communication technologies use from the 2001 survey were replicated in 2008, so comparability is total.

When we analyze the increase between 2001 and 2008 in legislators' Internet usage, we can see that this attitudinal change accompanies the penetration of ICT into Portuguese society. According to OberCom (2008), between 2002 and 2007 in homes with at least one person aged 16–74, Internet usage increased 111 percent. Home connections increased from 15 percent in 2002 to 40 percent in 2007 (57 percent in 2013 according to Cardoso and Lapa 2014), with broadband increasing from 8 percent in 2003 to 30 percent in 2007.

Email usage increased from 78 percent in 2003 to 84 percent in 2007, while Internet phone calls and videoconferencing increased from 10 percent to 22 percent. Blogging increased from 7 percent in 2005 to 14 percent in 2007. *Information seeking* for goods and services rose slightly from 82 percent in 2003 to 83 percent in 2007, with specialized searches showing larger increases (e.g., searches for health information increased from 25 percent in 2003 to 45 percent in 2007) (OberCom 2008).

Our first hypothesis therefore—that deputies have increased their use of information and communication technologies for both *information seeking* and *information provision*—has been validated (Table 7.3).

Because email is especially used as an information and communication technologies tool, we look at this aspect in greater detail for deputies. How do they use it for horizontal communication (i.e., with other politicians, decision-makers, staff, colleagues, etc.) and vertical communication (i.e., with constituents, journalists, and others)? Email is especially useful in allowing direct, vertical communication from constituents seek-

Table 7.2 Main areas of Internet use Portugal 2003–2007 (%)

	2003	2004	2005	2006	2007
Search for information					
Information seeking for goods and services	82	79	81	84	83
Information seeking re: health issues	25	19	31	39	45
Communication/information transmission					
Sending/receiving emails	78	81	81	81	84
Internet phone calls and videoconferencing	10	11	10	16	22
Develop blogs	–	–	7	10	14

Note: Those aged 14–74 who used the Internet in the first three months of the year
Source: OberCom (2008)

Table 7.3 Origins of emails (%)

	2011
Voters/citizens	20.0
Personal staff	18.2
Party organization	15.0
Party colleagues	13.8
Government/ bureaucracy	12.5
Interest groups	8.3
Press/journalists	7.5

Source: Freire et al. (2011)

ing redress for problems or for the communication of opinions without any mediating influences.

In our survey, the deputies were directly questioned about the origins of their emails.

The majority of emails originated from their constituents (20 percent), followed by staff (18.2 percent) then party colleagues or the party organization. The press and interest groups were at the bottom of the heap. What we find is that horizontal communication (particularly with staff and party organization) is favored over vertical communication with the voters/citizens (33.2 percent and 20 percent, respectively), a finding that has corroborated earlier studies (Cardoso et al. 2006) (Fig. 7.2).

If we compare the 2001, 2008, and 2011 data, we see a decline in emails from interest groups, while there is a slight increase in emails originating from the party and the government/bureaucracy. Emails from colleagues remain about the same, with a slight decrease in 2011.

We also see an inversion in terms of emails originating from staff and constituents in 2008 comparing with 2001 and 2011. While emails from these two categories are generally first and second in frequency, emails from staff increased by 5 percent while emails from constituents declined by 3 percent between 2001 and 2008, with the opposite tendency in 2011.

At first this should seem paradoxical given that we saw an overall increase of the use of information and communication technologies by constituents during this period. However, we cannot directly conclude that this decline in emails means there is less contact with constituents in 2008 and 2011 than in 2001.

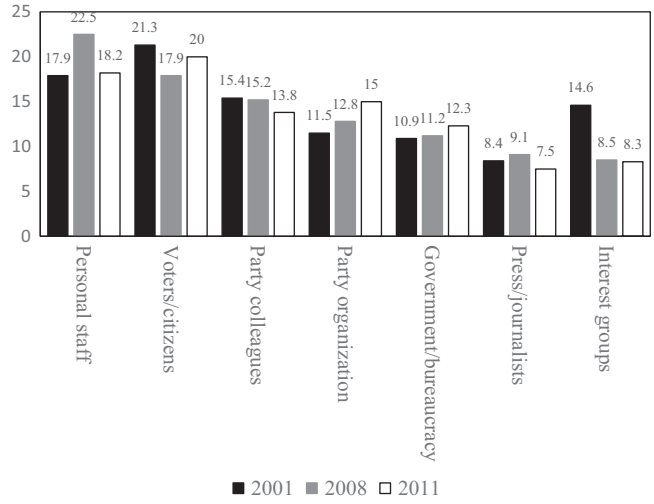

Fig. 7.2 Evolution of the origins of emails, 2001–2011 (%)
Sources: Cardoso (2001), Freire et al. (2009, 2011)

Given that the survey requested the categories total 100 percent, an internal readjustment could have been made by deputies to reflect increases in other categories. An increase in the use of information and communication technologies, and in this case emails, in the daily routines of deputies and their staff (given that internal communication via these technologies had the greater increase between 2001 and 2008, and also that emails from staff increased) would be a plausible explanation for the decline of the deputies' perception of the proportion of emails received from constituents.

We cannot directly address this issue with the data at hand; however, what we can affirm is that when members of parliament in 2011 were directly asked about the influence information and communication technologies had in respect to their contact with constituents, 96.5 percent replied that direct contact with constituents had increased (Table 7.4).

Thus, our second hypothesis may be partially correct insofar as vertical communication by members of parliament using information and communication technologies may have increased, but as mentioned above, the data at hand does not allow us to document a significant change in this realm.

Table 7.4 Information and communication technologies influence in the contact between deputies and citizens/voters

	2011	
	N	%
Citizens contact me more now using information and communication technologies than they did 5–10 years ago	113	96.5
Information and communication technologies has made no difference in the frequency with which citizens contact me	4	3.4
Citizens contact me fewer times now using information and communication technologies than they did 5–10 years ago	0	0
Total	117	100

Source: Freire et al. (2011)

Final Notes

Portuguese members of parliament increased the use of information and communication technologies in their parliamentary work. Legislators use these technologies to seek information and to communicate, thus becoming essential functional elements in the Assembly of the Republic. However, in terms of the use of these technologies to connect with voters, despite the increase in vertical communication (a point of view shared by almost all the respondents), we did not see any evolution toward more inclusive political participation by taking advantage of all the possibilities of interactivity Web 2.0 allows.

In a previous article, one of the authors discussed the origins of what was labeled the e-democracy gap in Portugal (Cardoso et al. 2006). We revisited this issue to see how, if at all, the situation has changed over the years. That article argued against the beliefs of several members of parliament that weak vertical communication between the elected and the electors resulted from the small number of Internet users, the weak participatory quality of the citizens, and insufficient secretarial support (although we recognize the latter continues to be a problem).

However, a 2009 Hansard Society report presents a similar e-democracy gap in the United Kingdom, a country that does not suffer from the above problems (Williamson 2009) as does a study of Knesset Members (Haleva-Amir 2013). So the roots of the participatory deficit must be deeper than the arguments the Portuguese members of parliament offered. We suggest

comparative analysis needs to be carried out throughout Europe regarding this issue to see how many nations suffer from the problem and what its root causes are (and if they do not have the problem why that might be).

Has the emergence of Web 2.0 and social media altered these earlier trends? It has not among parliamentarians in the United Kingdom, and is not doing so in Portugal. While some MPs have adopted 2.0 such as Facebook and YouTube, they often close the feedback loop so that essentially these are reduced to 1.0 in terms of interactivity. However, in the United States, Barack Obama's presidential campaign—and now his administration—has embraced these technologies. We expect this to become the wave of the future as the trend increases in Europe. The main issue with which we are left is how rapidly the uptake will be.

The successful example of the use of the technologies developed by Barack Obama and how he used interactivity to involve voters in his campaign is a good indicator of how new and more interactive forms of political involvement may be developed: forms that stimulate the political participation of citizens in democratic regimes.

Since some of Obama's strategies have already begun to be adopted in Portugal, we hope several political parties will adopt new technologies in a more consistent manner (political campaigning), forcing other parties to follow them in order not to be left behind (as happened in the United States). We also hope this development encourages deputies to use information and communication technologies in a way that promotes and stimulates the contact and involvement of their constituents.

In many countries, politics increasingly suffers from declining interest and participation of citizens in the political arena. Given the aforementioned problems, the challenge is to overcome the democratic deficit in politics. One aid in resolving this dilemma is that communication has transformed drastically since the Internet made its way into the political showground. Currently, politicians and the public have a myriad of information and communication possibilities empowered by the Internet, where one has the opportunity to turn to new information and communication technologies (ICTs) to communicate. The use of the Internet and its effects, however, is a topic which is surrounded by some polemics, not only in terms of what is referred to as politics, as well as in other areas, because the analysis of its impact has two opposing theories:

1. One argument (cyberoptimist/mobilization theory) sees the Internet breaking with previous political communication dominated by the political elite by introducing new, more inclusive dynamics and structures for societies (on the technological determinism axis).
2. Another argument (cyberpessimist/reinforcement theory) sees continuity (where the Internet is considered to be an important innovation but that remains in the preexisting political communication structure) (on the social determinism axis).

Norris (2000b and 2001) discusses these two theories when analyzing the possibilities that the Internet could have in making civic involvement in political participation more equal. Mobilization theory argues that the Internet can reduce political participation barriers, increase opportunities for public debate, disseminate information and interaction among groups, diminish inequalities of participation in public life, and provide new interactive means to communicate horizontally and vertically that facilitate and enrich public sphere deliberation. The varied structure of available Internet political opportunities may encourage users to become more participatory and politically involved, attracting to this domain those who actually find themselves 'marginalized' from the political systems: the younger, residents in isolated peripheral communities, and political minorities distanced by the traditional system.

In fact, with the development of ICTs, the mobilization theory argues that an increase in civic and political participation will result. Beginning with the premise that we find ourselves in an era of citizens' almost unlimited access to the internet, they are enabled to:

1. Be more informed about politics,
2. More easily disseminate their positions via methods such as email, Twitter, Facebook, blogs, and mail lists,
3. More easily mobilize for civic action.

Defenders of this position also argue that the Internet can strengthen relations between the public and intermediary organizations (including political parties, social movements, and authorities at the local, national, or international level). In this way, public space will be reactivated and

amplified with these new forms of vertical and horizontal communication, with a lively spirit of free debate and opinion exchange, in a non-hierarchical fashion (Rheingold 1993; Davies 2005).

On the other hand, the reinforcement theory defends that Internet use will only strengthen existing patterns of social inequality and political participation, exacerbating existing inequalities among and within nations. From this perspective, the online resources will be used by individuals that are already active in traditional political participation methods, rather than as a mobilizing method to activate the politically marginalized (Margolis and Resnick 2000; Ward and Gibson 2003; Cunha et al. 2003; Chadwick and Howard 2009). But one should also emphasize that those that are cyberspace activists are not necessarily an accurate sample of the electorate. In general, they are still largely male, young, highly educated, and wealthier than the average voter. Still today a large part of the population does not have access to this new communicative means whether by choice or because of economic/technological/skill level (Norris 2001; Hindman 2009).

Analysis of the impact of these technologies in politics has led to great interest, leading to varied interpretations and perspectives on the possibilities that their use can bring to democracy, governance, political participation, electoral campaigns, and so on, leading again to the dualistic theories mentioned with conflicting conclusions (Hindman 2009). Despite these possibilities and their importance in the political domain, the sole use of these means of communication and information in and of themselves does not lead to an increase in political participation. In accord with Castells (2001), and in the actual context of integration and use of media methods by political institutions, the Internet alone does not lead to an increased political participation. Citizen political participation vis-à-vis democratic institutions (such as parliaments) can be empowered by the Internet as long as attitudes by politicians toward citizens, and vice versa, change.

In the last few years, the development of Web 2.0 and its interactive possibilities has led to a resurgence of the mobilizationist argument, but as Castells (2001) has said, the Internet on its own does not allow for an increased political participation if one maintains the current methods of political-institutional integration of social communication means.

Confidence between politicians and voters must be restored for the Internet to become a mediatory method and, in some cases, substitute for the use of traditional mass media.

The discussion around the mobilization/reinforcement dichotomy will continue with the emergence of each communicative technological innovation. In the future, with this continued theoretical discussion, it is possible that a synthesis between the two tendencies might be reached, which could signify the evolution in a direction that could transcend both. For this reason, the authors recommend some preliminary policy options.

Public policy suggestions for the future:

1. To decrease the 'democratic deficit' that the public generally believes exists with the government, and the increased use of true 2.0 functionality rather than 1.0 information provision is highly recommended.
2. As discussed above, communicating with the public has never been easier. To not do so will increase the public's belief in the 'democratic deficit.' It is strongly suggested that communication be increased.
3. Officials need to move past their views based on a small percentage of emails that may be 'flaming' and instead think of the overall public stances.
4. Budgets need to provide officials with adequate support so they may respond in a timely fashion to public queries and comments if 2.0 attention is to be successful.

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8

Sharing Economy as an Urban Phenomenon: Examining Policies for Sharing Cities

Silvia Mazzucotelli Salice and Ivana Pais

The sharing economy is a growing model in the overall economy. Based on accessing resources rather than owning them and on peer-to-peer relations mediated through online digital platforms, it has recently gained a great deal of media and scientific attention. Although the literature identifies a vast scope of sharing within and beyond cities, recent studies on the emergence of the sharing economy tend to focus on the interplay between peer-to-peer services and urban areas, depicting an increas-

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The authors discussed the setting, the structure and content of the chapter. Silvia Mazzucotelli Salice authored sections 'From Sharing Economy to the Sharing Economies', 'The Revival of Sharing in Cities' and 'On Urban Sharing Activities: Tales from Around the Globe'; Ivana Pais authored sections 'Beyond Polanyi's Taxonomy: A Framework for the Analysis of Sharing Cities', 'Milano Sharing City' and 'Sharing Policies for Sharing Economies: A Comparative Analysis'. Closing remarks are the result of a joint work of the two authors.

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*, Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_8

ing number of cities across the globe that make use of sharing services (see, among others, Agyeman et al. 2013; Mclaren and Agyeman 2015). Nonetheless, theoretical reflections on the sharing economy as an urban phenomenon are still limited.

The Internet is where sharing happens the most, but local and community initiatives in an urban context are another locus of sharing: car sharing, bike sharing, house sharing, swapping and so on happen in place-based contexts and are relevant to a wide range of urban actors. These practices seem to break new ground in the study of the relationship between online and offline: they are not only the result of effective interaction between the online and offline, but give shape to new territories, which are already inherently virtual and real at the same time. The Internet, therefore, not only takes up and innovates existing activities but creates new practices to the extent that it radically changes the access, the confidence and feedback mechanisms, the number of persons potentially involved, the meeting between needs and resources also in the case of dated activities as bartering, renting or fundraising. Such services are changing either the urban landscape or the social experience of living in cities: individuals, businesses or public administrations can engage in sharing practices, include some of them in their activities or suffer from their effects. That accounts for how deeply entwined the sharing economy is with urban space and city life (Infranca and Davidson 2016).

This study seeks to gain a better understanding of the sharing economy as an urban phenomenon. The primary aim is to discuss the concept of the Sharing City, analysing from a theoretical point of view why sharing cities emerge, and to propose a model of analysis of the different roles institutions could play in the implementation of sharing initiatives in the urban context. The secondary aim is to present case studies from across the globe and offer an insight into the (partial) implementation of the Sharing City concept. Finally, the third aim is to shed a light on the effects of the sharing economy as an instituted process of interaction between individuals and their environment.

The first section introduces the phenomenon of the sharing economy, acknowledging contested definitions and alternative crosscurrents, and proposes to shift from a singular definition of the phenomenon to a plural interpretation of the sharing economies. The second section is dedicated to the interplay between urban areas and sharing economies:

sharing services are transforming transportation, accommodations, personal services and so on and, as local governments produce innovative regulatory responses, new forms of integration between economy and society are instituted. In this line, the third section proposes an elaboration of Polanyi's taxonomy aimed at developing a new analytical model to be used in the comparative analysis of cases of sharing economy cities.

Following four case studies, we outline how the implementation of the Sharing City plays out empirically. More specifically, the fourth section explores the cases of San Francisco, Amsterdam and Seoul and is based on secondary sources (scientific literature, think tanks and policy reports and media accounts), while the fifth looks more closely at the case of Milan and is based on a field research (observant participation, interview, analysis of administrative documents).

Finally, the analytical model proposed in the chapter is put into practice, and a comparative analysis of urban sharing economy cases and related policies is presented. Limitations towards the development of a macro analytical model for the evaluation of the effects of urban sharing economies are introduced.

From Sharing Economy to the Sharing Economies

Sharing is an indispensable component of human history, as Price pointed out back in 1975: 'Sharing has probably been the most basic form of economic distribution in hominid societies for several hundred thousand years' (Price 1975, p. 12). Marcel Mauss adopted the term 'gift economy' to describe activities providing crucial instruments for social interactions and solidarity (Mauss 1923). And a few years later, Karl Polanyi (1944), while showing that market activities in traditional societies were highly diversified and multi-functional, pointed out that human social behaviour is influenced by more than simple self-interest, displaying a broad range of social motivations and emotions:

> The outstanding discovery of recent historical and anthropological research is that man's economy, as a rule, is submerged in his social relationships. He does not act so as to safeguard his individual interest in the possession of

> material goods; he acts so as to safeguard his sociological standing, his social claims, his social assets. He values material goods only in so far as they serve this end. (Polanyi 1944, p. 46)

Nowadays, however, the market economy has become dominant and production and consumption seem to be more and more atomized. Have we perhaps even lost our ability for sharing? (Belk 2007, 2010). Providing a response to this question is challenging. Non-economic dimensions of economic activities have been recognized as being highly relevant and providing a central function in society by some contemporary economists (see, for example, works on heterodox economic theory, Rabin 1993; Gneezy and Rustichini 2000); moreover, they are a key factor in the rhetoric behind the development of the so-called sharing economy. As people choose to join and use collaborative activities and new business start-ups enabling people to share goods and services with their peers—from cars and bikes to food, office space, spare rooms, time and expertize (Benkler 2004)—platforms oriented towards sharing and collaboration (and thus boasting a strong social dimension) have sprung up to enable this process.

The defining characteristic of the sharing economy lies in the shift towards access of goods over ownership of them (Warde 2005; Belk 2007) and can be described as comprising:

(a) resource optimization: the sharing economy promotes practices focusing on reuse rather than acquisition and on access rather than ownership
(b) peer-to-peer relationship: disintermediation supports the direct relationship between supply and demand with a disappearance of boundaries between the funder, producer, consumer and provider
(c) technological platforms supporting digital relationships where social distance is more critical than geographical distance and trust is managed through digital reputation.

The rise of the sharing economy was facilitated by the widespread use of IT. The transition from the web 1.0 to the web 2.0 opened a new era and new possibility for the practices of sharing. From the shar-

ing of audio-visual materials to the exchange of second-hand goods, the Internet has laid the framework for collaborative consumption. Actually, these initiatives are often organized and managed by web platforms providing the organizational infrastructure necessary for scaling. In some cases, the digital platform is limited to streamlining and extending the reach of traditional rental services: through the Internet the coverage of the social network is greatly enhanced, and the probability of matching is greatly increased so that strangers can potentially enter into transactions. In other cases, the platform allows services and tools that transform the cultural value of consumption embracing social dimensions.

Through the formation of digital communities, people recalled the sharing and cooperating spirit of pre-modern communities (Aigrain 2012): the open-source movement made people rethink the meaning of intellectual property and established the new copy-left licensing; the proliferation of P2P platforms and wiki systems transformed sharing into a quite common activity among Internet users; and, lastly, online platforms and networks enabled users to simplify daily sharing activities such as spare bedrooms rental, carpooling, ride sharing, swapping, spot labour offers and so on. On this line, Botsman and Rogers (2010) use the term sharing in reference to all of the activities described by the prefix co- and also practices labelled with the prefix crowd such as crowdsourcing and crowdfunding.

While covering different practices, the 'sharing economy' is often expressed in the singular; however, it may be useful to start thinking in the plural in light of the diverse territorial varieties of the sharing economies.

The rediscovery of the local dimension in socio-economic analysis depends on the spread of information technology (Castells 1989); the transition to a post-industrial economy based on technology, finance and real estate (Sassen 1991, 2007); and the persistence of the creative destruction mechanism as the engine of capitalism (Harvey 1985). Furthermore, through the 1990s the attention of economic geographers and of regional development researchers on the local dimension has grown. In general, such researches show how the importance of local specificities has increased—rather than being marginalized—in a context of increasing globalization and functional economic integration (Amin and Thrift 2002; Storper 1995; Storper and Venables 2004; Storper et al. 2012).

Further studies, however, drawn more specifically attention to the role of the regulatory mechanisms of local societies and economies in the intentional creation of competitive advantages for the firms in the defined area (local collective competition goods) (Crouch et al. 2001).

Hence, the city has emerged as a unit of analysis and as an economically relevant actor at the centre of a double dialectical tension between global and local and between cooperation and competition (Le Galès 2002) and the privileged place of the transition from government to governance (the latter defined as the ability to bring together various interests, actors and organizations and to express them in a place, thereby giving shape to local interests, organizations, social groups developing strategies more or less unified in relation to the market, the state, the city and other levels of government) (Le Galès and Lequesne 1997).

These considerations are even more important when applied to sharing economy practices whose value proposition relies on urban conditions such as population density and physical proximity (Infranca and Davidson 2016). Therefore, to explain the spread of the sharing economy in a given national or local context, we have to take into account the socio-economic and institutional context in which this is embedded: the historical traditions which have contributed to establishing competencies, technical skills and know-how in a particular area; the presence of the medium-scale and large-scale firms facilitating economic growth; the institutional architecture that provides collective goods; but also the strength of the social capital and community relations at a local level with particular attention to the implications of the spread of the informal economy. It is not by chance that the concept of the shareable city (or sharing city) denotes urban contexts in which programmes and policies—especially in priority sectors for cities such as transportation, food, housing and jobs—are implemented to promote and enable sharing-based platforms (Agyeman 2014).

The purpose of the next sections is to gain a contextual understanding of existing approaches to urban governance of the sharing economy in an international comparison and to develop an awareness of the challenges and opportunities for sharing in cities as a way to improve resource efficiency, reduce inequities and boost social capital.

To reach these goals, in the following section, a review of the literature on sharing cities will be introduced in order to provide a basic

understanding of the arguments for and against sharing in cities; thus, examples of the cities already working towards sharing economy regulation will be discussed.

The Revival of Sharing in Cities

Cities have always been hubs of sharing. Over time, different governance practices and deliberative democracy experimentation—from the Greek Polis to modern community urban planners—have nourished the collaborative spirit of our cities. Despite this, modern cities have traditionally been described as governed by private interests and commonly exhibit conflicts between public and private interests. Lately, however, new models of consumption and production that rely heavily on collaboration and cooperation are challenging traditional models and redefining the city as a place for sharing and exchange.

The reasons for the emergence or revival of sharing in cities are mostly linked to three main factors: urbanization concerns, information and communication technology availability and the economic crisis. The rapid rise in the number of people living in the cities is a cause for concern since the urban hubs are unprepared for an influx of masses of people adding to their populations. It puts a great deal of pressure on infrastructure and public services. With continuing urbanization, sharing economy principles have been introduced as an opportunity to mitigate these negative impacts at city level (Gorenflo 2013).

Another aspect is the advance in technologies. Easy use of the Internet via a smartphone and real-time applications gives people power to unlock the idle capacities, allowing sharing among diverse networks of people. They allow access to untapped resources within a city, often exchanging them between people situated in close proximity but who do not know each other (Botsman and Rogers 2010; Gansky 2010).

Also important is the collapse of financial systems and the 2008 financial crisis, which triggered alternative visions of urban life beyond capitalism. In the aftermath of the crisis, in fact, certain terms such as the sharing economy became popular and new business start-ups enabling people to share goods and services with their peers started spreading

rapidly (Brenner et al. 2009; Schor 2014). This was often framed as a post-crisis antidote to overconsumption and materialism (Ritzer 2013).

Besides these, other forces, playing a role in communities engaging in sharing, have to be acknowledged: for instance, the desire to renew social connections and interpersonal exchanges together with the growing attention towards sustainable consumption practices. When products and services are shared among a group or a community, social contacts, trust and collaboration within a community are assumed to increase (Botsman and Rogers 2010), less energy is needed for transportation and production, and less waste is created in the satisfaction of each consumer's needs (Belk 2010).

In general, sharing between urban residents is considered to be worthwhile because it potentially furthers endogenous potentials, local growth and social integration (Agyeman et al. 2013). But what is actually being shared in the Sharing City?

In order to gain an understanding of sharing types and how they can apply to sharing in cities, it is useful to recall Agyeman's sharing spectrum (Agyeman et al. 2013), which attempts to break down different forms of sharing based on what is being shared and outlining sample activities and typical participants in each sharing activity. The value of the spectrum as a tool towards the definition of urban sharing activities depends mainly on the fact that it calls attention to the inputs and outputs of sharing.

In other words, Agyeman et al. point out that 'a focus on goods and services can miss opportunities to share both inputs to the economy such as materials and water, and the outputs that people really value – the well-being obtained from our activities and the capabilities (or real freedoms) to participate in the society that we all seek' (Agyeman et al. 2013, p. 5). Secondly, they suggest that the more participants or users engaged in or using what is being shared, the more shareable the service is.

When it comes to cities, almost any resource can be shared (Agyeman et al. 2013): goods and services; the Public Realm; public as well as private infrastructure such as on the one hand childcare and healthcare and on the other hand retailer and consumer cooperatives; and environmental resources.

Not simply urban contexts prove themselves as loci of sharing, but the sharing economy becomes a new instituted process of interaction

between urban actors—individuals, businesses and public administrations—and the environment. A reflection on the innovative patterns of integrations between economy and society instituted by sharing services is needed. Thus, in the following section, departing from a revision of Polanyi's taxonomy forms of integration between economy and society, we introduce a theoretical and analytical model useful for comparing the sharing economy in different international settings.

Beyond Polanyi's Taxonomy: A Framework for the Analysis of Sharing Cities

In a recent work, Pais and Provasi (2015), with the aim of updating traditional economic sociology studies identifying non-economic dimensions of economic activities, proposed a revision of Polanyi's taxonomy (market, redistribution and reciprocity) and introduced two intermediate forms of integration between economy and society (collaboration and common-pool arrangements). These are useful for analysing the territorial varieties of the sharing economy.

1. Market. Some of the most widespread sharing economy experiences, such as car sharing, accommodation exchange or those providing professional micro-services, fall entirely within the framework of market exchanges. Relational technologies offer opportunities for new intermediation (rather than disintermediation) which were previously impossible, but they enable transactions that still retain all the characteristics typical of the market: indifference to the identity of the contractors, the symmetry of the relationship, a low degree of commitment and easy exit from unsatisfactory relationships, money as means of exchange, simple confidence in the system's efficient functioning. It is accordingly preferable to exclude these experiences from the domain of the sharing economy in the proper sense and use labels which more closely reflect their real economic and social nature such as 'rental', 'on-demand' or 'gig economy'.
2. Collaboration. Among the experiences that innovate relationships between the economy and society, the most widespread are those that

take a collaborative form such as carpooling, the loan of tools and the provision of lodgings in cohabitation. The majority of these concern the joint utilization of rival but underused material goods (shareable goods) whose use can be optimized by relational technologies but need a relationship not indifferent to the identities of the persons with whom it is necessary to collaborate. These are relations established mainly for instrumental reasons (interest in use of the good) and frequently accompanied by monetary counter-value. The collaboration is possible due to some degree (albeit weak) of indirect trust intermediated by the reputation that the parties enjoy on platforms that handle the transaction. Those who collaborate on these platforms behave as cautious reciprocators.

3. Reciprocity. In the strict sense, this corresponds to the brave reciprocity defined by the economics of the gift: the person who starts the cycle of this reciprocity does so gratuitously and unconditionally, accepting the risk of not being repaid. Unlike in the market, this is an asynchronous and non-equivalent exchange, meant to generate a 'mutual positive debt' mediated by personal gratitude. It is a form of elective reciprocity presupposing a direct relationship between individuals who know and accept each other. It generates a specific (inter) personal trust that involves the identities of the partners in the exchange and as such cannot be generalized. The goods exchanged may be of different kinds (material or immaterial; rival, as they may be possessed or consumed only by a single user, or non-rival; nondurable, where consumption destroys the good, or durable), but what distinguishes them under this reciprocity regime is the bonding value that they help create. They are therefore in every respect relational goods, whose value increases to the extent that they are able to change the identities of the parties involved and their relation.
4. Common-pool arrangements. These mainly concern immaterial goods non-rival in consumption, which are however easily excludable and as such liable to be exchanged in the still predominant private market regime. Examples are open-source and open-access software and the various forms of the free circulation of knowledge; but also the more recent experiences of open design and open manufacturing. The distinctive feature of these cases is a strong sense of membership (Hippel and Krogh 2003), primarily among those people who promote and

support the initiative. The sharing of the same values characterizes the relationships among the participants, generates generalized trust in the community and consequently among its members and regulates the use of common resources and the contribution of each to their production and conservation. In these experiences (much more than in collaborative ones), the difference between producers and consumers becomes blurred, although forms of reward in both money and especially prestige still exist.

5. Redistribution. This form is characterized by direct contribution of economic resources (money or voluntary labour) occurring outside the fiscal system. The production of a public good in which there is direct collective control is maintained. This is the case of some experiments in civic crowdfunding and the mobilization of voluntary resources for the recovery and management of spaces or commons. At a time when traditional forms of political representation and the legitimacy of public decisions are undermined, these are practices of great interest, and they should be carefully monitored given their potential to create a different relationship not only between the economy and society but also between the state and society.

In this chapter, we argue that the model of Polanyi's—and more specifically Pais and Provasi's variant (2015)—can be applied not only to sharing economy practices but also to sharing policies. We test our hypothesis by investigating three cases of cities and then deepening the analysis through the empirical analysis of Milan. The cases were selected based on availability and accessibility of information (scientific literature, think tanks and policy reports, and media accounts and so on), on their ability to illustrate the diversity of potential methods for enabling shared access to tangible and intangible resources and their potential significance to the case of the city of Milan which is going to be elaborated upon in this chapter in much more detail. In addition, all the four cities are developed economies from Europe, North America and South-East Asia and thus they allow the elaboration of a global overview on collaborative practices.

The following paragraphs provide information about the sharing economy policies implemented in the cities examined; in the concluding paragraph, we analyse these cases through the lens of the model.

On Urban Sharing Activities: Tales from Around the Globe

The three cases presented here—San Francisco, Amsterdam and Seoul—do not simply represent three different ways of embodying the principle of the sharing economy at the urban level, but, being located on three different continents (Europe, Asia, America), they reflect a global overview.

San Francisco has been included as it is not only home to many of the leading sharing-focused start-ups and organizations, but it has also been the first to strive to incorporate the sharing economy into its policy through innovative projects and initiatives. It is, in fact, home not only to Airbnb and Uber—the two cases of sharing businesses most cited in the literature (Schor 2014)—but also to Shareable, the leading non-profit advocate for the sharing economy providing information on the need for new policies to support sharing, mutual aid and co-production in cities. In 2012 the city of San Francisco formed the Sharing Economy Working Group intending to take a comprehensive look at the economic benefits, innovative companies and emerging policy issues around the growing sharing economy.

Amsterdam, Europe's first shareable city (Mclaren and Agyeman 2015), has been included since numerous rapidly growing start-ups are located within its borders. Also within the government of Amsterdam, there has been significant progress towards the collaborative economy, especially with reference to its most usual sectors of activities such as transport and hospitality: car sharing, for example, is actively promoted and short-term home rentals have been regulated, limiting the number of rooms that can be rented, the number of people that the host can accept for one reservation and, furthermore, the rental period, thus making it legal for city residents to occasionally rent their homes to tourists and to list them on sites like Airbnb without fear of penalty. Otherwise, the rental falls under laws on bed and breakfast type tourist accommodation and other conditions apply. The relatively restrictive laws signal that this city is approaching the sharing economy carefully and with an open attitude. 'The priority is not to collect taxes on what renters charge or even to eliminate the temporary rental market altogether. Instead, it reflects a focus on ensuring

that short-term rentals are moderate in length and that efforts are taken to minimize negative externalities' (Interian 2016, p. 146).

Finally, the third case is Seoul. The city of Seoul, unlike San Francisco and Amsterdam which can both be described as post-industrial cities, is presently undergoing an industrial development. Its concerns are directly linked to expansion and population growth and therefore include housing, transportation and parking shortage issues as well as pollution, and resource overuse alarms (Johnson 2013). As a consequence, the sharing economy is emerging mostly as an innovative tool towards the solution of typical modern urban issues (Johnson 2013). The Seoul Sharing city project, in particular, was conceived in September 2012 as part of the Seoul Innovation Bureau's plan to solve the urban social, economic and environmental concerns and to optimize the use of economic resources available within the administration. Furthermore, the plan reflects a focus on adopting a much more proactive stance to regulation: the city puts in a lot of financial efforts into the creation of a local sharing economy environment, disconnected from the global economy and focused on local alternatives to the big multinational corporations such as Uber and Airbnb. For example, the city has invested heavily in infrastructures and facilities in its Digital Media City, a district in North West Seoul, to attract high-tech businesses (Mclaren and Agyeman 2015) aiming to stimulate clustering among local start-ups**.**

The three cities are uniquely positioned to take advantage of the Sharing City potential since they are among the densest (10 million people living within 605 square kilometres in Seoul, 800 thousand people living within 600 square kilometres in San Francisco and 800 thousand people living 220 square kilometres in Amsterdam) and most digitally connected cities in the world (see Table 8.1).

What do these three examples have in common and how do they differ from one another?

The elements to be considered in a cross-case analysis are the approaches to policy implementation. Of the three cases, Seoul slightly differs from the others: local sharing enterprises receive robust support from the city government which has purposefully adopted the Sharing City as the new city development paradigm. The municipal government of Seoul implemented it as a policy to offer an alternative way of tackling sustainability

issues. In the other two—Amsterdam and San Francisco—the origins of sharing are arguably more bottom-up. Both cities share a population that is historically responsive to alternative movements and, thus, their residents proved eager to engage in collaborative projects. Government intervention emerged way after start-ups enabling people to share goods and services with their peers were established.

The sharing policy implementation approach is directly linked to the legal form in which the concept of the sharing city was translated into the three cities. In the case of San Francisco, policies for shareable cities are mainly managed by a working group or, in other words, a forum of community groups, companies and institutional representatives. Similarly, Amsterdam Sharing City is a joint initiative in which ambassadors from all corners of the city work together: from start-ups to corporates, from a community centre to a public library and from knowledge institutions to the municipality. A further player helping lead the charge towards Sharing City status for Amsterdam was, in fact, Share NL, the Dutch knowledge and networking platform for the sharing economy. Finally, Seoul, in contrast, is mostly a governmental initiative managed according to the 'Seoul Metropolitan Government Act for Promoting Sharing'.

The role of policy-makers is an additional element of the cross-case analysis. The role the public institutions can play can be summarized in three major types: *investors*, meaning they provide capital to or financial support for companies that wish to expand; *regulators*, meaning they

Table 8.1 International case studies overview

	Seoul	San Francisco	Amsterdam
Total area	605.4 km^2	600.6 km^2	219.4 km^2
Population	10,528,774	City area: 808,977 Urban: 3,273,190 Metro: 4,335,391	City area: 790,654 Urban: 1,209,419 Metro: 2,289,762
Fixed broadband penetration[a]	36% (South Korea)	27.3% (United States)	38.5% (Netherlands)
Households with broadband access[a]	97.5% (South Korea) 57%	68.2% (United States)	79.5% (Netherlands) 3%

[a]OECD Broadband Portal, 2011

set rules; and, finally, *facilitators* which is basically to say they don't play either a regulatory or a financing role, but they intervene directly by providing sharing services and indirectly by designing infrastructure, services and incentives for sharing economy activities (Orsi et al. 2013). Such a typology, though useful on a theoretical level, is rarely evidenced in a pure way when it comes to real cases. In the case of San Francisco, Amsterdam and Seoul, for example, policy-makers played a multifaceted role encompassing financing, regulations and even creation of peer-to-peer sharing services.

The city of San Francisco, for example, has mainly played the role of regulator, fostering private-sector intervention through de-regulative actions. For example, it recognized that the land use law could be adjusted to aid sharing and introduced a new land use category Neighbourhood Agriculture, which permits community gardens, community-supported agriculture, market gardens and commercial farms of less than an acre to sell or donate their products (Długosz 2014).

Amsterdam similarly created a new private rental category (Mclaren and Agyeman 2015), but, in contrast to San Francisco, the Dutch city is starting to integrate sharing into its Smart City Program which focuses on cutting carbon emissions in energy and transport systems and in engaging citizens in participatory service evaluation and design. In this spirit, the city is 'demonstrating sharing can help meet the challenges of delivering inclusion, with co-production linking city authorities, the business sector, and citizens' (Mclaren and Agyeman 2015, p. 251).

Seoul is significantly different from the other two sharing cities and needs further clarification. Collaborative services enjoy remarkably strong support from the city government, thus making Seoul the first global city to officially endorse the sharing economy (Mclaren and Agyeman 2015). The municipality is generating and diffusing infrastructure in order to promote and enable sharing-based platforms, and it is reviewing rules and regulations that inhibit or prevent Seoul's citizens from sharing. More importantly, it is delivering its own sharing initiatives, striving to cultivate a sharing culture and build the public's trust in sharing enterprises and activities (Mclaren and Agyeman 2015).

According to ShareHub, an agency initiated by the Seoul Metropolitan Government, from 2013 to August 2016, the number of Seoul-designated

sharing companies reached the proportion of 77 (39 in 2013; 11 in 2014; 14 in 2015; 13 in 2016). Thirty-five of the above-mentioned businesses provide services for space sharing; 18 for good sharing; 20 for skills, experience and time sharing; and 4 are active in the field of content sharing. Sharing users are mostly young people aged between 20 and 30 years.

However, a big difference between principles and action remains (CO-UP/Share 2013). All in all, the city is doing a good job of trying to spread the word. Knowledge about sharing possibilities in Seoul is still thinly spread among its residents, not least because there are no 'super star' businesses that participate in the sharing city projects that can serve as highly visible examples. The sharing economy is currently seen as an alternative to traditional models of conducting business, a sort of consumer's choice more than anything else. In such a context the city government works actively as a facilitator promoting the use of sharing facilities among citizens issuing quality certificates[1] aimed at increasing the trust of citizens towards collaborative services. Recalling Benkler's argument that 'as kind, sharing, and reciprocal behaviour increases in society, so does the tendency to trust others, reciprocate and behave pro-socially' (2004, p. 341), the municipality wishes that by practicing sharing, people learn to appreciate it more and to trust other participants.

The variety of the roles played by institutions in all the three cases is directly linked to the purposes behind the implementation of sharing policies in the three cities. And the latter is undoubtedly the third element to be considered in a cross-case analysis. As previously mentioned, the Sharing City Seoul project is an example of a designed sharing city in which collaborative services are part of concrete tools and actions of a broader sustainable policy of the city. In San Francisco, goals are more related to business and innovation support. There is no clear ownership of the Sharing City movement in San Francisco, and policy-makers seem much more interested in enabling an innovative and creative framework within which social innovation and new business could continue growing. Finally, in the case of Amsterdam, the role played by institutions

[1] This certificate is part of a broad communication plan based first and foremost on the collaborative creation (thanks to a contest) of a logo for the project, intended to distinguish all services sponsored/supported/selected by the city among others and thus to encourage larger confidence among citizens and to support all new start-ups in expanding easily the level of users.

seems very much related to the idea of transforming Amsterdam into a more liveable city by fostering sharing.

Milano Sharing City

The analysis of the three main cases of sharing city offers interpretive insights useful to deepen the case of Milan, a city that started its path towards sharing later than others, but—thanks to the study of foreign experience—is introducing sharing policies intentionally oriented towards a comprehensive strategy.

Milan's urban policies for the sharing economy have been boosted by the Expo 2015. Experts, start-ups, businesses, non-profits and government that gathered on 29 November 2013 in the first edition of the conference Sharitaly identified the World Expo (1 May to 31 October 2015) as an opportunity to experiment with innovative policies and practices.

In the years before the Expo, various practices of the sharing economy were born, but they were still little known and did not have the opportunity to network with each other. The mega-event was considered as a privileged acceleration of socio-economic dynamics (Richard and Palmer 2010).

> Mega-events have been markers and symbols, and occasionally catalysts, for the modernization of host cities and nations including the development of capitalism and thus of "un-sharing" versions of the modern economy. However, versions of a "sharing economy" (and more broadly a "sharing society") can be present in the shadows of these events, for instance in both the social realities of interpersonal exchange and/or in the social ideals of "common citizenship" and the "public sphere" that mega-events can promote. […] Two such "sharing economy"-types of phenomena which can be noted here are volunteering and social legacy. (Roche 2014, p. 85)

The possible role that collaborative practices could play during and after Expo was set down in a guideline document drafted by a group of experts. This was presented to the city administration with the aim of 'stimulating a timely reflection into cultural institutions, civil society, the third sector

and the business community to promote the creation of a shared Milan from the experience of Milan Expo 2015' (Sharexpo 2014). A survey carried out by the Sharexpo Committee (2014)[2] through interviews with a random sample of 600 Italians showed that 74 per cent of respondents would be interested in using shared facilities at the Expo with particular interest in bike and car sharing (91 per cent), sightseeing tours (85 per cent), social eating (84 per cent), carpooling (83 per cent as a driver and 79 as a passenger), garage sharing (75 per cent), house sharing (74 per cent as a guest and 48 as a host) and car lending (53 per cent).

The document presented on 2 July 2014 was divided into three areas (reference scenario, design and measurement, material and immaterial legacy) and six policies (reception, mobility, work, personal services, catering, culture and leisure).

Two years after the start of these discussions and after the closing of the World Expo, it can be said that although the proposals did not have the desired effect during the Expo, they nonetheless generated a broader debate and some policy initiatives explicitly addressing the sharing economy, which can be considered a legacy, albeit indirect, of the event.

The Milano Sharing City policy is interesting for its innovation in content but also in the matter of method. On 19 December 2014, the Milan City Council approved a resolution with the 'Guidelines to govern and promote the development of economic initiatives for sharing and collaboration'. The resolution is the result of an online consultation process lasting one month, in which more than 200 people (experts and operators of sharing services) participated through the response to a questionnaire or through amendments to the text. Compared to the original formulation, the comments highlight the vocation of a social rather than an economic or environmental impact of the sharing economy in the city and the request to the municipality to act as a platform enabling the sharing economy (the role of *facilitator*), while they are more cautious about the regulatory requirements (the role of *regulator*).

The resolution aims to promote advertizing, transparency and accountability (open data and open services); strengthen the processes of partici-

[2] The authors of this chapter were involved in the Sharexpo Committee as part of their observant participation.

pation, co-design and co-operation through active citizenship; acquire dedicated resources, even through EU funds; promote internationally recognized quality certifications for positive experiences; promote the common good and provision of public or unused spaces; train and inform public administration workers and reduce the digital divide; develop new management and regulation tools; facilitate the mapping and dissemination of such initiatives; and actively contribute to the development of the sharing economy by becoming a user of collaborative services.

Following the resolution, the City issued a public notice for the establishment of a network of local actors interested in working with the Municipality of Milan to promote sharing economy initiatives. The analysis of those actors (60 operators of sharing services and 42 experts) allows some reflection on the specificity of the sharing economy in Milan (and in Italy).

A first point concerns the scope of their activities: With the exception of a few large multinational companies headquartered abroad (Airbnb, BlaBlaCar), the map of the sharing economy in Milan reveals a variety of initiatives mainly at the local level (5 per cent in a district, 19 in the city, 9 at the regional level, 38 at the national level, only 13 in other European countries and 16 outside Europe). When discussing the regulatory policies related to the sharing economy, the debate is often driven by the will to manage the interests of recently formed large multinationals, such as Airbnb and Uber. Without underestimating the impact of such businesses, it is important to stress once again that the sharing economy is place-based and context-specific and, thus, the territorial varieties of the sharing economy require differentiated policies.

The second point concerns the sectors: Hospitality, mobility, food and catering in total do not even cover one third of the initiatives of the sharing economy in Milan. Italian start-ups prevail in the sectors where the foreign multinationals are weaker, particularly in the cultural and social sectors. To quote a single but not unique example: the project Piacere Milano offers citizens the opportunity to become cultural ambassadors of the city guiding tourists through 'their own' Milan. Each path narrated contributes to the composition of a geographic location map available online, thus allowing that process of value co-creation among locals, tourists and other stakeholders often regarded as promoting an informal

tourism model driven by shared values and logics (Guttentag 2015). The actors of the Milan Sharing City network put a huge value in the social inclusion promoted by sharing economy initiatives, which is considered as important as economic development, while technological innovation is considered a secondary aspect.

And so we come to the third specificity of the sharing economy in Milan: Only 68 per cent are companies, the remainder is made up of associations, foundations and initiatives that are not even formally constituted. In part, these experiences are still immature. On the other hand, it highlights experiences that intentionally decide to stay in the realm of informality. This is the case of a peculiar Italian experience: the social streets, initiatives on a territorial basis that facilitate collaboration and sharing practices among residents in the same street. Formed in Bologna in September 2013, they are informal groups that are coordinated through a closed Facebook group. In Bologna, they were established in the Regulation on cooperation between citizens and administration for the care and regeneration of the urban commons. It allows the local administration to work with the social street as a collective of un-associated citizens. It is an interesting element, because it shows a willingness to recognize new forms of 'non-formal' social aggregation. A similar approach was adopted in 2015 by the Municipality of Milan, which nowadays hosts the larger number of social streets in Italy (64 out of 450).

Local, social and informal: If these are the three elements that most characterize the sharing economy in Milan, it is then useful to reflect on the policy for this context. The Municipality of Milan supported a bottom-up process. A result is the emergence of a new category of actors (the above-mentioned operators, but also users, of sharing services) interacting for the first time with the municipality. Their relationship is completely new and for this reason requires careful observation.

The persistent dialogue with the actors of the sharing network allowed the Municipality of Milan to build policies more consistent with the actual needs of the area. Several areas exemplify this development.

The Municipality of Milan in March 2016 opened Cohub—the house of collaboration, a physical space to promote information, training and networking on the sharing economy for both operators and citizens.

The city also has recently widely improved the investment in sharing mobility utilities: it reached 280 bicycle stations, with 45,000 subscribers and between 10,000 and 15,000 users per day and 4 car sharing operators registered with 2830 cars (also electric) and motorbikes.

Another example is shared housing. Italy is the third largest market for Airbnb after the United States and France, and the Municipality of Milan decided to intervene through an agreement that stipulates the fulfilment of economic and fiscal obligations, the cooperation at major events or in the case of a housing emergency, the measurement of the impacts of shared hospitality and the promotion of digital literacy initiatives for people at risk of marginalization. The interesting fact is that—unlike other cities, including Amsterdam—Milan did not introduce rental period restrictions. This approach seems to signal that the Airbnb offer in the town is considered complementary and does not negatively affect traditional hospitality supply.

The municipality also supports collaborative production spaces, through the accreditation of 49 coworking spaces that received funding for improving their spaces and vouchers for coworkers who use them (364 so far) and providing public spaces to create an incubator for fab-lab and makers-spaces, one for start-ups with high social impact (with a stream devoted to the sharing economy) and one for cultural start-ups and initiatives.

They also introduced innovative forms of local welfare support inspired by peer-to-peer logics: Examples are the caregiver shared by entire condos or citizens hosting refugees in their homes or, again, the opening of a civic crowdfunding platform (the municipality supports who collect more than 50 per cent of the budget needed for their civic project through crowdfunding).

Following these efforts, in December 2015, Milan, together with London and Lisbon, was awarded €25 million by the European Commission's Horizon 2020 Smart Cities and Communities call to bring to life the project Sharing Cities that aim at demonstrating the effectiveness of sharing practices mediated by technologies in improving urban mobility, increasing the energy efficiency of buildings and reducing carbon emissions.

Sharing Policies for Sharing Economies: A Comparative Analysis

The analysis of the Milan case contributes to the scientific debate on sharing cities and introduces new perspectives of interpretation. The four case studies show how the sharing economy plays out empirically and are examples of the variety of sharing economy businesses and regulations developed in different local contexts. However, it is important to point out that they are intended as a set of simplified portraits of the cities, designed to illustrate the scope and breadth of sharing activity.

Cautiously simplifying, San Francisco is characterized by the liveliness of the business fabric in technological innovation and by a strong entrepreneurial mindset; Seoul, on the other hand, is often recognized for its wealth of infrastructure (at the level of connectivity) and the propensity to trust (Jeong in Korean) (Mclaren and Agyeman 2015); Amsterdam is acknowledged for social mixing, culturally supported by a libertarian and open mindset; finally, Milan is depicted by a rich social fabric and a propensity to solidarity.

Considering the revision of the Polanyian taxonomy, the entrepreneurial and technological driver of San Francisco focuses on sharing economy initiatives predominantly in the sphere of collaboration as a way to build new efficient markets. Public initiative is geared towards modernizing the regulatory environment in a way that supports innovators sometimes at the expense of the incumbents through deregulation.

In Amsterdam, the attention towards civic integration through social mixing moves the sharing economy towards the legalization of new forms of collaboration and the experimentation of shared ownership in social housing using a common pooling logic.

In Milan the driver of local development is guided by the idea that innovation be connected to practices of social inclusion. This leads to the experimentation of practices which mix traditional forms of reciprocity with innovative logics of common pooling.

Finally, in Seoul, the drive to manage the population density and the aim to restore forms of proximity affecting the evolution of social ties move the focus of the sharing economy towards the establishment of new

forms of redistribution through policies of direct investments in sharing economy practices.

Interestingly, as the focus of the city moves along the Polanyian axis, the roles and functions of the municipality vary. In San Francisco, where policies for shareable cities are mainly managed by a forum of community groups, companies and institutional representatives, the market sphere remains dominant and businesses' interests lobby to construct a regulation fostering commercial interests. In Seoul the public actor plays the role of a direct promoter and suggests a propensity to support locally based alternatives. In Amsterdam and Milan, the process leading to the development is more bottom-up, and although sharing initiatives are challenging traditional models of public regulation in the two cities, regulative efforts are used to deal with the collaborative service while capitalizing on the opportunities offered by them (extra incomes from the users of such services, better resource allocation and utilization, new economic activities for cities and municipalities and so on).

In summary, these approaches to the sharing city reflect the need of specific regulations in different local contexts, and, as such, they demonstrate that there is no one-size-fits-all model (Table 8.2).

Conclusions

As this chapter showed, the spread of sharing economy practices, initially interpreted as a singular socio-economic model, is really quite diverse. An analysis of the varieties of the urban sharing economy can actually be a useful interpretative exercise in order to highlight socio-economic specificities and the related implications in terms of rescaling policies.

In this vein, the chapter seeks to capture the variations in the forms of integration between economy and society and to highlight regional differences in practice. In this way the chapter contributes to the scientific debate on the effects of the sharing economy as an instituted process of interaction between individuals and their environment.

To this purpose, four case studies have been examined, outlining how the implementation of the Sharing City plays out empirically. We proposed, departing from Polanyi's taxonomy of the forms of integra-

Table 8.2 Main features of the sharing policies put into action in the cities analysed

	San Francisco (focus on market/collaboration)	Amsterdam (focus on collaboration/ common pooling)	Milano (focus on reciprocity/common pooling)	Seoul (focus on common pooling/redistribution)
Main kind of collective goods	Economic/technological	Cultural (hospitality)	Relational	Infrastructural
Main distinctive cultural characteristic	Entrepreneurial mindset	Freedom and openness	Solidarity	*Jeong* (generalized altruism)
Main key driver	Entrepreneurship/technology development	Immigration	Local development	Population density
Main emergent policy aims	Support the commercial sharing economy Support start-ups Tackle public challenges	Civic integration Mixing socio-economic groups	Innovation and social inclusion	Restore dissolved communities and revive sharing culture
Main public action	De-regulation (de-/regulator)	Legalization (regulator and facilitator)	Practices and agreements (facilitator)	Policies (investor)
Main promoters	Sharing companies; chief innovation officer; office of civic innovation;	ShareNL; Amsterdam Economic Board	Sharexpo; Policies for Employment and Economic Development Department	Major; Innovation Department
Main players	Sharing economy working group (sharing companies; city departments; community organizations)	ShareNL; city officials; businesses	Network of local players of the sharing economy (60 operators and 42 experts)	Sharing Promotion Committee (12 members from the private sector and 3 from the government)

Example of activities	Entrepreneurship In Residence Program (start-up; city governments for 16 weeks) Emergency housing assistance (BayShare) Living Innovation Zone Program (improves and enlivens public spaces through creative projects and technologies) New rules for short-term rental (Airbnb) and for ride sharing	Social housing and shared ownership First city to officially legalize short-term rental of personal property through a new private rental category Amsterdam Sharing City: support for sharing policies and experimentation.	Milano sharing city guidelines House of collaboration Incubator for sharing economy start-ups Agreement with Airbnb Support to coworking and maker spaces Platform of civic crowdfunding Apartment buildings' caregivers	Expanding physical and digital infrastructures (ShareHub, Seoul Innovation Park and so on) Incubating and supporting start-ups (Sharing Economy Start School) Putting idle public resources to better use (Youth Hub, YouthZone) Training and meetings (Sharing Economy Clubs and Sharing School, Public Hearing, Lectures, Sharing Economy Forums, Sharing City Fair) Subsides/grants for share resources in apartment buildings (Community Centers, Bookshelves, Tool Libraries, Sharing Villages)
Funding	Private	Partnership public-private	Public as user of the sharing services	Public

Source: Own elaboration

tions of economy and society, an analytical schema for the evaluation of the effects of urban sharing economies. We thus described the socio-economic interplays generated by the sharing economy along the axis market/collaboration/reciprocity/common pooling/redistribution.

The four cases presented exemplify the features of the sharing economy in a simplified way. The major aim was to describe the scope and range of sharing activities and enabling executive interventions (regulations, financial support and so on), rather than as an effort to claim fundamental differences between the cities or cultures involved.

The most urgent question for policy-makers is how to evaluate sharing policies. We believe that the proposed interpretative scheme, even if in initial stage, could be used to conduct a synchronic cross-cities comparison (widening the number of cities taken into consideration) and in the construction of indicators useful for longitudinal analysis and impact assessment.

The model could also be further enhanced by including the indicators of local development, technological innovation and social capital available for the cities studied in order to double check the existence of likely matches and policy implications.

To conclude, it is useful to point out that all the cases examined here are putting the sharing economy at the centre of the narrative of urban policies. So far the outcomes presented in the previous pages show that there is no one path to becoming a sharing city: many approaches can work efficiently. Putting the four cases analysed in a broader conception of urban policies, four types of the urban sharing economy can be highlighted: San Francisco focuses largely on promoting private-sector models, thus interpreting the sharing economy as a tool within local economic development programmes; Amsterdam, on the other hand, enables a range of business models and gives priority to the values of community, fostering the idea that the sharing economy is part of community empowerment policies; the city of Milan seems to be considering the implications of the sharing economy for social programmes and labour market policies to increase employment opportunities for job seekers and improve the balance between available jobs and qualified employees; finally, the Seoul government applies the sharing economy to its own operations, mainly interpreting it as a tool for sustainable policies.

The four examples detailed above can help other cities in outlining different roles they can play in sharing economy. First of all, at a very basic level, they clarify that the very first way through which cities can enable and stimulate the development of sharing economy deals with investments in infrastructures and digital service aiming to stimulate clustering among local start-ups. Cities and city authorities can be key actors in the expansion and replication of sharing programme, with the potential of shaping the presence of sharing business at a large scale. Seoul, San Francisco, Amsterdam and Milan are all attempting this in their own fashion.

Cities' authorities, moreover, might play an intermediary role with respect to the issue of reputation, ensuring credibility and protecting data from abuse.

Thus, the brand sharing city in many cases replaces that of smart city, which in turn has taken the place of sustainable city. It is up to the researchers to distinguish between a merely rhetorical use of this category and the actual introduction of innovative urban policies, analysing the different forms they can assume, also in order to evaluate them.

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9

Workers, Contradictions and Digital Commodity Chains: Organizing with Content Creators in Canada

Karen Wirsig and James Compton

On 25 November 2015, the *Columbia Journalism Review* (CJR) ran a story with the following headline: 'How a little-known, Uber-driving freelancer brought the lawsuit that forced Chicago to release a police shooting video.' The court-ordered release of a Chicago Police Department dashcam video depicting an officer fatally shooting 17-year-old Laquan McDonald set off a series of tough questions for police and city officials. It was a story of national significance, but the 29-year-old freelance reporter who successfully sued to have the video made public was not allowed inside the Cook County courthouse to hear the decision. Brandon Smith lacked the necessary media credentials, so he was forced to wait outside in the relatively chilly 10°C weather. As recounted, in the CJR article

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Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_9

(Borden 2015), Smith's journalistic work was part time. He also worked in marketing and restaurants jobs as well as an Uber and Lyft driver.

Smith's work situation is telling, but it's not an oddity as the headline suggests. He is a member of a growing population of workers, including 'creative' workers, who find it difficult to obtain full-time employment in their chosen professions. He is also, by virtue of his precarious employment, in the vortex of cybernetic capitalism's use of network connectivity to restructure commodity chains and labor processes in industries as disparate as journalism and transportation (Dyer-Witheford 2015). These changes have brought turbulence. In cities across North America and Europe, taxi drivers have staged protests against Uber and Lyft arguing the 'ride-sharing' companies are undermining their jobs and income. Meanwhile, layoffs have hit North American newsrooms hard as news organizations urge reporters to re-tool and build their personal brands so as to be able to adapt to the revamped demands of digital newsrooms and freelance piece work.

In this chapter, we take the position that workers caught up in these new and expanding commodity chains pose a particular challenge for unions that wish to organize in these sectors. Specifically, we argue that these networked technologies are implicated in capital's ongoing decomposition and recomposition of labor.

A few words of clarification are in order. In making this reference to Marx's concept of the organic composition of capital—that is, the ratio of constant capital (machines, technology and raw materials) to variable capital (workers)—we are drawing attention to the broader structural balance of forces that exist between capital and labor. As Alex Callinicos argues, this balance 'is weighted in favour of capital, because the tendency for the organic composition of capital to rise as accumulation continues increases the size of the industrial reserve army and thereby weakens the bargaining power of labour' (Callinicos 2014, p. 310).

Our interest here is to make visible not only workers' contradictory relation to capital but, indeed, the ways in which digital networks place workers in contradiction with other workers. This is particularly acute for people employed in digitally networked creative endeavors, for whom the production of such things as YouTube videos is viewed as imaginative and entrepreneurial. They may not even identify as workers at all.

And so, following Fredric Jameson's advice, we seek to represent the role of digital technologies through an analysis of their multiple contradictions (Jameson 2011, pp. 5–6). In doing so, we hope to provide insight to organizers struggling to explain the complex and constantly shifting workspace to potential members in the digital sector.

We begin by briefly outlining some of the changes made to commodity chains through the use of digital networks. We draw out some of the contradictions labor faces as a result of these changes before moving on to a three-part discussion of how these contradictions manifest themselves in the Canadian media sector. Specifically, we examine the challenges faced by the Canadian Media Guild (CMG) in organizing factual/non-fiction TV production workers, freelance workers and so-called YouTubers who create content for Google's YouTube service for a small cut of advertizing revenues. We then conclude with comments aimed at helping digital workers overcome their workplace contradictions.

Digital Commons and Digital Commodity Chains

In recent years the large-scale adoption of networked technologies has been celebrated by scholars who see in the proliferation of mobile devices and so-called Web 2.0 technologies an expansion of social knowledge and the potential for renewed participation of everyday people in a decentralized and democratic public sphere (Benkler 2006; Shirky 2010). It is certainly true that the mushrooming adoption of blogs, Twitter, Facebook and other user-generated media has profoundly reshaped the media landscape and made visible the enormous creativity of people who genuinely want to share their ideas and creations. However, it does not necessarily follow that this sharing of human creativity has inverted social relations of power. As Robins and Webster have noted: 'What is missing in most accounts of the Information Society is an understanding of the way in which knowledge and information mediate relations of power' (1999, p. 128). One important factor in this mediation is capital's need to accelerate the time of production, distribution and consumption in order to remain competitive and increase profits. The elimination of space through

the acceleration of time continues today with investments in Internet and social media technologies—tools used to integrate world markets and accelerate the flow of commodities and financial capital.

The vast expansion of networked technologies that accompanied the rise of transnational neoliberal capitalism is deeply contradictory. To be sure, the use of computer networks to share knowledge and information has sparked dramatic changes in the scale, efficiency and scope of peer production (Benkler 2006). At the same time, these networks 'substantially increased management's ability to disperse both the object and the subject of labor—jobs and workers—so as to maximize profits. The array of labor processes, and the types of job categories, that could be reconstituted around networked production chains burst through prior constraints' (Schiller 2000, p. 42). Indeed, this new flexibility became the hallmark of capital's restructuring of commodity chains. As Dan Schiller points out, the tendency toward shared use of information began in the 1960s, and by the 1980s businesses started to take advantage of local area networks to share and alter flows of information on factory floors and between factories and suppliers (Schiller 2014, p. 23). Globalized capital used networked technologies to reinvent labor processes, control costs and rationalize supply chain risk management. From search engines to word processing packages and corporate databases, networks, according to Schiller, 'conveyed the longstanding historical tendency for tools to be transformed into 'instruments of labour only usable in common' into fresh fields of practice and previously exempt segments of the division of labor' (Schiller 2014, pp. 20–1). Contra Benkler, Schiller demonstrates that collaboration was not an intrinsic trait of computerized networks:

> The internet's enablement of emerging forms of collaboration – of "peer-production", as Benkler calls it – was not rooted, however, in a commons. Who appropriated this capability for resource sharing and common labor was a question engaged by differentially placed social actors, some demonstrating greater power than others. (Schiller 2014, p. 26)

Nowhere is this power differential exemplified more than in capital's ability to integrate workers 'as a factor of production to be used or ejected at will' (Dyer-Witheford 2015, p. 32). This 'moving contradiction,' argues

Dyer-Witheford, is constitutive of networked capital's vertical integration of flexible labor into accelerated circuits of commodity production, distribution and exchange. Computer networks provide for this acceleration through the 'deepening commodification of communication, and the extraction of increasing quantities of free labour from network users' (Dyer-Witheford 2015, p. 36).

> [W]e can say that the addition of cybernetics to the value vortex powers up both aspects of capital's moving contradiction, the double dynamic by which on the one hand it expels labour through automation, and on the other absorbs new cheapened labour, all the while trying to abridge the consequent contractions between production and consumption by increasing reliance on debt and speculation. (Dyer-Witheford 2015, p. 37–8)

These dynamics have been central to the restructuring of media organizations in recent years. Media that had historically been tied to local and national markets, in particular through news, have, through financialization, become integrated into global mergers and acquisitions markets (Compton and Dyer-Witheford 2014). Indeed, the role of the finance sector has swelled in Canada in recent years (Winseck 2010). Postmedia, the country's media giant comprised of close to 200 newspapers, websites and magazines, is controlled by hedge fund investors led by GoldenTree Asset Management. Postmedia was created by GoldenTree in the wake of the hedge fund's purchase of the debt-ridden CanWest chain. Since 2010, Postmedia staff have been slashed in half and assets sold off (Benedetti and Compton 2015; Olive 2015). The job cuts occurred across the entire Canadian media as the global recession took a particular toll on advertizing-supported media (CMCRP 2015). In January 2016, Postmedia merged news operations in four major Canadian cities—Vancouver, Calgary, Edmonton and Ottawa—collapsing eight newspapers, involving four broadsheet and four tabloid titles, into one news organization for each city. The eight separate titles remain, but all editorial staff were rationalized into one news team reporting to a single editor-in-chief for each city (Bradshaw 2015).

Job cuts also continued at the Canadian Broadcasting Corporation (CBC), the country's public broadcaster, which has been forced to reduce

staff after years of budget tightening at the hands of both Conservative and Liberal governments. In March 2015, the public broadcaster announced plans to slash a further 1500 staff by 2020 (Bradshaw 2014a).

Local TV news is also at risk. Declining advertizing revenues tied to a lingering economic slump and the cancellation of state support through a local programming fund have led to deepening troubles for local broadcast news operations. Revenues for conventional over-the-air broadcasters dropped $338 million between 2010 and 2014. One high-profile casualty was CHCH-TV. The Hamilton, Ontario, station radically reduced its newscasts in December 2014 (Bradshaw 2014b).

In the wake of this uncertainty, Canadian media companies have responded by restructuring newsrooms and creating new digital platforms (Li 2015). French-language *La Presse* ended its weekday print editions in 2016 as it invested in a new tablet edition of the paper. Both the *Globe and Mail* and *Toronto Star* continue to publish daily print editions, but they too have placed bets on their new digital platforms, with the *Star* in 2014 creating a digital newsroom staffed with journalists who were to be paid less than other reporter/editors, in effect creating a two-tier pay scale in the newsroom (Baluja 2014).

These were not isolated moves. In 2015, *The New York Times* announced an ambitious plan to reach $800 million in digital revenue by 2020—double its digital revenue from 2014 (Lichterman 2015). This followed the release by the company of a widely discussed internal 'Innovation' report calling for the abandonment of the 'Church and State' separation of the business and editorial departments (New York Times 2014). The report called for the creation of 'promotional teams' in the newsroom and for individual reporters and editors to better self-promote themselves and their work using social media. The decision held enormous significance. What was arguably the world's most important English-language daily had declared that business interests were to be integrated into the daily work of reporters. It was a clear break with the journalistic profession's core legitimation principle (Compton and Benedetti 2015).

But the paper wasn't alone in announcing a shift in emphasis from traditional platforms to digital. In January 2015, the BBC released its *Future of News* report which outlined the public broadcaster's plans to emphasize current and emerging digital news platforms. In Canada, the CBC

followed suit releasing its own report—'A Space for Us All'—that laid out a plan to double its digital reach by 2020. The blueprint explained the CBC's desire to reduce fixed costs while reaching an expanded digital audience, which would—in theory—help increase revenue streams. Unlike CBC radio, which remains free of advertizing, both TV and Internet divisions are ad supported.

In the private sector, Rogers Communications—one of Canada's three largest telecommunication companies—announced a $100 million partnership with Vice Media to produce content for mobile devices and the web (Brownwell 2014). It was another high-profile announcement signally how both public and private media capital was restructuring to develop new networked commodity chains. In the United States, major news organizations such as the Journal Media Group have teamed up with Knight Digital Media Center at USC/Annenberg to spearhead the 'transformation of newsrooms.' The goal is to integrate 'journalism and audience engagement first for the web, smart phones and tablets and then turn to print at the end of the cycle' (Stewart et al. 2015). According to Michelle McLellan—a co-author of the report: 'It's a matter of re-engineering journalists' attitudes and their relationships with news consumers, as well as changing newsroom workflows and priorities' (McLellan 2015).

Here we find the nub of the contradiction at the heart of the cybernetic transformation of value chains involving creative knowledge workers. The decomposition and recomposition of labor involves intense efforts to overturn and restructure long-standing work routines and professional standards. In the case of newsrooms, journalists are encouraged to work more closely with the business side, be more entrepreneurial and to promote their work through the circuits of new media. As a result, argues Ursula Huws, creative knowledge workers are 'simultaneously both complicit agents of restructuring and victims of it' (Huws 2014, p. 101). Evidence of this contradictory relation was found in a survey of Canadian journalists working in digitalized newsrooms. 'On the one hand, most journalistic workers are dissatisfied with their incomes and the precariousness of their careers. On the other, they appreciate their craft, its contributions to society, and the autonomy they report experiencing' (Comor and Compton 2015).

Creative workers—such as Uber-driving freelancer Brandon Smith—are increasingly likely to be working multiple jobs 'leading, very often, to contradictory identities' (Huws 2014, p. 172). These workers are deeply attached to their creative work. And because their work has meaning, the 'personal identification of the innovative worker with his or her innovative idea also gives rise to another set of contradictions: between the individual and the collective interest, and between competition and collaboration' (Huws 2014, p. 112). Precarious creative workers, those who don't have stable employment with a single employer and who often fall through the gaps in legislated employment standards, are compelled to share their ideas, promote their work and collaborate with other creative workers who can be viewed as competitors for the next contract or staff position. This state of affairs poses obvious challenges for union organizers.

Organizing Creative Workers in Canada

Even as union organizing in North America has experienced an upturn—and particularly among digital media workers in 2015 (Chen 2015)—a number of challenges remain: how people who perform media work, or want to perform it, self-identify; how, and indeed whether, they identify the conflicts embedded in this work; and how to establish bargaining power in order to transform both the conditions and the content of the work. The structure of North American unions, and the laws that underpin them, may also not adequately help workers address what confronts, and sometimes divides, them.

The labor relations regime in Canada is similar to the one in the United States, and many Canadian unions, including the CMG, are part of larger so-called 'international' unions based in the United States. In Canada, the regime is based on the closed shop and automatic dues check off—the lifeblood of the union institution. Unions are therefore organized specifically around workplaces. Their legal status is that of exclusive bargaining agent for a group of employees defined in a certificate issued by a Labor Board. Canada's long history of social unionism and labor militancy has co-existed with a business unionism that takes a

narrow approach to labor organizing focused on administering collective agreements (Camfield 2011). As such, labor organizing is often reduced to organizing workers into state-sanctioned bargaining units by demonstrating that a majority of employees in a prospective unit, all currently working for the same employer and sharing a 'community of interest,' want to join the union and bargain collectively.

This regime has severe limitations for workers not defined as employees, the self-employed and those working for more than one employer, those working for small employers and the unemployed. It is therefore vulnerable to labor market restructuring and the decomposition and recomposition of labor on a global scale in the era of network connectivity. While there are no reliable statistics on the proportion of the media workforce that is precariously employed, the proportion of organized workers in the private sector has dropped in Canada in the last 35 years (Galarneau and Sohn 2013). With the rise of freelancer unions, however, media workers outside of traditional employment relationships are increasingly open to collective organizing and collective action, even if their connection to, and even knowledge of, unions is often sparse.

The CMG is a multi-employer local of the Communications Workers of America, which represents around 700,000 workers in a broad range of industries including telecommunications, media and airlines. CMG has 6000 members across Canada and 11 different collective agreements. CMG's biggest unit is at the CBC, the public broadcaster that has been undergoing successive funding and staffing cuts for more than two decades, mirroring staff cuts at private broadcasters. The union, both in Canada and the United States, has recognized that organizing new members is an essential survival strategy. However, the path to organizing in the current climate in North America is still being charted, and there is mixed political support for organizing with precarious workers.

Unpaid media internships, underpaid freelance contributions and 'user-generated content' are wedges driven between staff media workers and freelance and emerging content creators. Staff journalists, photographers and producers have seen some of their work replaced with reader/viewer submissions that are unpaid. Producers, editors and reporters who remain on staff are assigned as aggregators of these submissions while resources are pulled from original newsgathering. Skilled sound engineers, camera

operators and video editors are sacked as media bosses ask the remaining overworked employees to make it look and sound more like YouTube.

Meanwhile, workers trying to break into the field are sometimes willing to work for free or on the hope of getting paid (what is known as 'on spec') to get a foot in the door. They can see traditional media organizations—and their staff—as gatekeepers that limit access both to jobs and to a diversity of media content. And they have a point. The average newsroom in Canada is older and whiter than the general population. The interests of established media union members appear to be pitted against those of unorganized workers, which can also lead to the misdiagnosis of a generational conflict in which baby boomers, with secure—and often unionized—jobs are destroying the industry and threatening the next generations (Lytvynenko 2016). Unorganized workers are invited to believe that joining a union as a path to collective self-organization is old-fashioned and a crimp on one's autonomy and that unions don't defend the interests of the young.

With a decline in the availability of stable, unionized media jobs even as journalism and media programs proliferate in colleges and universities (Charbonneau 2013), emerging media workers are exhorted to be entrepreneurial, flexible, multi-skilled and able to train themselves on new equipment, software and platforms (Briggs 2011). They are framed as entrepreneurs, professionals or users whose primary interest is to grow their own brand to ensure success in a rapidly transforming media environment.

The promotion of the idea of generational conflict reflects the lack of analysis in popular journalism about how the media is being restructured, in what ways capital is still being accumulated and who is benefiting most from the transformations. This continues to be true despite the fact that recent critical scholarship argues that networked capital is using the new value chains to monitor the enormous amounts of data generated by users—both paid and unpaid—to underpin their advertizing sales and data-mining accumulation strategies (Dyer-Witheford 2015; Manzerolle and Kjøsen 2012). 'New' media companies tend to be opaque about their operations and most are privately held with no public reporting requirements of their financial health. Companies such as Google, Twitter and Facebook have enjoyed healthy financial valuations without much public

data on how and where they earn revenue. Their users are as much in the dark as anyone else.

Struggling to Make Contradictions Visible

More research and public discussion is needed on the role media workers play in increasingly sophisticated and globalized divisions of labor and who is profiting most from their work. For longer-term employees of Google, Bell Media or VICE, for example, conflicts over worktime, pay and work satisfaction are visible and pointed. Someone else is telling you what to do, how and when to do it, and how much you will be paid for it. That someone is identifiable both as having power over you and as profiting from your work. The conflicts are collectively shared and can lead to collective organizing within the workplace, as we've seen recently at digital media organizations in the United States, including Gawker, Vice, Huffington Post, Salon, Al Jazeera America and the Guardian US. Employees at VICE in Canada and the UK also launched union drives in late 2015.

Short-term contractors and freelancers have a different experience of the employment relationship. For some, the view is the employer took a chance on you and, to sustain that relationship, it's sometimes worth ignoring the conflicts. One set of independent media workers is bucking that trend. Hundreds of workers in independent non-fiction TV production have begun to organize collectively in Canada, the United States and the UK (Canadian Media Guild 2014). This is a mushrooming sector in Canada as broadcasters contract out more and more production, including lifestyle, reality and documentary programming. It is also an industry dominated by freelance work arrangements. On the 'scripted' (drama, comedy) side of the industry, craft unions have long established a model in which to bargain with independent producers outside of the legal industrial relations regime. They have secured what is called voluntary recognition from production companies who recognize their jurisdiction to bargain framework agreements for the industry. In Canada, these craft unions—writers' and directors' guilds, the actors' union and technicians' unions—have been unable, or uninterested, to organize workers in non-

fiction TV. In part, this is because the productions skirt many of the typical craft roles—actor and writer—and have much leaner production crews.

Many of the workers in non-fiction TV are former CMG members—journalists, editors, sound technicians, camera operators and producers once employed at a broadcaster—who came to the union for help to improve working standards and health and safety in their new sector after realizing that their individual relationships with production companies were not enough to sustain a healthy career. Several hundred workers in Canada have so far signed on for collective bargaining with their multiple employers. The union is attempting to organize for voluntary recognition from production companies and to negotiate a framework agreement industry-wide, in the model of what has been done in the scripted TV and film sector, except—unlike with the craft unions—it seeks a single agreement for the entire crew. Because these productions are supported by public funding for Canadian content as well as by tax credits, the union is also seeking political support for improved working conditions and enforcement of labor and health and safety laws.

Aside from improving the working conditions of thousands of media workers, this organizing effort could also supply a model of sectoral bargaining that the CMG could bring to other sectors of the content creation industries that have emerged in the last couple of decades, including games and online video. Bargaining according to the existing Canadian labor regime is more difficult in these sectors because so many of the workers are considered self-employed entrepreneurs and many create on a speculative basis, their pay based on how well their product sells on an online platform.

Organizing YouTubers

For this latter set of independent creators, even the employment relationship itself is hidden. Take YouTubers, the loose group of independent video producers whose projects are primarily distributed on YouTube. It is easy to mistake them for amateurs or prosumers who use the platform to share videos of their cats and children. Google treats them as users,

and they are certainly part of the broader digital shift to 'user-generated' content, even as the company cultivates YouTubers to provide a pipeline of fresh and appealing content to attract views and advertizing dollars. Google and multi-channel networks (MCNs), middlemen that group multiple YouTubers into online 'channels,' are part of the new digital value chains that accelerate the circulation of commodities and capital. Google needs a constant flow of fresh content delivered by the expanding reserve army of precarious and under-employed workers, a reality that can be masked by the concept of prosumer (Comor 2010). As a Canadian YouTuber explained in early 2015 (personal communication), 'users don't even understand their relationship to the stuff they are using anymore.'

YouTubers consider themselves professional, 'independent' creators even if they are dependent on the platform, its algorithms and its one-sided user agreement to make money without having any control over, or even disclosure about how these function. Similar issues exist for creators who produce content on Facebook. One Canadian YouTuber wrote (Speerin 2014) that he must reach at least one million views per month to earn the equivalent of minimum wage—$11 per hour—on YouTube. He's a news satirist who wants to focus on Canadian political stories. It's difficult to earn money this way because of the limited demand for Canadian political satire on the global Internet. Google also appears to use a classic speed-up strategy, requiring YouTubers to produce ever-increasing volumes of new material on the platform to sustain the same income. And as Ursula Huws points out 'the platform economy extends capitalism's scope into the informal economy, again taking a hefty rent from each transaction, as well as bringing this labor within the scope of capitalist discipline and time regimes' (Huws 2016).

The role of MCNs has grown to the point where many YouTubers feel compelled to participate in order to generate sufficient promotional exposure to secure an income on the social network. MCNs, which consolidate views in order to attract investors and large-scale advertizing, sign exclusivity deals with YouTubers to 'represent' them and take a cut of the ad revenue. They provide information to YouTubers on how to make money on the platform, and also deal with copyright issues, but have also been known to take exclusive rights to content. Successful and

growing MCNs provide less personalized help to YouTubers and are often seen as a(nother) hand in creators' pockets. Given its near monopoly position, at least in North America, with advertizers and users, the worker-users are largely at the mercy of YouTube. Boycotting it means leaving the business. Working with it means taking the gamble that you will be one of a small minority of creators to earn the bulk of views and revenue.

From the point of view of creators, it is unfortunate that the CBC launched a new partnership in 2015 with a major US-based MCN owned by telecommunications giant AT&T and the Chernin Group. The public broadcaster, long a leading employer in the country's cultural sector, is now exhorting Canadian independent creators to provide content on spec via MCN Fullscreen under the guise of a new 'talent development' system. Incentives for creators include the *chance* to get a show on the CBC and help boosting their brand. At the end of 2015, CBC posted a one-year contract position for an 'entrepreneurial spirit' who is 'comfortable with long hours' to serve as the producer for the Fullscreen partnership. The key duties include 'scouting, signing and managing social media influencers and growing their audience across YouTube, Vine, Instagram, Twitter, and Facebook and finding meaningful ways for this talent to integrate within the CBC programming units and beyond.'

By virtue of the partnership, CBC is requiring Canadian creators to join Fullscreen, which boasts a network of nearly 70,000 YouTubers, to be eligible for 'talent development' within their own public broadcaster. This excludes Canadian YouTubers that belong to another MCN and any creator that might choose to forgo participation in Google's speculative framework altogether. Given the economics of YouTube and the global strategy employed by Fullscreen, it's unclear the CBC initiative can in any way help Canadians make a living by creating content for and about Canadians, as the CBC has always been expected to do up to now.

Self-employed creators are conditioned to treat themselves as entrepreneurs, even pioneers, in the brave new world of digital media. Their country is the Internet, with which Google has developed a strong sense of identity. Google and MCN further shape the relationship with active user-workers as co-marketers, creating a sense of joined interests in which people self-identify with the platform. There is a tendency to roll a regu-

lated work environment and decent working standards in with the gatekeeping backwardness of regulated media in general.

On the other hand, a group of Canadian online content producers recently founded the Independent Web Content Creators (IWCC). While not a union, the IWCC is focused on events, education, lobbying and connecting members to resources. The organization could also potentially provide an important opportunity to develop a collective analysis of that part of the media industry, as well as positions on improving the situation for independent creators. CMG organizers and IWCC members have opened discussions about how the two organizations could support each other in their respective organizing work.

Some self-employed content creators are beginning to question media organizations that directly employ a shrinking number of media workers as salaried employees while leaving another group shouldering all of the risks inherent in content creation. 'Why can you choose which workers you pay?' asked one (personal communication, autumn 2015). It is a question for Google, Facebook and, indeed, the CBC. And it echoes the question that other workers have been asking about Uber and the so-called ride-sharing services.

Conclusion

Organizing media workers in the age of cybernetic capitalism requires a careful analysis of what work is being done, where and by whom. It has to be recognized that the full range of participation in networked communication is not, at least yet, universally understood as work in the traditional sense, and the people producing within it are not always seen as workers. This is true for people providing services in a wide range of areas seemingly without a boss, but whose conditions of work are tightly controlled by online platforms such as YouTube, Uber, Lyft and Mechanical Turk.

One does not have to type into a search engine for very long to find a reference to so-called 'legacy' media as dying dinosaurs. Traditional jobs are being cut, traditional newsroom unions are being broken and a growing army of precariously employed media workers cast about for a way to keep food on the table and a roof over their head. The shift in the media

sector has been swift across North America and Europe. After 'Go into public relations,' the most common advice for media workers is to boost their entrepreneurial spirit, build their brand and embark on the adventure of self-employment. In this formulation, these are no longer jobs but opportunities. These workers become part of the 'liquid' labor force (Huws 2016) available to fill the just-in-time and all-the-time content needs of an industry in transformation.

There is surely opportunity in this brave new future, but it is largely conceived as an individual enterprise in which the most hardworking and the best skilled will thrive. Even newly organizing digital media workers at Gawker have decided they don't need just-cause protection from being fired, instead trusting their managers 'to make hiring and firing decisions to keep the company moving smoothly' (James 2016). There are winners and losers in the media business, we are told. Among the losers could be your legacy-media employer. Or, as a common trope would have it, it could be your 'stick-in-the-mud co-workers' or 'hapless' fellow freelancers who are just not up to the challenge. And then there's the problem of all those media toilers who are missing from the formulation of worker: users, prosumers, entrepreneurs—atomized creators not typically invited to consider their situation collectively or the platforms that control the distribution of, and payment for, their work as the boss.

Media unions need to find a way to embrace these contradictory identities and create a sense of common purpose and inter-dependency among the people who produce for the media without truly controlling the platforms and organizations that profit from their work. Workers themselves need opportunities to analyze and share intelligence on what they are experiencing and to start putting together the puzzle-pieces of the recomposing labor market. They will need help from researchers and policy-makers.

We must all recognize that the new commodity chains of cybernetic capitalism are not simply spaces of freedom where entrepreneurial media workers with the 'right stuff' succeed. Platforms such as Google and Facebook are deeply contradictory. And as long as workers remain divided and atomized, these platforms will continue to serve networked capital's efforts to reshape the mode of accumulation in ways opposed to supporting a more robust and democratic social commons.

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10

Digitalization of Public Services in Europe: Policy Challenges for the European Trade Union Movement

Vassil Kirov

Introduction

In the academic literature and in the public debate, there is an increasing consensus that digitalization impacts significantly on work and employment in Europe. However, even if the processes of digitalization are not new, as such, the investigation on how exactly digitalization impacts the quality of work and employment is relatively new. In recent years researchers' interest in different disciplines has been focused more on the digitalization effects in ICT, in creative industries, in education, in transport (the case of Uber among others) or even the hotel industry (booking.com or airbnb.com). The recent phenomena of automation, crowdsourcing, user-generated content and so on have become the subject of intensive studies, also transnationally, with sometimes alarming results in terms of the fragmentation of work and precarization, lower job

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P. Meil, V. Kirov (eds.), *Policy Implications of Virtual Work*,
Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_10

quality and negative impacts on work-life balance. But as virtual/digital work is empirically extremely diverse (Webster 2014), an emerging body of empirical studies of its different forms suggests that there is need for a more subtle analysis of what exactly digitalization entails and how it changes work and employment (see more about this literature in Meil and Kirov (Chap. 1) in this volume).

As in other areas, during the last years there has been a growing corpus of policy documents and literature on digitalization in European public services. In these, digitalization is seen by policy makers as the main leverage of the modernization of public services in Europe. And paradoxically, digitalization of public services is explored mainly from the point of view of public sector reforms and benefits for governments and users, while its labor and employment aspects are clearly neglected. That is why the main objective of the chapter is to focus on the process of digitalization of the public sector and public services in Europe in order to address some of its impacts in the domain of work and employment and to introduce the emerging interest and involvement of the trade unions' movement about it.

Digitalization, being examined mainly from a 'technical' perspective, starts increasingly to challenge stakeholders in terms of work and employment consequences. However, there is limited concrete knowledge and ideas how to deal with it, and even if the recent 2015/2016 policy debates are intense and evolving, they are still too general, probably because of the lack of sufficient knowledge, the complicated configurations, mixing the old and the new (Valenduc and Vendramin 2016), often in a 'fascination' about technologies.

The analysis is done on the basis of a recent literature review the author conducted for the European Public Service Union[1] and analysis of policy documents of trade unions, published in 2015 and 2016. In addition, some observations were carried out during seminars and discussions with trade union officials.[2]

[1] The present report is prepared in the framework of a contract with the European Trade Union Institute (ETUI) in the period March to June 2015 ('The digital economy and public services').

[2] For example, the 45th Standing Committee on Local and Regional Government, 22 September 2015, Brussels.

Digitalization of Public Services and the Policy Context

Digitalization of Public Services

This part first introduces the concept of digitalization of public services. There are multiple definitions of digitalization. In a narrow sense, digitalization is the integration of digital technologies into everyday life by the digitization of everything that can be digitized.[3] However, in a larger sense, digitalization is seen as 'economic and social transformation triggered by the massive adoption of digital technologies to generate, process, share and transact information' (Katz et al. 2014). In sum, this concept is still evolving, and there is no consensus, in the academic or policy debate, what should be included and what not. However, in the domain of public services, the initiatives of e-government, e-health, e-procurement and so on clearly are areas related to digitalization. If digitalization has been seen as the main leverage of the modernization of public services in Europe (and beyond) for a long time, some new elements shape the recent move to digitalization—digital by default, 'once only principle' (it means that users (citizens and businesses) supply certain standard information only once, because public administration offices take action to internally share this data, so that no additional burden falls on citizens and businesses) and so on.

The spheres of digitalization in the public services are really large. Many governments in Europe have focused on key services, for example in terms of high annual number of transactions. According to the 2010 report 'Digitizing Public Services in Europe: Putting ambition into action', prepared for the European Commission, there are four main spheres of digitalization: services, generating income for the government (e.g., tax administrations and so on); registrations (e.g., births, company, moving); the so-called service returns (e.g., health, social, libraries); and finally, permits and licenses (e.g., building, education, passports). There are numerous national examples of government efforts going in

[3] http://www.businessdictionary.com/definition/digitalization.html#ixzz3ZAPi92A1.

this direction. The UK, for example, implemented a new strategy to transform the tax-related services into 'digital by default'.[4] In Norway—NAV—there are new procedures and system solutions for all governmental services, the objective being to offer simple, user-friendly online services available 24/7.[5] In Denmark the policy goal was to have at least 80 percent of all written communication between the public and the public authorities digital only by 2015, accelerating the use of ICT in frontline public service delivery, such as in healthcare, care for the elderly, social services and education.[6] However, policy reports presenting those changing processes mainly focus on the description of the service process compared to the previous type of delivery, but not on the labor process.

There is understanding that digitalization, together with other processes, is radically transforming the public sector and the public services. Already in the mid-2000s, some scholars (Dunleavy et al. 2006) advanced the thesis that the New Public Management (NPM) is 'dead' in the public sector and that the next level of change is toward the so-called 'digital-era governance' (DEG). Based on research carried out in seven developed countries (the UK, the United States, Australia, New Zealand, Canada, the Netherlands and Japan), the authors argue that for a long time, digitization was impacting 'only the back-office activities', but in the current DEG there is a 'whole complex of changes, which have IT and information-handling changes at their center, but which spread much more widely and take place in many more dimensions simultaneously than was the case with previous IT influences' (Dunleavy et al. 2006, p. 478).[7] Digital-era changes have already triggered numerous significant shifts: 'a large scale switchover to e-mail in internal and external communications; the rising salience of Web sites and intranets in organizational information networks; the development of electronic services

[4] HM Revenue and Customs, HMRC Digital Strategy, December 2012, https://www.gov.uk/government/publications/digital-strategy-december-2012.

[5] Digital Agenda Norway (2012), Digitizing Public Sector Services. Norwegian eGovernment Program, Oslo, https://www.regjeringen.no/globalassets/upload/fad/kampanje/dan/regjeringens-digitaliseringsprogram/digit_prg_eng.pdf.

[6] https://systematic.com/publicsector/cases/digitalisering.

[7] See also Dunleavy, P. and Margetts, H. (2010), The Second Wave of Digital Era Governance, American Political Science Association Conference, 4 September 2010, Washington DC, USA.

for different client groups; the growth of electronic procurement systems; a fundamental transition from paper-based to electronic record-keeping; and so on' (ibid., p. 479). The authors of this seminal article identify some key elements of the digitization in public services: electronic service delivery (completely embrace and imbed electronic delivery at the heart of the government business model), new forms of automated processes—zero touch technologies (ZTT) (that do not require human intervention), radical disintermediation (the effort to strip out layers of redundant or non-value-adding processes and bureaucracies from service delivery), facilitating isocratic administration and co-production ('do-it-yourself' government) and moving toward open-book government (a transition to full open-book governance instead of previously very limited or partial 'freedom of information' regimes).

As digitalization spreads in the private sector, in the recent debates in the academic literature, other authors (Osborne et al. 2013) also claim the need for or a 'public service dominant' approach, based on the management ideas from the service sector. From this perspective it will be interesting to reflect on the transfers of managements models from the private sector service delivery in the context of digitalization.

Last, but not least, if changes in work across Europe, driven by globalization, have been thoroughly investigated within industries or services (e.g., greater standardization and intensification of work, fragmentation of work processes and of employment, increasing precariousness, lower job quality and negative impacts on work-life balance—see Flecker and Meil 2010), much less is known about the real impact of digitalization on work and employment in the public sector. However, the changing models of service delivery have certainly introduced new players in the value chains (e.g., large IT or business service companies), and this value chain restructuring impacts work organization, jobs and skills.

The Policy Context of Digitalization in Europe

As the increased integration of digital technologies into the public services delivery is one of the objectives of the European Union (EU), for the purposes of this chapter, the European policy context in this area

should be reminded. The EU has focused on ICT developments and digitalization for a long time, but the recent Europe 2020 strategy (the EU's growth strategy for the decade 2010–2020)[8] has reasserted this strong interest, considering it as a growth force. Europe 2020 has a special focus on digitalization and ICT as the base of the key objective of achieving a 'smart, sustainable and inclusive economy'. In this perspective, the Europe 2020 strategy is based on seven pillars, one of them being the digital agenda which proposes to 'better exploit the potential of ICTs as a way to foster innovation, economic growth and progress'. Some of the different priorities in the digital agenda (see more about in Valtýsson (Chap. 4), in this volume) address directly a concern for public services and e-skills. Moreover, the European e-Government Action Plan 2011–2015[9] launched by the European Commission (EC) reflects these priorities as it aims at improving openness and flexibility of public administrations along with enhancing collaborative practices with users. In the document 'A Vision for Public Services', the EC delivers its approach for the future of public services, as an 'open and collaborative government mode' based on the principles of collaboration, transparency and participation.[10] Finally, in 2015 the EC Digital Single Market Strategy[11] has engaged in 'tearing down regulatory walls and moving from 28 national markets to a single one', certainly a process impacting the functioning of public services.

In addition, the process of digitalization of public services in Europe and its impacts have to be examined in the larger context of the effects of the economic crisis and the austerity policy measures which lead the EC and the national governments to expect public services to become more efficient and less costly through reforms. For example, the 'once only' measure in itself will potentially save around €5 billion per year by 2017.[12]

[8] http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/index_fr.htm.

[9] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0743:FIN:EN:PDF.

[10] http://ec.europa.eu/digital-agenda/en/news/vision-public-services.

[11] https://ec.europa.eu/digital-single-market/en/digital-single-market.

[12] https://ec.europa.eu/digital-single-market/en/economy-society-digital-single-market.

Extent and Consequences of the Digitalization of Public Services in Europe

Different international organizations have tried to measure digitalization, including the digitalization of public services, using various approaches and methodologies (Kirov 2015). Several studies outsourced by the EC to consultancies reveal evolving trends across Europe, in terms of availability online, the use, optimizations of costs and so on.

In 2010 a study entitled 'Digitizing Public Services in Europe' revealed that the 20 key basic public services were 100 percent available online in European countries such as Italy, Malta, Austria, Portugal and Sweden in 2010 (CapGemini et al. 2010). On average, public services are increasingly digitalized: they were fully available online at 82 percent in the EU in 2010, compared to 69 percent in 2009. If we do not have more recent figures, it can be assumed that this ratio is even higher today. This study also underlines that public services to business have been prioritized over the past years.

More recently, the study on 'e-Government and the Reduction of the Administrative Burden' conducted by Ernst and Young in cooperation with the Danish Technological Institute shows that more than 70 percent of EU countries have undertaken initiatives to put into practice the 'once only' principle.[13] The introduction of this principle supposes changes in the coordination of the central/local governments units.

The diversity of the situations in Europe in terms of digital public services spread is stressed in different policy reports: while they are an everyday reality in some countries, they remain almost non-existent or with limited use in others. The economic capacity of a country, measured by its income level, influences its e-government development. The EC's benchmark assessment conducted in 2010 highlights that there are also differences between e-government service maturity at national, regional and local levels (ibid.). While, in general, the adoption of online channels for the delivery of public services is growing, several gaps in the uptake are identified in many OECD member countries, where usage of

[13] https://ec.europa.eu/digital-agenda/en/news/final-report-study-egovernment-and-reduction-administrative-burden-smart-20120061.

online services remains more limited (see detailed data per country about the citizens and companies using the Internet to interact with public authorities in OECD 2013). In the member countries of the OECD, e-government usage averages 50 percent, but with a great variation among countries, and the use of more advanced services, such as accessing and sending forms online, is much less, especially as such services require robust security and payment systems. The above mentioned findings about diversity are in line with the scores of the Digital Economy and Society Index (DESI),[14] which includes five main dimensions, one of which is the digital public services. While digital development is uneven among EU member states, Digital Public Services is the dimension where performance is most fragmented.

Further than merely budgetary approaches, it is important to address the impacts of the growing digitalization of the public services. Digitalization is a driver of massive and global changes among the public services. First of all, it redefines the users' role and the delivery of public services as digitalization strategies are supposed to lead to more open, collaborative and transparent governments.[15] In this respect, digitalization is implemented to contribute to higher user satisfaction; thus, the role of the user is becoming central. Indeed, OECD (2012) explains that the approaches toward digitalization consider that better services are designed around users. Public services are becoming increasingly personalized, with a delivery based on the specific needs of the users, approaching an 'on-demand' model. Some studies are even emphasizing a switch to a 'co-production' model of public services. However, little is known how this new model is being translated within each particular public sector. Another possible evolution is that expectations of users are also growing as public services become more open and therefore more accountable.

Digitalization also transforms the governance model in the public sector, impacting the organizational and the governance structures that need to adapt. According to the vision of the EC, the appropriate governance

[14] https://ec.europa.eu/digital-agenda/en/digital-economy-and-society-index-desi.

[15] The paradigm of the open government is driven by opening up public data and services and facilitating collaboration for the design, production and delivery of public service. It is also about making government processes and decisions open, in order to foster citizen participation and engagement.

encompasses open structures, open organizations and open processes. This point remains vague and needs to be further examined by trade unions to make sure that these transformations are being implemented without negative impact on workers of the public sector.

Impact of the Digitalization on Employment and Working Conditions

From the General Debate About Digitalization Impacts on Work and Employment to the Case of the Public Sector

In the literature there are strong voices claiming that digitalization will impact work and employment (see literature review in Degryse 2016; Valenduc and Vendramin 2016). Some of these impacts are alarming and are highly publicized. For example, the recent study of Frey and Osborne (2013) suggests that around 47 percent of total US employment is in the high-risk category of work to be automated very soon. According to them, most workers in transportation, together with office and administrative support workers and labor production occupations, are likely to lose their job. When the methodology of Frey and Osborne is applied to Europe, predictions are even more alarming—from the mid-40 percent range (similar to the United States) up to well over 60 percent of the labor force is estimated to be impacted in the following decades (Bowles 2014). However, these studies and their conclusions are highly contested, and others see digitalization as a driver for job growth, for example, Digital Single Market Commissioner Andrus Ansip announced the creation of 3 million additional jobs by 2018 in the App economy alone (Kowalsky 2015).

However, there are few studies analyzing this impact on the public sector and public services specifically. As previously explained, digitalization goes together with restructuring reforms, which lead to important cuts in employment within the public sector. However, it is quite complex to determine to which extent digitalization is the driver for employment reduction.

Digitalization also impacts job contents and working conditions, and some extrapolations could be made to the public services areas. Digital technologies can be beneficial and lead to work enrichment by saving time on routine tasks, to employees' satisfaction and participation. However, in other cases, they could lead to stress, psychosocial strain and dissatisfaction. Moreover, digitalization can lead to deskilling and change of the work object, that is, from working with human beings to working with electronic information. Indeed, with digitalization of public services and user-centric models, users' satisfaction becomes the measure of efficiency of the public services and therefore of the workers activities. Therefore, the quality of the work accomplished by the public sector workers is becoming more and more based on productivity concerns and quantified performance indicators. This can lead to a reduction in the complexity and variation of their work and their feeling less valued (see also Huws et al. 2009). Coupled with digital tools that allow traceability, this could also result in stricter surveillance of employees and more pressure on them to achieve quantified objectives. ICT skills is therefore a major issue when it comes to digitalization of public services, as it goes with a strong need for qualified public sector workers. To illustrate how crucial ICT skills are, according to the OECD, public administration will be one of the top four sectors in terms of ICT-related employment, and more than 10 percent of the public sector workers will be working in ICT-related works.

Behind this need for training, there is the risk of growing inequalities between educated and less educated people brought about by digitalization. Indeed, digitalization will reinforce the role of some professions within the public sector (Kirov 2015). The process could benefit some socio-professional groups while endanger others (less e-skilled, back-office, older employees and so on).

The Impacts in Public Services

The consequences of digitization on employment in public services are complex but not well known and analyzed. In the relevant literature, there is agreement that it is very difficult to predict the employment demand

in the context of the widespread use of ICT (Eurofound 2014, p. 62). In addition, the effects of digitalization cannot be examined separately, but only in the context of larger reforms and reorganizations (public administration modernization, lean organization programs, for example, in hospitals, and so on).

Although there are no direct indications in the literature, there should be a careful examination of digitalization and the parallel restructuring taking place in the public sector in many developed economies. For example, according to OECD, Germany is one of 25 OECD countries that reported an anticipated decrease in public employment levels as a result of planned reforms. A fiscal consolidation plan that began in 2011 included a cut of up to 10,000 jobs from the federal administration by 2014. But that goal was already reached in 2012. OECD reports that the implemented changes in employment levels have affected more than half of the ministries/agencies since 2000. There are three main processes shaping this change: discretionary hiring/dismissal, contracting out and reorganization/restructuring. Probably only part of these processes are directly related to digitalization, but it is worth further analyzing what the impact of reforms on digitalization is and, respectively, the impact of digitalization on jobs and working conditions. In this case it is clear that future research is needed to better demonstrate this link and provide trade unions with arguments in negotiation.

Some indirect indications about possible spatial restructuring could be identified in the recent book of Politt (2012). He explores how, in the context of technological change and digitalization, the provision of public services shapes the places in which they are located. The author also provides some evidence about the impact technological change has had on public service delivery, for example, the increase in digital communication, which contributed to the closures of more than 10,000 post offices in the UK between 1979 and 2009. An analysis is carried on the effects of digitalization and technologies in the case of hospitals.

In some cases, there is evidence that they could be beneficial and lead to work enrichment, employees' satisfaction and participation. In other cases, they could lead to job losses, stress, psychosocial strain, dissatisfaction and so on. For example, in a recent article of Nygren (2012), resistance to digitalization which leads to deskilling and a change of work

object are identified. One of the interviewed respondents concludes that 'work is not fun anymore when we have no contact with either managers or employees'. She describes how the complexity and variation of her work has been reduced: 'work achievement is now a matter of high efficiency, counted by the number of cases handled every day and not as it was before when she felt that her personal service was valued'. Participation of employees in the change process is a key element for the acceptance and satisfaction of the personnel. However, evidence-based research for the role of participation is limited and should be further developed.

Digitalization is associated also with so-called e-skills. E-skills seem to be needed to make optimal use of the available ICT and public sector digitalization. But, as highlighted by observers, a critical project for the digitalization of the public service, one that does not always receive the needed attention, is training.[16] The public administration is estimated to be one of the top four sectors in terms of ICT-related employment. More than 10 percent of public sector workers will work in ICT-related works (OECD 2014). However, according to media analyses, the percentage of public sector workers older than 50 is over 40 percent in some OECD countries. So the digitalization will certainly be challenging from the perspective of training older workers, especially in a context where the public sector is losing 'the war for tech talent'.[17]

It is clear that digitalization will reinforce the role of some professions within the public sector—for example, IT specialists and so on. A recent report of the consulting company EY identifies some of the key challenges associated with transforming professions in the public sector in France (EY 2014). These include the increasing cooperation between different administrative units in the context of project work, digital technologies and the new types of evaluations.

The process of digitalization could benefit some socio-professional groups within national/local governments and endanger others (less e-skilled, back-office, older employees and so on), but again, a careful case-by-case analysis is needed. For example, in the case of librarians (Huvila 2012), a recent study reports that digitalization has affected their

[16] http://somos-digitales.blogspot.com/2014/12/the-juncker-plan-and-digitalisation-of.html.

[17] http://www.computerweekly.com/opinion/Why-public-sector-is-losing-the-war-for-tech-talent.

work in multiple ways and 'multiple informants felt anxiety about the perceived impossibility to keep pace with the changes and follow the latest developments'.

E-government leads to serious reorganization taking place in different segments—changes in job content, skills and relationship of the administration with the users and among the different administrative structures (because of the 'once only' principle, the move toward 'open government' and so on). There is a need to evaluate and analyze the impacts on work and working conditions within the concrete e-government initiatives. The e-government (which is changing from an option to the main channel of delivery of public services, at least in some countries) and the move toward open government define the role of the user in a new way, compared to traditional models of public service delivery. The users in this new paradigm are engaged in a 'co-production' of services, and their feedback is required in order to evaluate the service and eventually adapt it. In this perspective, the user's satisfaction becomes a measure of efficiency that could be further used by HR in the public sector. Hence, it is vital to understand the connection of service quality indicators and indicators that could be used for HR evaluation. In addition, the quantification of performance indicators, related to some of the digital tools, could lead to strict surveillance of employees, and privacy issue is crucial even if it is outside the remit of this chapter.

All these developments should be examined as part of a long-term process of change. Hayes et al. (2014), on the basis of their study on the Citizen Service Centres (CSC), one-stop shops, established in Greece in 2012, show how 'institutional change can be understood as complex imbrications of contrasting institutional logics rather than one institutional logic displacing another'.

Those changes certainly affect the professional cultures, as argued by the paper by Baines et al. (2010) which examines how the implementation of local e-government in England touched all public services and affected frontline workers across local authorities and partner agencies. In this case 'cultures' are invoked as barriers to the translation of this policy into practice.

Staff resistance to change is examined also in a recent paper of Berger (2014) highlighting the 'silent resistance' and the effect of e-government

on the staff in the case of Denmark: 'Staff perceives an increased workload combined with a reduced ability to provide service and help citizens, who together constitute a reduced work life quality. Generally, staff sees the technology part as far too complex, both for citizens and for staff'.

In this situation of knowledge gaps, it is clear that future research is needed to better demonstrate the dynamics and concrete dimensions of digitalization impacts on work and employment in the context of larger societal changes. This is particularly true from the trade unions' perspective. Future studies on concrete cases will allow providing employees' representatives with arguments for policy formulation and collective bargaining. Here the analysis of the consequences of digitalization in the private sector could give additional insights in order to better understand the processes and future challenges within the public sector.

The Trade Union Initiatives to Address Digitalization

Until recently, trade unions in Europe were not placing digitalization among the key challenges to address. However, this situation seems to be changing since 2015. In June 2015 the European Trade Union Confederation (ETUC) endorsed a Preliminary Assessment about the digital agenda of the European Commission. In this document, ETUC (2015a) argues that:

> The Commission fails to deliver a clear analysis of the strengths and weaknesses of the digitizing industries and service providers in Europe and its impact on jobs, of the risks of abuse of dominant position, and on the compatibility of the digitalisation with the "social market economy" set as one of the EU objectives.

ETUC further asserts that digitalization is not just a technological issue or a question of the market but also is 'about just transition of traditional jobs to digital jobs in the industrial and the service sector, it is a question of future society and its cohesion. Digitalization is a megatrend for the world of work, one we must be involved in shaping' (ETUC 2015a). From

this perspective ETUC declares that the 'trade unions' main focus must be put on the spectacular increase in productivity and its huge impact on employment and work. There is potential for major risks—in terms of monopoly building, mass redundancies, new possibilities of supervision and control, even of spying on employees, inadequate data protection and so on—and for major opportunities as well, new possibilities for better information, communication, participation and networking'. Finally, the ETUC 'demands that digitalization be based on quality work and the transition to be anticipated and managed in close cooperation with trade unions, European Works Councils (EWC), workers representatives in general'.

In a way, this opinion is a milestone in the changing trade union agenda, now taking account of digitalization, identified as new opportunities, but also new risks. In other public interventions of ETUC officials, this discourse is strongly reaffirmed.[18]

In the autumn of 2015, ETUC adopted its program for 2015–2019 (ETUC 2015b) stating that:

> Innovation and ICT provide new opportunities to enrich the quality of employment, public services and of education. Trade unions can help to create the political vision and raise expectations for the effective use of ICT. To provide the workforce with the skills and knowledge necessary to achieve smart and sustainable growth, quality education and training, workplace and work-related learning as well as re-skilling and up-skilling strategies for workers are needed. (ETUC 2015b)

In 2016 ETUC adopted a new working document, called ETUC resolution on digitalization: 'Towards fair digital work' (ETUC 2016). In this resolution several points summarizing union claims are developed—stressing inclusive digitalization, digitalization that does not reinforce inequalities, the need of upskilling the workforce, gender and so on. In this resolution, European trade unions claim that the European Commission should not consider the future of work as a marginal sub-theme, but to inspire debates on the German examples of Work 4.0 (BMAS 2015).

[18] https://www.etuc.org/press/digital-age-benefits-european-workers-and-enterprises.

In parallel, ETUC, together with some European sectoral federations, has had meetings with the European Commission[19] in order to promote transparent policy processes and the need to mobilize social dialogue. For example, the Sectoral Social Dialogue is an important instrument to include workers and lead to a better understanding of how digitalization will impact on workers citizens' lives.

The debates within the European trade union movement were enlarged, at the level of the European Parliament but also within the think tanks around the Party of European Socialists (PES), such as FEPS (see recent publications).[20] In 2015 the European Parliament adopted the Draft Opinion of the Committee on Employment and Social Affairs on 'Towards a Digital Single Market Act',[21] calling among others on the Commission 'to undertake a thorough assessment of the impact which digitalization will have on the number and types of jobs available and to gather information on new forms of employment, such as crowdsourcing and crowdworking'.

For the moment, at the level of the EC, it seems that the answers are too narrow, as Kowalsky (2015) recently claimed:

> The ETUC quite recently demanded that a permanent European Forum be set up composed of the European Commission, the European Parliament, and social partners to discuss how such a European digital vision can be developed and how to shape the future digital Europe, how to design industry 4.0, workplaces 4.0, smart digital services and good digital work, on the basis of a clear roadmap. The great digital transformation has to be steered in a sustainable and fair direction and new digital (crowd)work needs to be regulated.

Public Services Digitalization?

For the European Public Service Union (EPSU), the issue of digitalization has started to gain importance on the agenda since 2015. A look at the 2014 EPSU Congress resolutions illustrates that the word digi-

[19] http://www.epsu.org/a/11389.

[20] http://www.feps-europe.eu/en/publications/post/7.

[21] http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+COMPARL+PE-560.716+02+DOC+PDF+V0//EN&language=GA.

talization was not used even once.[22] During 2015, EPSU (sometimes together with ETUC or other sectoral federations) was consulted by the European Commission on initiatives relating to digitalization.[23] In May 2015 a meeting was organized in advance of the publication of the so-called Digital Single Market Package.

In a number of events, seminars and working meetings,[24] the issue of digitalization was put on the agenda, for example, concerning the digitalization of local authority services in Europe. At the end of the year, EPSU adopted a joint declaration[25] together with the Council of European Municipalities and Regions (CEMR), 'committed to work together to multiply the benefits and minimize the risks of digitalization at the workplace'. The declaration's emphasis is on the need of an open and transparent process and consultation; adequate training has to be provided to workers not only on ICT but also in relation to skills and workers' rights. The understanding of both social partners is that digital technology at the workplace must service to empower and support workers, through greater autonomy and work flexibility and improved quality of public services delivery. More concretely, CEMR and EPSU are determined to further develop the following action points[26]:

- Explore the changes to the work process caused by digitalization;
- Assess the actual benefits enabled by digitalization for workers and services delivery;
- Consider the information and training needs for workers at different stages in the implementation process and for different groups within the workforce;
- Identify how workers feel about the loss of personal/telephone contact with clients after the introduction of digital systems;
- Monitor the incidence of muscular-skeletal conditions in the workplace;

[22] http://www.epsu.org/IMG/pdf/Resolutions_EPSU_Congress_2014_-_EN.pdf.
[23] http://www.epsu.org/a/11389.
[24] http://www.epsu.org/a/11551.
[25] http://www.epsu.org/a/11865.
[26] http://www.epsu.org/IMG/pdf/Joint_Declaration_EN.pdf.

- Monitor the incidence of psychosocial conditions in the workplace;
- Implement monitoring of sickness absence after the introduction of digital systems;
- Identify examples of good practice in the implementation of digitalization;
- Facilitate the sharing of good practice.

This declaration and the involvement of both social partners in joint projects, as well as their wish to develop new projects, seems to be a step further in the more concrete policy debate.

Conclusion

In this analysis we have identified the large gap in the literature on the impact of digitalization on jobs, skills and working conditions in the public services sphere. So far, the benefits of digitalization of public services have mainly been strictly through economic cost-benefit analyses. The digitalization of public services appears to be thought of as a mainly positive trend. The potential disadvantages that such a transformation could lead to in the public sector have been neglected so far.

Despite the knowledge gaps, there could be some positive and negative trends for public service employees. Digitalization allows routine tasks to be processed automatically, saving time for workers to dedicate themselves to their core job. It can give more value to their work in this sense. However, there can be a backlash and a development toward negative trends, such as deskilling, in which workers are reduced to fulfilling tasks dictated by machines over which they have no control. This can lead to devaluation and stress, with performance only being judged by quantitative indicators. Also digitalization, coupled with the use of ICT tools to achieve tasks, leads to higher traceability and surveillance of the workers. In terms of job losses, there are prognoses, but no data on the current situation thus far. It is probable that digitalization has destroyed jobs in the public services, but it is not clear to what extent.

The recent emergence of digitalization high on the agenda of the European trade union movement, as well as specifically in the domain

of public services, is certainly positive. In this debate several aspects are relevant for the future social dialogue and collective bargaining:

- Digitalization of the public services is rarely examined from the perspective of labor and employee representation;
- The recent political debates at EU level about digital issues offer a space for the trade union voice—for example, responses and reactions to e-government and e-health plans, different taskforces and so on;
- The role of new skills and transformation of jobs—how to negotiate concretely? The need for new skills for workers' representatives as well, in order to have a better understanding of processes and challenges;
- Need for coordination and exchange between trade unions, since practices vary across the different EU countries and administrations[27];
- Need of anticipation efforts and tools to address restructuring and job impacts based on digitalization on the basis of scientific research and tools such as employment observatories and so on.

Finally, there is a process of raising awareness about the digitalization challenges within the European trade union movement. However, the debate, especially in the domain of public services, could be qualified as still very vague. The existing declarations and other documents adopted during the last year claim to be about the need to integrate labor and social dimensions but are not concrete. From this perspective further policy-oriented analysis is needed. However, some steps have already been taken, by EPSU and their social partner at EU level—CEMR—in their joint declaration, commitments and future plans.

Europe 2020 emphasizes the need for social inclusion and for fighting poverty, as well as increasing labor market participation with more and better jobs, as essential elements of Europe's socioeconomic model. But in practice different forms of precariousness, low-wage work and problems of social inclusion are the consequences of the pressures on the European model (Holtgrewe et al. 2015). In this perspective unions in Europe should be aware that digitalization could be both an opportunity and a risk.

[27] And need to follow developments related to digitalization in other sectors—see, for example, Luce, S. (2015), Background Report For the UNI Europa Commerce Conference, Gdansk, May 2015.

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11

The Legal Protection of Crowdworkers: Four Avenues for Workers' Rights in the Virtual Realm

Jeremias Prassl and Martin Risak

Introduction

Amongst the nearly unlimited factual variety that characterizes the emergence of online platforms over the past decade, both in terms of crowdsourcing in general (e.g., crowdfunding or the allocation of non-labor resources such as accommodation) and crowdsourcing of labor ('crowdwork') in particular, one phenomenon stands out: virtual crowdwork. Digital work is delivered in the virtual world, usually via an interface provided by a platform. The tasks involved range widely—from high-tech programming and skilled design to comparatively simple, repetitive activities involving low pay and highly standardized or automated

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Dynamics of Virtual Work, DOI 10.1007/978-3-319-52057-5_11

processes. These 'microtasks' include digital labelling and the creation of image descriptions, categorization of data and products as well as the translation or proofreading of short texts, with larger tasks often broken down into smaller subtasks to be worked on independently. These microtasks are then posted on platforms, where crowdworkers can find and complete them. The leading platforms for this kind of 'cognitive piece work' (Schmidt 2014, p. 378) or 'Neo-Taylorism' (Leimeister et al. 2014, p. 32) include Amazon's Mechanical Turk[1] and Clickworker.[2] Pay can be surprisingly low: survey research has shown that 25 percent of the tasks offered on Amazon Mechanical Turk are valued at $0.01, 70 percent offer $0.05 or less and 90 percent pay less than $0.10 per completed task, thus equalling an average wage of about $2 per hour (Eurofund 2014, p. 115).

We have described the detailed mechanisms underlying crowdwork elsewhere (Prassl and Risak 2016, p. 622); in the present contribution, we focus on the challenges this new form of work organization poses to traditional labor market regulation and explain how some of these might be met. To this end, this chapter is structured as follows. Section "Regulatory Challenges" outlines the regulatory challenges arising from crowdwork: One of the very purposes of employment and labor law is to draw a distinction between the genuinely self-employed and those requiring protection and to bring the latter within its protective scope. The multiplicity of contractual relationships and competing legal characterizations in the arrangements between platforms, workers and customers, on the other hand, sits uneasily with the traditional binary divide. It is this mismatch which sits at the core of classification problems in the on-demand economy and the resulting exclusion of crowdworkers from even the most basic labor standards.

In the following sections, we develop different approaches for addressing this problem. Sections "A Functional Concept of the Employer" and "Redefining the Notion of the Employee" deal with interpretative approaches to the notion of employee and employer in an attempt to enlarge (or restore) the scope of employment law to include those working in the virtual realm. Section "A Functional Concept of the Employer"

[1] www.mturk.com/mturk/welcome.

[2] www.clickworker.com.

outlines an approach based on Prassl's concept of a functional-typological concept of the employer, developed on the basis of a catalogue of five employer functions (Prassl 2015). Section "Redefining the Notion of the Employee" then proposes another re-interpretation of the employee, emphasizing economic arguments over organizational ones. Both approaches have the advantage of requiring little legislative activity and may therefore be the most easily applicable, especially as judges are increasingly asked to adjudicate upon employment status in platform-based work.[3]

Another (much-disputed) approach to regulating work in the on-demand economy is based on the idea that an intermediate legal category, situated between the employee and the self-employed, might be the most apt to deal with the legal issues arising from crowdwork. Section "Introduction or Extension of an Intermediate Category" looks at existing models and recent litigation in Austria, Germany and the United Kingdom to demonstrate the potentially different effects of such an approach.

The third and maybe most obvious way to deal with crowdwork is to follow established patterns of regulation, equating platform-based work with another three-partite employment relationship, viz., temporary agency work. On the European as well as national level, special legislative provisions have been enacted to deal with the specific problems arising from the multiplicity of contracts and contractual partners found in outsourcing and agency work. Section "Special Legislation (Crowdwork Act)" reflects on this avenue and points out possible advantages of this approach.

Whilst the avenues to be chosen are thus potentially manifold, one thing is clear: there is an urgent need for legislators and practitioners to address the often vulnerable situation of virtual crowdworkers competing against each other in the boundless virtual world for work and thereby their livelihood. And we have to keep in mind that any proposed solution or a mix of solutions must be able to respond flexibly to changing eco-

[3] For example, Employment Tribunals 28.10.2016, 2202551/2015 & Others, Aslam, Farrar & Others v Uber B.V., Uber London Ltd. & Uber Britannia Ltd., https://www.judiciary.gov.uk/judgments/mr-y-aslam-mr-j-farrar-and-others-v-uber/ (2.11.2016).

nomic and organizational models but at the same time offer conceptual coherence in the face of factual complexity.

Regulatory Challenges

Working Conditions in the Crowd

It cannot be denied that crowdwork offers significant potential benefits for (at least some of its) workers. First and foremost, in terms of flexibility: crowdworkers can decide when to work, where to work and what kind of tasks to accept. Platform work might therefore be more compatible with other duties, such as childcare. The flexibility and potentially limited nature of individual engagements can also help the underemployed, providing additional income to their regular earnings, and (especially through virtual crowdwork) allow those excluded from regular labor markets due to disabilities or other factors to find opportunities for gainful employment (Zyskowski et al. 2015). Virtual crowdwork also grants crowdworkers access to foreign labor markets without the need for physical relocation, thus reducing economic differences to some extent. Finally, there is an increasing number of genuinely successful small entrepreneurs, focussed on particular niches or offering special skills, for whom crowdwork has become a very profitable source of new business.

At the same time, however, working conditions for the vast majority of crowdworkers appear to be poor, irrespective of the work being delivered (Prassl and Risak 2016, p. 625).[4] A lack of union representation and organizing power, the oligopoly of but a few platforms offering certain kinds of tasks and constant economic as well as legal insecurity result in a massive imbalance of bargaining power, noticeable primarily in low wage rates and heavily slanted terms and conditions in platform use agreements. In the case of virtual crowdwork, global competition and dislocated physical workplaces further aggravate these problems, as a lack of regulation leads to 'digital slaves' (Rosenblum 2013) toiling in their 'virtual sweatshops'.

[4] For a fact-specific account, cf. also http://www.thenation.com/article/how-crowdworkers-became-ghosts-digital-machine/.

Two problems in particular are repeatedly highlighted: low wages and workers' dependence of their ratings with a particular platform. As regards the former problem, for example, some reports suggest that the average wage on Amazon's *Mechanical Turk* is less than $2 per hour (Felstiner 2011, p. 143), considerably below the US minimum wage. A related aspect is insecurity as regards payment: in accordance with the general terms and conditions of microtasking platforms, crowdsourcers have the right to reject the work without having to give a reason or providing payment whilst still receiving the fruits of a worker's labor (Strube 2014, p. 83; Martin et al. 2014).

Various systems of 'digital reputation', or rating mechanisms, which form one of the core elements of platform work, raise a second set of difficult questions: a customer-input-based system of stars or points not only puts crowdworkers in a state of permanent probation but also infringes their mobility as it ties them to particular platforms. As the more attractive and better paid tasks are only offered and assigned to those that have the best reputation, a change of platforms will be difficult as the digital reputation is not transferable between individual platforms—a fact which also further impairs the bargaining situation of crowdworkers (Prassl and Risak 2016, p. 626).

Underlying (Legal) Problems

One of the very purposes of employment and labor law is to draw a distinction between the genuinely self-employed and those requiring protection against many of the problems just outlined, bringing the latter group within its protective scope. Most jurisdictions have developed a more or less elaborate legal framework regulating the employment relationship based on the idea of the existence of an imbalance of bargaining power when negotiating pay and conditions of work (Freedland and Davies 1983, pp. 14, 69). This usually includes the right to organize, to bargain collectively and to take collective action. Self-employed persons, on the other hand, do not enjoy any of these rights, including minimum wages, sick pay or protection against unfair dismissal. Indeed, they may even be forbidden from coming to mutual arrangements over basic terms

such as minimum payments, as this might contravene competition or anti-trust laws.[5]

It is therefore important to analyze where the line is drawn between the status of an employee and a self-employed person or independent contractor. As we have pointed out elsewhere (Prassl and Risak 2016, p. 633), this becomes very hard when more than two parties are involved as the received analytical approach was developed in the context of bilateral employment relationships. Employment law thus struggles with the crowdsourcing of labor given the involvement of an intermediary or platform in addition to the crowdworkers and crowdsourcers. A traditional analysis would split the three-party arrangements underlying crowdwork scenarios into a series of bilateral contractual relationships and attempt to classify each relationship separately. The economic situation of crowdworkers, however, is not accurately reflected in the sum of these fragments of contracts. Looking only at individual relationships at a time, without also considering their interwoven nature because of the crowdsourcing platform is akin to determining the nature of cloth by looking only at its differently colored threads of wool without taking into account the knitting pattern. The received analytical approach tends to ignore complex multi-party relationships and analyzes the resulting fragments without reference to the broader context and economic effects of crowdwork. This, then, is at the core of its shortcomings when faced with multiple parties: there is little analysis of contractual relationships as an interdependent net of contracts that only make sense as a whole.

Possible Solutions

In the following sections, we will point out four different ways to deal with the regulatory challenges starting with the one the least 'intrusive', that is, requiring the least changes in labor regulation and jurisprudence up to the one requiring the most detailed legislative activity. We start out with an approach that focuses on who is the employer based on a functional concept asking who can best meet the responsibilities deriving from the

[5] Cf. European Court of Justice Case C-413/13 *FNV Kunsten Informatie en Media v Staat der Nederlanden* [2014] ECLI:EU:C:2014:2411.

employer functions (Section "A Functional Concept of the Employer"). Another approach is the widening of the notion of the employee, which up to now (at least in some jurisdictions) has been primarily based on organizational criteria and less on the economic dependency towards a single or few contractual partners (Section "Redefining the Notion of the Employee"). Another approach might be the introduction of an intermediate category or—where it already exists—its application to virtual crowdworkers (Section "Introduction or Extension of an Intermediate Category"). The last regulatory avenue explored is the one of a special statutory regulation of crowdwork similar to temporary agency work (Section "Special Legislation (Crowdwork Act)").

The different ways for dealing with the issues of virtual crowdworkers are complementary rather than mutually exclusive to one another. They also do not solve the problems to a different extent: Whilst an extension of the notion of the employee will bring crowdworkers (or at least some of them) into the protective scope of employment law, that solution does not clearly solve those issues connected with multiple-party work relationships. And of course the different paths for reform do very much depend on the status quo and general approach to labor law in any given jurisdiction. Where employment regulation is primarily based on collective bargaining, for example, the extension of the possibilities to do so will be the focus, whilst in those systems with closely knitted statutory protection, the extension of the scope of application of key protective norms will be more crucial.

A Functional Concept of the Employer

As *The Concept of the Employer* (Prassl 2015) suggests, in order to restore congruence to the application of employment law norms, the very definition of the employer must carefully be reconceptualized as a more openly functional one, whether through judicial recognition of that notion in litigation or through legislative action. Present space limitations prohibit an extensive rehearsal of the development of that notion; two crucial steps can nonetheless be highlighted. First, the argument that the traditional unitary analysis of the employer has long been accompanied by func-

tional elements: employment law identifies, at least indirectly, a series of five employer functions—from hiring workers to setting their rates of pay—and regulates them in one or several areas, from anti-discrimination law to minimum wage provisions.

For purposes of this analysis, a 'function' of being an employer is one of the various actions employers are entitled or obliged to take as part of the bundle of rights and duties falling within the scope of the open-ended contract of service. These functions are rarely set out explicitly: indeed, in most jurisdictions, the definition of the employer is seen as an afterthought in determining the scope of worker-protective norms. Upon closer inspection, however, it quickly appears that the concept implicitly mirrors the definition of the employee or worker, allowing for a 'reverse-engineering' of employer functions out of factors defining the employee (Prassl 2015, pp. 24–25).

In trawling the established tests of employment status such as control, economic dependence or mutuality of obligation for these employer functions, there are endless possible mutations of different fact scenarios, rendering categorization purely on the basis of past decisions of limited assistance.[6] The result of this analysis of concepts underlying different fact patterns, rather than the actual results on a case-by-case basis, is the following set of functions, with the presence or absence of individual factors becoming less relevant than the specific role they play in any given context. Individual elements can vary from situation to situation, as long as they fulfill the same function when looked at as a whole.[7]

The *five main functions* and their functional underpinning of the employer are[8]:

1. Inception and Termination of the Employment Relationship
   This category includes all powers of the employer over the very existence of its relationship with the employee, from the 'power of selection', to the right to dismiss.

[6] Whilst subsequent examples are drawn primarily from Common Law jurisdictions, we suggest that the approach is capable of being similarly developed in Civilian jurisdictions.

[7] The 'equipollency principle' (*Äquivalenzprinzip*): Nogler (2009, p. 463).

[8] For earlier attempts at such lists see, for example, Freedland (2001, p. 40).

2. Receiving Labor and its Fruits
   Duties owed by the employee to the employer, specifically to provide his or her labor and the results thereof, as well as rights incidental to it.
3. Providing Work and Pay
   The employer's obligations towards its employees, such as the payment of wages.
4. Managing the Enterprise-Internal Market
   Coordination through control over all factors of production, up to and including the power to require both how and what is to be done.
5. Managing the Enterprise-External Market
   Undertaking economic activity in return for potential profit whilst also being exposed to any losses that may result from the enterprise.

Key to this concept of the employer being a *multi-functional* one is the fact that no one function mentioned above is relevant in and of itself. Rather, it is the *ensemble* of the five functions that matters: each of them covers one of the facets necessary to create, maintain and commercially exploit employment relationships, thus coming together to make up the received legal concept of employing workers or acting as an employer—and being subjected to the appropriate range of employee-protective norms.

A functional conceptualization of the employer, then, is one in which the contractual identification of the employer is replaced by an emphasis on the exercise of each function—whether by a single entity, as demonstrated immediately below, or in situations where different functions may be exercised from more than one *locus* of control.[9] Indeed, in the crowdwork context, one particular challenge arises from the fact that functions may sometimes be jointly exercised by platforms, customers and potentially even the crowdworker herself. The shared exercise between two or more entities, or one where functions are parceled out between different parties, arises where platform work arrangements lead to a fragmented

[9] The term *locus* of control is designed to avoid additional complexities arising out of the fact, noted *inter al* by M. Freedland (2001) pp. 45–47, that even in traditional companies without external influence management control is often exercised by more than one person amongst a group of relatively senior executives.

exercise of employer functions—it is in those scenarios that the functional model of the employer will now be put to the test: there may be elements of genuine self-employment, platforms performing employer roles and even customers potentially becoming subject to regulatory obligations.

In order to reconcile these contradictions, and ensure a consistent application of employment law in the face of factual complexity, our conceptualization of the concept of the employer needs to move from the current rigidly formalistic approach to a flexible, *functional* concept. In more concrete terms, the following working definition has been offered by Prassl (2015, p. 155): The functional concept of the employer should come to mean

> the entity, or combination of entities, playing a decisive role in the exercise of relational employing functions, and regulated or controlled as such in each particular domain of employment law.

Calling for a functional definition of the employer is not a completely novel approach to the problems arising from multilateral employment arrangements. Judy Fudge (2006a, p. 636), for example, has long noted the 'need to go beyond contract and the corporate form, and adopt a relational and functional approach to ascribing employment-related responsibilities in situations involving multilateral work arrangements in employing enterprises' (see also Deakin 2001, p. 79).

In order to embrace a functional approach, however, the law's underlying methods of reasoning need to evolve in part. The present sub-section thus sets out to consider the meaning of 'functional' in the proposed functional concept on a more abstract level, in the hope that this will allow for a clearer account of that approach. It further aims to develop functional typology as a richer concept than simply a contrast to the perceived formalism of the current bilateral contractual approach (Fudge 2006b), thus avoiding at least some of the dangers of the 'transcendental nonsense' which can result from the indiscriminate use of the 'functional approach' as a panacea to various analytical problems, 'often […] with as little meaning as any of the magical legal concepts against which it is directed' (Cohen 1935).

The key idea of this *functional approach* is to focus on the specific role different elements play in the relevant context, instead of looking at the mere absence or presence of predetermined factors. The presence of a contract of employment (or other contract) can thus be an important indicator in particular fields (e.g., the obligation to pay wages), but it is by no means the only one. A functional concept of the employer is one where the employing entity or entities are defined not via the absence or presence of a particular factor, but via the exercise of specific functions. This exercise of specific functions extends to include a decisive role in their exercise, in order to take account of the judicial recognition in existing cases that as regards employer functions the right to play a decisive role in a particular function is as relevant as the actual exercise thereof.

We have applied this concept to existing business models in a paper and reached the following conclusions (Prassl and Risak 2016): An examination of the transportation service Uber's business model demonstrated, where a platform exercises all employer functions, it can easily be identified as an employer, with drivers consequently to be seen as workers, rather than independent contractors. Most platforms, on the other hand, lead to a fragmentation of employer functions as demonstrated in the case of TaskRabbit which provides household services. We concluded that, just as different functions may be exercised by various parties, concomitant responsibility should be ascribed to whichever entity—or combination of entities—has exercised the relevant function. As a result, multiple entities may come to be seen as employers for different purposes; the model is able at the same time to recognize elements of (genuine) self-employment, as the concluding examples have demonstrated.

Redefining the Notion of the Employee

Two of the core questions of labor law relate to the scope and justification of employment protection; put differently: who is protected, and why? The scope of employment law should extend to those in need of protection because of their unique situation. This leads us to the second question, namely what makes the employment relationship so special and the employee in need of special protection. One of the most-frequently cited

underlying rationales of labor law is the twofold economic dependence of the employee. This refers, first, to the fact that resources (e.g., materials, machines or an organization) are typically needed to perform the work and that employees have, at least historically, depended on the employer to provide them. Secondly, it implies dependence of the employee on 'selling' his or her labor in exchange for remuneration from the employment relationship to sustain his or her living. Some legal orders, however, do not refer to these economic arguments, focussing instead on the way the work is actually performed (for Austria, see Risak 2010, p. 36; Brodil et al. 2016, p. 14; for Germany, Weiss and Schmidt 2008, p. 45). Especially the second aspect (dependence on the salary to earn a living) is considered impractical, as employers often have no means to ascertain whether their contractual partners actually have other sources of income or their reasons for working more generally.

The European Court of Justice applies a similar approach. It is settled case law that the essential feature of the employment relationship is that for a certain period of time, one person performs services for and under the direction of another person in return for which she receives remuneration.[10] It is of major importance that a person acts under the direction of his or her employer as regards, in particular, the freedom to choose the time, place and content of the work,[11] that the employee does not share in the employer's commercial risks,[12] and, for the duration of that relationship, forms an integral part of that employer's undertaking, so forming an economic unit with that undertaking.[13]

For decades this organizational approach focusing on the restricted self-determination when working on the one hand delivered satisfactory results and on the other was practical and relatively easy to apply. This was based on the fact that only those having enough resources were able to become self-employed and that they were able to negotiate for pay that satisfied their needs. On the other hand, those working under the close supervision of another person often did not have enough bargain-

[10] ECJ in *N.*, C-46/12, EU:C:2013:97, para. 40 and the case-law cited, and ECJ in *Haralambidis*, C-270/13, EU:C:2014:2185, para. 28.

[11] ECJ in *Allonby*, C-256/07, EU:C:2004:18, para. 72.

[12] ECJ in *Agegate*, C-3/87, EU:C:1989:650, para. 36.

[13] ECJ in *Becu and Others*, C-22/98, EU:C:1999:419, para. 26.

ing power when negotiating pay and conditions of work (Freedland and Davies 1983, pp. 14, 69). In those circumstances, it was rather unproblematic to equal organizational and economic dependency in the past. This picture, however, has changed due to a number of factors and has led to the emergence of a growing number of self-employed: advances in digital technologies, the widespread availability of handheld devices and ever-increasing high-speed connectivity have combined with the realities presented by several cycles of economic downturn, shifts in lifestyle and generational preferences (Lobel 2016, p. 2). These new 'solo-entrepreneurs' and freelancers are very different from the ones in the past, where 'liberal professions' such as lawyers, architects and other high-skilled professionals had the power to bargain for high remuneration and controlled their own working conditions. Crowdworkers active in the virtual realms of the gig economy today resemble the workers of the nineteenth century who did not have any other alternatives than to sell their labor in a highly competitive market. They compete with a large reserve army of virtual labor unlike those self-employed in liberal professions. They are also similar to traditional employees as they do work in person and thereby sell their labor and not an end product. Finally, they are also vulnerable as they earn their livelihood by doing this vis-à-vis only one or a very limited number of immediate contractual partners (viz., the platforms). The only difference between them and traditional employees is the fact that they are formally free to work what and when they choose—but this freedom may often be no more than formal due to an economic situation which does not leave them a lot of alternatives to selling their labor in a certain way to certain contractual partners.

Against this background it makes sense to open up a range of employment rights, not least the rights to organize, to bargain collectively and to take collective action to this group of vulnerable self-employed. At first glance, this might be in conflict with European Union competition and anti-trust law, as Art. 101 TFEU forbids all agreements and concerted practices which have as their object or effect the prevention, restriction or distortion of competition: collective agreements could be characterized as a restriction on competition between employees, thus contravening that provision. The European Court of Justice has held, however, that agreements entered into within the framework of collective bargaining

between employers and employees and intended to improve employment and working conditions must, by virtue of their nature and purpose, be regarded as not falling within the scope of Art. 101(1) TFEU.[14] In our view it is therefore crucial to either re-define the notion of the employee or take specific legislative initiatives in order to open up collective bargaining to this group of self-employed with limited bargaining powers. In December 2015, for example, the Seattle City Council unanimously enacted legislation granting the city's drivers 'a voice on the job and the opportunity to negotiate for improved working conditions at their companies'.[15]

Re-defining the notion of the employee, or specifically including the self-employed within the scope of certain employment law norms, would also widen the scope of application of individual labor law, that is, the set of rules granting individual rights and entitlements and therefore protecting employees from unfair und unhealthy working conditions. This body of laws usually encompasses amongst others minimum wages, working time restrictions, right to paid sick leave and holidays as well as protection against dismissals. If the economic situation of the employee is the reason why these rights and entitlements have been developed in the first place, it is hard to argue why not to extend the scope of their application to persons in the same situation only based on the argument that they are not formally integrated enough into the business of their contractual partners.

Introduction or Extension of an Intermediate Category

Another option to protect virtual crowdworkers which has recently been mooted is a suggestion that the law might recognize an intermediate category of worker between employee and independent contractor (Lobel

[14] ECJ in *Albany*, EU:C:1999:430, para. 60; *Brentjens'*, EU:C:1999:434, para. 57; *Drijvende Bokken*, EU:C:1999:437, para. 47; *Pavlov* and Others, C-180/98 to C-184/98, EU:C:2000:428, para. 67; *van der Woude*, EU:C:2000:475, para. 22; *AG2R Prévoyance*, C-437/09, EU:C:2011:112, para. 29; *FNV Kunsten Informatie en Media v Staat der Nederlanden,* ECLI:EU:C:2014:2411, para. 23.

[15] http://www.seattle.gov/council/issues/giving-drivers-a-voice (3.11.2016).

2016, p. 10; Harris and Krueger 2015). In this way, the argument runs, the level of protection may be graded and the fact that the personal integration of some of the crowdworkers is less intense and that they enjoy a certain level of flexibility and freedom can actually be used to their advantage.

The examples are numerous: In Canada, jurisprudence has developed the category of dependent contractor for cases in which a contractor has worked exclusively or largely exclusively for one client for an extended period. They are then deemed a dependent contractor for purposes of termination notification and representation.[16] In Italy *para-subordinate* relationships enjoy some level of statutory protection (De Stefano 2016, p. 20), and in Germany and Austria, some employment regulations are to be applied also to employee-like (*arbeitnehmerähnliche*) persons. In Austria these persons are defined as persons who perform work/services by order of and on account of another person without being in an employment relationship, but who may be considered employee-like due to their economic dependence. Only some provisions of labor law apply to those employee-like persons, for example, those on the competence of the labor courts,[17] agency work,[18] employee liability[19] and anti-discrimination.[20] In Germany, the intermediate category is defined similarly and is also covered by the Act on Collective Agreements (*Tarifvertragsgesetz*) and may therefore conclude collective agreements with normative effect. In the United Kingdom, the extension of employee rights beyond the employment contract seems to be the furthest developed, as discussed in our analysis of the 2016 *Uber* decision, immediately below.

Instead of building on these specific domestic experiences, Harris and Krueger (2015) have instead argued in favor of the statutory introduction of a novel third, intermediate category to capture gig economy workers: their 'independent worker' status would be entitled to some protection,

[16] Cf. Superior Court of Justice, 14.8.2014, ***Wyman v. Kadlec***, 2014 ONSC 4710 (CanLII), http://canlii.ca/t/g8lnv (26.19.2016); Court of Appeal for Ontario, 23.12.2009, ***McKee v. Reid's Heritage Homes Ltd.***, 2009 ONCA 916 (CanLII), http://canlii.ca/t/27551 (26.1.2016).

[17] The Labour and Social Courts Act s 51 (3)2.

[18] The Act on Agency Work s 3.

[19] The Employees' Liability Act s 1(2).

[20] The Equal Treatment Act ss 1 (3) 2 and 16 (3) 2.

including collective bargaining and elements of social security provision, whilst being denied recourse to basic standards such as wage and hours protection. This approach differs from existing models, insofar as platforms would immediately be relieved from some of employers' most costly obligations—whilst continuing to litigate over independent contractor status.

As an exasperated US District Judge famously noted, the task of determining worker status is often akin to being 'handed a square peg and asked to choose between two round holes'.[21] Adding a third round hole is therefore unlikely to solve any classification problems. Indeed, it appears that even those jurisdictions that have recognized a third category have done so without resolving any of the fundamental classificatory problems. If anything, more confusion is introduced, as became evident during recent UK litigation against Uber, with legal arguments focused on the third category recognized in English employment law.

In Aslam v. Uber BV, the Central London employment tribunal ruled on October 28, 2016, that Uber drivers were workers for purposes of s. 230(3)(b) of the Employment Rights Act 1996, rather than independent contractors as the company had long maintained. In a clear and powerful judgment, the tribunal found that the company's 'resorting in its documentation to fictions, twisted language and even brand new terminology' merited 'a degree of skepticism' (at paragraph [87]) and found that drivers were workers. As a result, Uber's drivers will now be entitled (subject to the inevitable appeal, of course) to a small number of core rights attached to worker status, including importantly the National Minimum Wage Act 1998 and the Working Time Regulations 1998.

Such basic protection will overcome some of the worst problems faced by Uber drivers—not least, because the tribunal (rightly) ruled that a driver is 'working' for the entire time that his (the vast majority being male, as noted in the decision) Uber drivers' app is switched on, and he is able and willing to accept rides, not just when he has a passenger in his car. In the longer run, however, Uber drivers—even when classified as work-

[21] United States District Court, Northern District of California, Order of March 11, 2015, Denying Cross-Motion for Summary Judgment (Case No. 13-cv-04065-VC) 19, Cotter et al. v. Lyft Inc.

ers—will face many of the problems encountered by zero-hours workers across the United Kingdom (Adams et al. 2015): from low income to struggling with unpredictable shifts due to a lack of guaranteed work. This, then, is the fundamental problem with the creation of a novel third status category: not only would it fail to alleviate the uncertainty and classificatory problems identified above; it would provide crowdworkers with a lower degree of protection even though, as previous discussion has shown, they might often be amongst the most vulnerable participants in the labor market.

Beyond the United Kingdom, the experience with this intermediate category is similarly varied. Whilst its introduction does not, at first glance, appear to change anything to the disadvantage of traditional employees because of employers moving over to this now legitimate group, the Italian example seems to indicate otherwise. De Stefano (2016, p. 20) points out that the workers that would qualify for full protection as employees under the traditional legal tests would likely become deprived of many rights if they were crammed into an 'intermediate bucket'. He warns that regulating dependent self-employment as a distinct group is no panacea for addressing the changes in business and work organization driven by the disintegration of vertical firms. Some argue, on the other hand, that as existing law no longer protects a growing number of persons who once would have enjoyed the status of employees and who are now slipping out of the protective scope of labor law due to their increased formal freedom and flexibility, there is nonetheless the need for such intervention. It is arguable, for example, that the lack of any intermediate status effectively provides greater incentives for employers to reclassify their workers as independent contractors and that an intermediary category may well provide them with those rights they actually need (Lobel 2016, p. 12). In our view, however, current proposals are flawed insofar as they do not even recognize the full set of 'basic' employment rights, including the right to organize and to bargain collectively as well as the application of minimum wage legislation, and as they would lead to little additional clarity or faster dispute resolution.

From the point of view of EU law, a further difficulty arises from the issue of the applicable law and the choice of law in situations where plat-

forms operate across multiple jurisdictions. In cases concerning cross-border contractual relationships, Regulation (EC) Number 593/2008 of the European Parliament and of the Council on the law applicable to contractual obligations (Rome I Regulation)[22] applies, according to which there is freedom of choice regarding the applicable law (Art. 3). However, this is limited when it comes to employment contracts (Art. 8). In these cases, the level of protection cannot fall below that which would be provided in the absence of choice. Crowdworkers who are not considered to be employees thus lack significant protection not only as regards the application of statutory protection is concerned but also insofar as they—or better their contractual partners—may choose any law without any restrictions. It is very likely that platforms will include the choice of a legal order that is favorable for them in their terms and conditions and thereby make it harder again for the crowdworkers to enforce even the limited number of rights they have. An extension of the limitation of the choice of law-provisions for employees to the intermediate category therefore seems of essence.

Special Legislation (Crowdwork Act)

The last option to be highlighted in this chapter is the creation of a special legislative act dealing with the issues involved with crowdwork as it has been done in many European countries with temporary agency work in the transposition of the Temporary Agency Work Directive 2008/104/EC. This is the most complicated solution as it has to take into account that the platform economy is very diverse and that a one-size-fits-all approach will hardly work. We can therefore just sketch in very rough strokes what such an act might look like.

The aim would most likely be to ensure the protection of crowdworkers and to improve the quality of crowdwork. It should also take into account that crowdwork may contribute to the creation of jobs and to the development of flexible forms of working by introducing creative and innovative business models but also keep in mind that there is noth-

[22] OJ L 177, 4 July /2008, pp. 6–16.

ing innovative about precarious work. The primary goal thus would be the creation of a level playing field for those platforms that endorse an approach that is crowdworker friendly, rather than one based on low labor costs and value extraction.

A core provision might thus be—as in the case of artwork (Art. 5 of Directive 2008/104/EC)—a principle of equal treatment with a corporate customers' existing workforce, to ensure that jobs are not crowdsourced just for the sake of contravening minimum wage and other employment provisions. The basic working and employment conditions of crowdworkers shall therefore be for the duration of working on tasks or—if the general availability is part of the business model like in the case of Uber in the United Kingdom[23]—at least those that would apply if they had been recruited directly by the crowdsourcer to occupy the same job. This would also establish the equal treatment of temporary agency workers and avoid the circumvention of the laws protecting them by switching over to crowdsourcing.

It should be noted, however, that this equal-treatment-approach very likely only works in cases where the crowdworker is actually working for a business that would otherwise employ an employee and that actually crowdsources labor. In cases where the contractual partner is a consumer and the alternative is contracting directly with a self-employed person (e.g., with a cleaner) avoiding the intermediary (e.g., the platform Taskrabbit), the equal treatment principle cannot apply. In these cases no crowdsourcing of employment contracts takes place and a host of other issues arise, not least as regards the application of minimum wages on those crowdworkers.

Other topics that seem to be important might be the prohibition of certain clauses in the contracts with the crowdworkers and the terms and conditions of the platforms. This can refer to the notorious clauses that enable the contractual partner to refuse to accept a completed task without having to give a reason and refrain from paying the advertized remuneration or provisions that the result may be kept even in those cases. Other possible issues are non-compete clauses as well as clauses that

[23] Cf. Employment Tribunals 28.10.2016, 2202551/2015 and Others, Aslam, Farrar and Others v Uber B.V., Uber London Ltd. and Uber Britannia Ltd., https://www.judiciary.gov.uk/judgments/mr-y-aslam-mr-j-farrar-and-others-v-uber/ (2.11.2016).

restrict the hiring of crowdworkers by crowdsourcers. Finally, workers should also be permitted to port their ratings across different platforms to ensure that their expertise and experience is adequately recognized.

The very tricky question for legislation will be to draw the role and the responsibility of the crowdsourcing platforms in a transparent way in order to give crowdworkers certainty of their legal position in this set-up, without however suffocating those crowdsourcing models that are based on genuine self-employment (and thus not necessarily in need of statutory protection). This final concern, however, should not be—in our view—a hindrance or excuse to protect those genuinely in need of protection. Finally, it should also be noted that any crowdwork-specific legislation ought not to fall into the trap of technological exceptionalism and recognize that fundamentally, crowdwork should be regulated as work first and foremost.

Conclusion

In this contribution, we set out to explore a series of potential legal solutions to the problems faced by crowdworkers in the on-demand economy. In concluding, it is important to note that whilst the phenomenon of 'gigs' and 'platforms' is indeed a novel one, the legal implications—particularly as regards employment law—are much less so. Seen from an historical labor law perspective, crowdwork is but the most recent threat to emerge to the law's quest for underlying coherence in the scope of protective norms in the face of dramatic changes in the labor market: online platforms or 'apps' act as intermediaries in a spot market for labor, providing clients with workers for a wide range of jobs referred to as 'gigs', 'rides' or 'tasks' are, from a legal perspective, not all that different from traditional outsourcing and agency relationships or the more recent phenomenon of zero-hours contracts in the United Kingdom.

At a first glance, the advantages for business, customers and workers resulting from the 'gig economy' are immense: crowdwork does away with many of the regulatory costs traditionally associated with employing individuals; customers can receive a nearly infinite number of services at cut-price rates; and workers can find flexible work to suit their sched-

ules and income needs. Upon closer inspection in, however, a series of problems arising from this fragmentation of traditional work, quickly emerged—in particular for workers, who often find themselves outside the scope of employment protective norms as a result of crowdwork platforms' business models, thus suffering low pay and challenging working conditions.

Each of the models scrutinized has its peculiar advantages and drawbacks. Present space limitations do not permit for a detailed summary, but three points may nonetheless be made. First, the importance of recognizing that whichever regulatory solutions are adopted, we should be careful of reinventing the wheel: many of the problems we encounter are not novel, so efforts should be made to fit crowdwork into existing regulatory structures, with only partial additions as and when required. Second, new regulatory measures, if adopted, should not lead to the dilution of workers' rights, as might be the case with some 'third status' proposals in particular. Finally, and perhaps most importantly, given the vast heterogeneity of platforms, users and working conditions, it is unlikely that an easy solution could be found: crowdwork can cater to the needs of successful entrepreneurs, but it can also become a low-wage trap. Only a sophisticated and responsive approach will be able to address the vast range of problems identified.

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