Online but Still not Taking Part?

Investigating Online Participation Divides in Germany

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The President:

Prof. Dr. Thomas Bieger

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List of Abbreviations

AIC Akaike information criterion

APA American Psychological Association

AVE average variance extracted

BIC Bayesian information criterion

C.R. composite reliability

cf. *confer* (compare)

CFI comparative fit index

e.g. *exempli gratia* (for example)

et al. *et alii* (and others)

GDP gross domestic product

GO gratifications obtained

GS gratifications sought

i.e. *id est* (that is)

ibid. *ibidem* (at the same place)

ICA International Communication Association

ICT information and communication technologies

ITU International Telecommunication Union

OBP online business participation

OCC online content creation

OCP online cultural participation

OEP online educational participation

OHP online health participation

OPP&CE online political participation and civic engagement

OxIS Oxford Internet Survey

p. page

pp. pages

RMSEA root mean square error of approximation

SCT social cognitive theory

SEM structural equation model

SES socio-economic status

SNS social network site(s)

SRMR standardized root mean square residual

TLI Tucker Lewis index

U&G uses and gratifications

UK United Kingdom

US United States

VPN Virtual Private Network

WOK Web of Knowledge

Abstract

Millions of people all over the world participate in various online contexts and create content via blogs, wikis, personal homepages, online communities or social media platforms, such as Facebook and Twitter. Social scientists are increasingly researching the forms, drivers and consequences of such online participation, understood as the creation and sharing of content on the Internet addressed to a specific audience and driven by a social purpose. However, most research focuses on political participation on the Internet and its impact on the offline world, neglecting newer and more fluid activities. Furthermore, the nascent field of online participation research is very fragmented and atheoretical. This dissertation addresses these problems and investigates online participation from a holistic perspective, taking a sociological and digital divide approach and going beyond political participation and civic engagement. It proceeds in four steps. *First*, a systematic literature review is conducted to assess the current state-of-research and to derive a typology of online participation. Five areas of online participation are distinguished: political and civic participation, business participation, cultural participation, educational participation, and health participation. *Second*, salient drivers of online participation are researched from a social cognitive perspective. This contribution shows that cognitive factors, namely privacy concerns and online self-efficacy, partly mediate the effect of demographic antecedents (age, gender) and education on different forms of online participation. *Third*, German users' online participation patterns are differentiated along social milieus. This contribution expands notions of the digital and participation divide with a cultural perspective. *Fourth*, the single contributions are brought together into a coherent structure and reflected in theoretical terms within the framing chapter as well as the conclusion. The main theoretical contribution of the thesis consists of a thorough analysis of previous research on online participation – including the central aspect of participation divides – and a carefully derived definition of the concept. This understanding challenges previous understandings by being largely descriptive instead of normative and by considering a myriad of forms of online participation, going beyond the political. The main empirical contribution of the dissertation lies in a theoretically substantiated, multi-method investigation of the participation divides in Germany, a country where little research on that topic exists.

Zusammenfassung

Millionen von Menschen weltweit beteiligen sich in verschiedenen Online-Kontexten und kreieren Inhalte auf Blogs, Wikis, persönlichen Seiten, in Online Communities oder auf sozialen Medien, wie Facebook und Twitter. Die Sozialwissenschaften untersuchen vermehrt die Formen, Treiber und Folgen solcher Online Beteiligung, definiert als das sozial motivierte Erstellen und Teilen von Inhalten im Internet für ein spezifisches Publikum. Bisher konzentriert sich der Grossteil der Forschung jedoch auf die politische Beteiligung im Netz und deren Einfluss auf die Offline Welt. Neuere, fluidere Formen der Beteiligung werden dagegen weitgehend vernachlässigt. Zudem ist das junge Feld der Online Partizipationsforschung sehr fragmentiert und wenig theoretisch orientiert. Diese Dissertation widmet sich diesen Problemen und untersucht Beteiligung im Internet aus einer ganzheitlichen Perspektive – mit einem soziologischen Zugang, der sich auf digitale Klüfte stützt und über politische und zivilgesellschaftliche Beteiligung hinausgeht. Die Arbeit beinhaltet vier Schritte. *Zunächst* wird der aktuelle Forschungsstand mit einer systematischen Literaturanalyse erarbeitet, um eine Typologie der Online Beteiligung abzuleiten. Fünf Beteiligungsbereiche im Internet werden unterschieden: politische und zivilgesellschaftliche Beteiligung, wirtschaftliche Beteiligung, kulturelle Beteiligung, Beteiligung in der Bildung und Beteiligung in Gesundheitsfragen. Im *zweiten Schritt* werden zentrale Treiber der Online Beteiligung unter Rückgriff auf die social cognitive theory untersucht. Der zweite Artikel zeigt, dass kognitive Faktoren – Selbstwirksamkeit und Sorgen um die Privatsphäre – den Effekt demographischer Merkmale (Alter, Geschlecht) und von Bildung auf verschiedene Formen der Online Beteiligung partiell mediieren. Im *dritten Schritt* werden die Beteiligungsmuster Deutscher Internetnutzer nach verschiedenen sozialen Milieus differenziert. Dieser dritte Beitrag ergänzt bisherige Verständnisse der digitalen Spaltung und der Partizipationskluft (participation divide) mit einer kulturellen Perspektive. Schliesslich werden die drei Einzelbeiträge im *vierten Schritt* zusammengebracht, kontextualisiert und mit Hinblick auf die verwendeten Theorien reflektiert. Dies geschieht sowohl im Mantelkapitel (framing chapter; Kapitel 2 der Dissertation) als auch im Schlussteil. Der hauptsächliche konzeptionelle Beitrag der Dissertation liegt in einer gründlichen Analyse bisheriger Forschung zur Online Beteiligung – inklusive des zentralen Aspekts der Partizipationsklüfte – und einer daraus abgeleiteten Definition des Konzepts. Dieses Verständnis stellt bisherige Verständnisse in Frage, indem es primär beschreibend statt normativ agiert und indem es eine Vielfalt an Formen der Beteiligung berücksichtigt und damit über ein eng politisches Verständnis hinausgeht. Der hauptsächliche empirische Beitrag der Dissertation liegt in einer theoretisch fundierten Multi-Methoden Untersuchung der Partizipationsklüfte in Deutschland, einem Land, wo es bislang wenig Forschung zum Thema gibt.

There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says: "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes: "What the hell is water?"

David Foster Wallace

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Preliminary Notes

Throughout this dissertation, I use American English spelling, except for Article 2, which uses UK English spelling due to the journal requirements. I try to use male and female forms equally, relying on gender-neutral plural forms whenever possible. "Thesis" and "dissertation" are used interchangeably (see footnote 4 on page 2). I use the APA referencing format, except for Article 1, which uses a slightly different in-text referencing format due to the journal requirements (see footnote 16 on page 40). I use *italics* throughout the thesis to stress important concepts and enhance the reading flow.

1 Introduction

1.1 Introduction and research questions

The advent of the Internet has brought about profound changes in the ways we communicate, work and live. It has challenged and transformed established industries, such as journalism and entertainment, and given rise to new global players, most prominently Google and Facebook. It has revolutionized information acquisition and distribution. Around ten to fifteen years ago, social media[1] entered the stage and today Facebook has more users than the largest nation of the world has inhabitants. Smart phones powered by the Internet allow constant connectivity and communication with both close contacts and remote acquaintances. In a certain regard, the information revolution of the web 1.0 was followed by the communication and social revolution of web 2.0 (O'Reilly, 2007). Users not only employ the Internet for interpersonal or one-to-one communication but a large part also creates user-generated content for broader audiences, often to dozens or hundreds of followers, friends or like-minded strangers. This form of one-to-many communication corresponds with online participation – the central concept of this dissertation. Participation, despite its long background in political science and theory (Fuchs, 2014), has become a buzzword of Internet jargon: participatory action research, participatory budgeting, participatory culture, participatory design, participatory economics, participatory film, participatory governance... I could easily compile an alphabetical lexicon of participatory trends, many of which would not exist without the Internet[2].

At the core of the participatory ideal stands the thought that participation (whatever it is that individuals participate in) should be easy, bottom-up, inclusive and free of charge (Bryson, Quick, Slotterback, & Crosby, 2013). Everyone who wants to should be able to participate. Such normative claims about openness, sharing and connecting are very strong in the rhetoric of social media providers (Mitchell, 2014; Van Dijck, 2013). This comes as no surprise, as big Internet companies live and profit from big data (Mayer-Schönberger & Cukier, 2013). In the end, online participants pay a price and become vulnerable to a certain extent,

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[1]The most widespread definition of "social media" is the one by Kaplan & Haenlein (2010), who define them as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content". In my thesis, I largely follow this definition. In addition, Kane, Alavi, Labianca and Borgatti (2014, p. 279) stress four core attributes of social media (networks): "users (1) have a unique user profile that is constructed by the user, by members of their network, and by the platform; (2) access digital content through, and protect it from, various search mechanisms provided by the platform; (3) can articulate a list of other users with whom they share a relational connection; and (4) view and traverse their connections and those made by others on the platform."

[2]In fact, I used Google autocomplete to come up with some of these concepts in alphabetical order. So, the list would not exist without the Internet, either.

no matter how empowering or fulfilling they perceive their participation to be. This aspect is strongly reflected in research on *online privacy* (Aeschlimann *et al.*, 2015; Smith, Dinev, & Xu, 2011) and – partly – *digital identities* (Fieseler, Meckel, & Ranzini, 2015).

My thesis challenges and reflects on another critical aspect of online participation: its inclusiveness. Or rather, its *exclusiveness.* Many citizens do not want to participate online or are not able to do so (Brake, 2014). The notion of a digital divide in online participation or a participation divide has been brought up early in the discourse on social media (Hargittai & Walejko, 2008; Jenkins, 2006). It becomes even more important in a time when social media are getting increasingly differentiated, distinctive and short-lived[3]. The social pressure to be on the "right" platforms, to have the "right" connections, and to use social media in the "right" way can create the contrary of the implicit inclusiveness of online participation, namely that online participation becomes more exclusive, segmentized and stratified. My dissertation will contribute to this debate and offer empirical insights on the participation divide in Germany – a country where the phenomenon is not yet thoroughly studied. My cumulative thesis provides a holistic investigation of online participation in Germany. It answers the following *research questions*:

Which forms of online participation can be distinguished in previous research? How are different forms of online participation in Germany structured along social lines?

Online participation in my thesis is defined as the *"creation and sharing of content on the Internet addressed at a specific audience and driven by a social purpose"* (Lutz, Hoffmann, & Meckel, 2014, section 2). The central topical area of the dissertation is thus online participation and the central research object is the participation divide in Germany. The latter is a sub-domain or sub-topic of the former. The dissertation[4] is structured in a way to reflect this sequence from the more abstract and general to the more concrete and specific (a detailed overview of the dissertation structure is provided in the last section of the introduction, 1.5).

1.2 Relevance and contribution

1.2.1 Scientific relevance and contribution

As I will in outline in more detail in the individual contributions, research on online participation suffers from a number of problems and is only in its infancy. At the same time, a large increase in the number of publications during the last years – both in absolute and relative terms – underlines the growing importance of the topic (Rice & Fuller, 2013). Understanding

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[3]Today, even as an academic in the domain of social media, it is increasingly difficult to keep abreast with the rapid diffusion of new platforms and applications.

[4]I use the expressions "dissertation" and "thesis" synonymously to refer to this work.

online participation and drawing empirically sound conclusions helps inform social theories and scientific debates, e.g., on social and digital inequalities, technology acceptance or political theories of the public sphere and deliberation. Considering my dissertation in particular, the overall research questions of the thesis have not been fully answered, especially not for the German case.

As for the *forms* of online participation, the field suffers from a lack of understanding of the broadness of participatory practices and of the central concept (Hoffman, 2012). Therefore, the first article provides a thorough discussion of previous research and comes up with a working definition of online participation (Lutz *et al.*, 2014). As for the *drivers*, previous research has mainly focused on demographic factors and largely excluded cognitive constructs. The second article considers online self-efficacy and privacy concerns and thereby contributes to advancing our knowledge on participation divides (Hoffmann, Lutz, & Meckel, 2015). As for the *social structuration* of online participation, a range of studies have investigated Internet effects on offline civic and political participation (e.g., Boulianne, 2009; Di Gennaro & Dutton, 2006; Moy, Manosevitch, Stamm, & Dunsmore, 2005; Wellman, Quan-Haase, Witte, & Hampton, 2001) and the impact of online political engagement on offline forms, such as voting, demonstrating or discussing politics with friends (Conroy, Feezell, & Guerrero, 2012; Gil de Zúñiga, Jung, & Valenzuela, 2012; Rojas & Puig-i-Abril, 2009). However, such research has mostly lacked a holistic perspective, with clear boundaries of participation, and an understanding of users' embeddedness in complex lifeworlds and networks (North, Snyder, & Bulfin, 2008; Sims, 2014). Article 3 addresses these issues and thus advances our knowledge of online participation. It uses Bourdieu's (1984) habitus theory as the conceptual background, a theory that has much potential for investigating digital divides. In doing so, the thesis is able to connect social conditions with digital practices and to address the theory problem of digital divide research (Van Dijk, 2006). Accordingly, the dissertation shows how cultural factors, such as users' attitudes, interests and hobbies, are at least equally important in explaining online participation as hard indicators of social status – be it education, income or social background – or demographics (Harambam, Aupers, & Houtman, 2013).

In this sense, the dissertation's *overall contribution* is a call to go beyond simple, linear understandings of online participation. Online participation is a complex social phenomenon which is influenced by a myriad of personal and environmental characteristics. Established theories, as used in Article 2 and Article 3, can be very helpful in furthering our understanding of the participation divides. Hence, online participation research, especially operating within a sociological angle as my thesis does, is well advised to think more holistic and theory-driven.

1.2.2 Practical relevance and contribution

The practical relevance of this dissertation stems from its newness and richness. Online participation is a topic with huge financial and symbolic value for different stakeholders, as demonstrated by developments like crowdsourcing, open innovation, and the rise of social media giants based on the logic of participation and sharing. For many Internet organizations, gathering, analyzing or selling user data has become a core of their business model. To obtain such rich data, users must be willing to disclose. The more intensively users participate and share, the more useful are the data that companies can use. Thus, Internet companies are well advised to know how to incentivize online participation. The findings of my thesis might provide insights in that regard. For users themselves the results of my thesis will also be relevant. They provide a fertile ground for reflection on their own participatory practices. Finally, the results of my thesis might help to objectify the often normative discourse on online participation and provide rich empirical material for the general public as well as interested lay audiences, such as public administration officials, politicians or educational professionals.

1.3 State-of-research and research gaps

We can distinguish three broad *conceptual perspectives on the topic of online participation* (Anduiza, Cantijoch, & Gallego, 2009; Casteltrione, 2015; Gil de Zúñiga, Puig-i-Abril, & Rojas, 2009; Uslaner, 2004): *Optimists* claimed that the web would enhance participation and encourage passive population segments to engage (Gibson, Lusoli, & Ward, 2005; Rojas & Puig-i-Abril, 2009; Ward, Gibson, & Lusoli, 2003). Thus, the Internet would strengthen democracy and participation. This so-called mobilization thesis coincides with early cyber-optimist views in general (Rheingold, 1993; Turkle, 1995). Several studies, both on web 1.0 and web 2.0/social media, found positive effects of (certain forms of) Internet use on participation (Bakker & de Vreese, 2011; Boulianne, 2009; 2015; Di Gennaro & Dutton, 2006; Hwang, Schmierbach, Paek, Gil de Zúñiga, & Shah, 2006; Lee & Kwak, 2012; Moy *et al.*, 2005; Stern & Dillman, 2006). *Pessimists,* on the other hand, saw displacement at work. According to their argument, citizens displace time previously dedicated to meaningful actions – such as political and civic engagement – for the individualistic activity of surfing the web (Nie & Erbring, 2002; Putnam, 2000). *Realists* were more cautious when predicting Internet effects. In the end, they said, the Internet would not change much and would supplement existing tendencies (Calenda & Meijer, 2009; Krueger, 2002; Norris, 2001; Wang, 2007). Already active citizens would embrace the Internet for their purposes, while those not participating would not bother using it at all; or the non-participants would use it for non-participatory pur-

poses, such as entertainment. Instead of bringing new population segments (like lower educated, politically disinterested youth) to participate in meaningful ways, the Internet could even deepen existing divides, as the so-called reinforcement thesis predicted (Norris, 2001). Overall, we can reject the displacement thesis (Boulianne, 2009). Depending on the form of participation, most empirical studies found (weakly) positive or no effects at all (Boulianne, 2009). Thus, a strong confirmation of the mobilization thesis seems inadequate as well. So far, the reinforcement thesis has seen most empirical evidence.

However, research addressing such Internet effects, and online participation in general, suffers from several *shortcomings*. First, it is hard to isolate the effects. Second, especially in early studies, researchers used very broad measures of Internet access and use as indicators of the Internet, e.g., time spent online. However, we must distinguish different forms of Internet use. Some forms are more participatory, social and active, whereas others are more passive, consumptive and information- or entertainment-driven. Recent research (e.g., Blank & Groselj, 2014) has tried to differentiate such forms but there is still a long way to go. Third, several studies suffer from a lack of generalizability because they were carried out with student samples. Fourth, much research neglects newer, less institutionalized, forms of participation and engagement. Social media and interactive participatory platforms offer such opportunities in the form of *participatory cultures* (Jenkins, 2006; e.g., remixing, posting videos on YouTube, crowdsourced art).

1.4 Research goals

This dissertation project tackles some of these issues for the German case, especially the second, third, and fourth point. It investigates the concept of participation and attempts to give it meaning. Participation has become an umbrella term for almost every form of engagement, both on and off the web. Thus, a thorough specification of its very foundations is necessary. I provide such a foundation in the first article of the cumulative thesis (section 3.2). However, as participation is a social process, an isolated investigation would be inadequate. Instead, I embed participation in a broader context, looking at its causes and social structuration in two separate articles (sections 3.3 and 3.4). The research strand on causes investigates why certain people participate on the Internet, while others do not, and identifies profiles of the participants (Blank & Reisdorf, 2012; Blank, 2013a; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011; 2012; 2013). The research strand on the social structuration goes beyond that and, based on social theories such as Bourdieu's (1984) distinction theory, also considers mechanisms for inequalities in online participation (Robinson, 2009; Sims, 2014). All three articles are already published (Article 1 and 2) or in the process of being

published (Article 3).

The *overall aim* of the dissertation is to substantialize the notion of online participation and to give it a sound empirical basis by investigating its social structuration in Germany. Thus, my thesis takes a generic perspective and operates more in terms of fundamental than applied research. Therefore, I cannot go into any great depth and look very specifically at single platforms. In opposition to case study research, I intend to reach generalizable – albeit less immediately applicable – conclusions. Still, the aim is to provide an accurate picture of the online participation landscape and especially the divides in a Western European country. Despite a descriptive scope, the overarching goal is explanatory. More specifically, the thesis focuses on the following four goals: ***a)*** Defining online participation and distinguishing different forms, ***b)*** Identifying and quantifying important drivers of online participation; especially investigating the role of demographics, online self-efficacy, and privacy concerns as explanations for online participation, ***c)*** Identifying how different social milieus in Germany exhibit distinct participation patterns and ***d)*** Reflecting the findings within a larger framework in theoretical terms. The following section elaborates on the objectives ***a) - d)*** and presents the structure of the dissertation.

1.5 Research context: Germany

This dissertation covers Germany as the research context. Although the conceptual parts and the first article do not refer to a specific country, the two empirical papers entail data collected in Germany. This focus on one country comes with specific challenges and limitations. Online participation depends strongly on the cultural and political context (George, 2005), as it is tied to the Internet connectivity levels of a region or country, the educational and economic endowment of the population and specific political decisions. In some countries, for example, certain participation platforms are censored or blocked, which limits online participation – on such platforms – to citizens who are able and ready to forgo the censorship by technical means (e.g., VPNs; Nabi, 2014).

I chose Germany as the research context for several reasons. First and foremost, it was a pragmatic choice because the two research projects that this dissertation covers were funded by German agencies. The funding agencies were interested in the German case rather than in a comparative study or in in-depth knowledge about another country. Second, we had conducted previous research projects in Germany. Thus, I know the research context well and had relatively easy access to the research site due to geographical proximity. In addition to the geographical proximity, there were no language barriers as the whole research team

are native German speakers[5]. Third, Germany is in many ways a "typical" industrialized Western country. In terms of the population, it is the largest country in Europe with 81.2 million inhabitants as of December 2014 (Statistisches Bundesamt, 2015). Thus, the results of this dissertation, especially of Article 2, cover a substantial number of people. Germany's economic development, measured by GDP per capita, puts it in the same category as other developed countries. It ranks on place 18 worldwide, with a GDP per capita of 41,267 US $ per year in 2015 (IMF, 2015).

Germany is also a relatively "normal" European country in terms of Internet connectivity levels and uses. According to the latest available ITU data from 2013, 83.96 percent of individuals in Germany use the Internet (defined as using it in the last 12 months from any device, including a mobile phone), while in the US (the next highest country) it is 84.2 percent and in Australia (the next lowest country) 83.0 percent. Facebook is popular in Germany, with around 22 million users, which corresponds to around 28 percent of the population (Statista, 2015), but not as popular as in the US and the UK. People in Germany reveal relatively high levels of privacy concerns compared with other EU countries (EUROSTAT, 2011). Online political and civic engagement in Germany is limited to a small proportion of the population (Emmer, Wolling, & Vowe, 2012). Compared with other European nations, those living in Germany think less positively about social media as a good way of keeping abreast of political affairs (EUROSTAT, 2012). In Northern and Southern European countries, citizens think more positively of social media as a political informaton source (EUROSTAT, 2012). Overall, in Germany, social and entertainment-oriented uses of the Internet enjoy greater popularity than political ones (ARD/ZDF Onlinestudie, 2013). Compared with the US, citizens living in Germany use the Internet for political purposes less frequently (Köcher & Bruttel, 2011; Smith, 2013)

1.6 Structure of the dissertation

After the introduction, the theory and *framing chapter* addresses research goal d). It presents the salient theories of the research articles: social cognitive theory (SCT; 2.1) and Bourdieu's (1984) habitus and class theory (2.2). For both theories, I first give a general overview (2.1.1 and 2.2.1) and then elaborate how their concepts can be applied to the Internet (2.1.2 and 2.2.2). Finally, the second chapter contains the contextualization of the thesis (2.3). I use the theory of networked individualism (Rainie & Wellman, 2012) as the main contextualizing element.

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[5]In Switzerland, it would have been more challenging to carry out such a dissertation because of the language diversity.

Framing Chapter
- Theoretical embedding
- Abstract and generalizing
- Social contextualization and discussion
- Methodological considerations

Article 1
- Literature overview: state of research
- Variety of countries and wide time range
- Relatively abstract and generalizing

Article 2
- Quantitative study in one country
- Focus on relations and effects
- Generalizing but more concrete

Introduction
- Setting up the topic and the research questions
- Explaining relevance of thesis
- Introducing the goals
- Introducing the structure

Article 3
- Qualitative
- Concrete
- Case focus

Conclusion
- Summarizing the thesis
- Working out the theoretical and practical implications
- Naming salient limitations and pointing to future research

Figure 1: *Overview of dissertation structure*

Chapter 3 covers the main part of the thesis: the three research articles. First, a general overview of the the papers is given (3.1). I explain the choice of the journals, describe their scope and standing within the field of communication and Internet studies and delineate the submission history. Then, in 3.2, Article 1 (Lutz *et al.*, 2014) addresses research goal a). It is a systematic literature review that summarizes previous research and proposes a definition of online participation (3.2.2). Moreover, it presents a typology which differentiates five distinct forms (3.2.3): online political participation and civic engagement (OPP&CE), online business participation (OBP), online cultural participation (OCP), online education partici-

pation (OEP), and online health-participation (OHP). For each form, we[6] discuss the current state-of-research and review the most salient discourses in the literature (3.2.4-3.2.8). The article concludes with a summary, an agenda for future research in the form of propositions, and the limitations of our approach (3.2.9). Article 2 or part 3.3 (Hoffmann *et al.*, 2015) addresses research goal b). It is a quantitative study with data from a large-scale online survey in Germany which investigates its participation divide. The structure of the second article follows the standardized way of reporting research findings in communication and Internet studies, i.e., it has an introduction (3.3.1), a detailed theory section on previous research in the area of digital and participation divides as well as a brief summary of SCT (3.3.2), a methodology part specifying the sample and method used (3.3.3), followed by the results and their discussion (3.3.4) as well as a conclusion, which summarizes the findings and elaborates on the theoretical implications as well as the limitations (3.3.5). Article 3 or part 3.4 (Lutz, 2015) addresses research goal c) and includes a qualitative study on how different social milieus in Germany participate differently on the Internet. In the same manner as Article 2, it covers the topic of participation divides. In addition, however, it introduces the milieu perspective to digital inequalities research and features Bourdieu's theory of social stratification. Similarly to Article 2, it is structured in a standardized way: After the introduction (3.4.1), an extended literature review derives how the notion of habitus is useful in theorizing the participation divides and understanding their social structuration (3.4.2). The methodology section (3.4.3) describes the sampling and data analysis of the study. In subsection 3.3.4, I present the results, using quotes from the focus groups and online communities. For each of the seven milieus considered, I carve out the participation patterns as well as the specific participation habitus. Lastly, the discussion and conclusion (3.3.5) ties the results back to the literature, discusses the theoretical implications and comes up with propositions to guide future research, before the article closes with the limitations.

Finally, *chapter 4* contains the conclusion of the thesis. It addresses research goal d) and summarizes the most important findings (4.1), discusses implications for theory and practice (4.2) and mentions salient limitations of the thesis as well as avenues for future research on the topic (4.3).

The *architecture of the dissertation* is funnel-shaped in its sequence (Figure 1). While the theory and framing chapter provide a broad overview of the central theories and a contextualization of the topic, Article 1 is already more concrete, since it presents a distilled review of previous research, though on an international scale. Article 2 then features own findings on one aspect of online participation in Germany, namely its participation divide. It is

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[6]I use "we" for the co-authored parts of the dissertation, i.e., Article 1 and Article 2. "I" is used for the single-authored parts, i.e., Article 3 as well as the introduction, theory chapter and conclusion.

still more abstract than Article 3 in the sense that it uses a standardized questionnaire and does not assess individuals' concrete participation practices. Article 3, finally, investigates the participation divide in Germany with very concrete examples and a fine-grained analysis of participation practices in distinct social milieus. The funnel-shape allows a summary at different levels of abstraction that build the basis for the implications addressed in the conclusion.

2 Theory and Framing

People are not hooked on their gadgets – they are hooked on each other.
Lee Rainie and Barry Wellman

This chapter presents a summary of the main theories in the dissertation. For each theory I first give an overview and then discuss how the theory is useful to guide our understanding of the online context. The social theories of crucial importance for the thesis are: social cognitive theory (SCT; Bandura 1977; 1986; Compeau, Higgins, & Huff, 1999; Wei, Teo, Chan, & Tan, 2011) and Bourdieu's distinction and habitus theory (Bourdieu, 1984). SCT is applied in Article 2 and Bourdieu's theory serves as the conceptual backbone of Article 3. After the discussion of the theories I present the framing and contextualization of the dissertation. With this framing, I intend to give the thesis a common thread and to contextualize the single contributions within larger developments in society. I chose the theory of *networked individualism* (Rainie & Wellman, 2012) as the guiding approach for the contextualization and framing.

2.1 Social cognitive theory

2.1.1 Social cognitive theory – An overview

SCT is one of the major theories in social psychology in particular and in the social sciences in general. A Google Scholar search of the term "social cognitive theory" yields 91,600 hits as of 11th February 2015. SCT is widely applied in psychology, sociology, communication, education, business/management and other domains. It was mainly developed by the Canadian psychologist Albert Bandura in two landmark books: *Social Learning Theory* (Bandura, 1977) and *Social Foundations of Thought and Action* (Bandura, 1986). As the title of the first book implies, the theory has its roots in the analysis of learning processes. At the core of the theory stands the experimentally substantiated claim that humans learn by observing and imitating others.

The *Bobo doll experiments,* which are among the most famous experiments in the history of psychology, illustrate this idea. In 1961 and 1963 Bandura and his colleagues conducted two experiments where young children watched an adult beating up a Bobo doll in the experimental condition and ignoring the Bobo doll in the control condition. After the display of the adult's behavior, the children were presented with the same type of Bobo doll. It was measured whether the children in the experimental condition behaved more aggressively

towards the Bobo doll than the ones in the control condition (Bandura, Ross, & Ross, 1961). Furthermore, the 1963 experiment featured a manipulation of the adults being rewarded, punished or getting away as a consequence of beating up the Bobo doll (Bandura, Ross, & Ross, 1963). The children in the experimental condition behaved significantly more aggressively towards the Bobo doll than the ones in the control condition. This implies that the children imitated the aggressive behavior they observed and revealed vicarious learning, i.e., learning by observation. The reward/punishment manipulation also affected the children's aggressiveness: The children who observed the adults being rewarded after beating up the Bobo doll behaved significantly more aggressively than those seeing the adult getting away with it or being punished. Hence, the second experiment stressed the role of *expected outcomes* and showed their importance. The reward/punishment manipulation, however, did not affect the children's memory of the events. In other words, the outcome of the beating up – whether being rewarded, punished or getting away without any consequence – did not influence how well the children remembered the beating up. The experiments were heavily criticized for ethical reasons, for conceptual misinterpretations, for methodological problems, and for including children from privileged backgrounds instead of featuring children from a broader range of socio-economic backgrounds (Hart & Kritsonis, 2006). Despite this, the experiments present a strong case for the theory of social learning and thus a fundamental building block of SCT: Humans learn through observing and imitating others.

According to SCT, personal factors, behavior and environmental factors form a causal model of *triadic reciprocity*. Within this model (a) an individual's environment influences personal dispositions (such as cognitions and affect), which in turn shape its choice of environment; (b) personal dispositions influence behavior, which in turn influences these personal factors; (c) behavior affects the environment, which in turn impacts behavior (Bandura, 1977; 1986).

The idea of reciprocity distinguishes the theory from other popular (social) psychological theories, such as the *Theory of Planned Behavior* (Ajzen, 1991) or the *Theory of Reasoned Action* (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). These two theories assume a causal relationship between cognitions, such as attitudes and intentions, and behavior as the dependent variable. In contrast to the aforementioned theories, SCT also considers the environment as the context where learning experiences take place. With this inclusion of the macro level it is a relatively encompassing theory, although the focus tends to be on the individuals and their specific learning experiences and cognitive processes. SCT is in essence an agentic theory and stands in contrast to behaviorism (Bandura, 2001). Thus, it concentrates on the individual and his or her behavior and cognitions. Accordingly, most of its core constructs have a personal focus and are introspective, such as the idea of *self-regulation*

(Bandura, 1991), i.e., individuals' propensity to observe themselves (self-monitoring), judge their behavior along social standards (judgmental process) and act accordingly (self reaction; LaRose & Eastin, 2004). At the same time, the idea of mutual shaping or reciprocity between various layers of the social sphere is reminiscent of other social theories that try to reconcile the micro and macro dimensions, such as Giddens' (1984) theory of structuration or Bourdieu's (1984) concept of habitus.

One of the key constructs in SCT is *self-efficacy*, defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). Thus, self-efficacy describes someone's judgment about being able to carry out a certain activity in order to achieve desired outcomes. Computer self-efficacy, for example, refers to "an individual's perceptions of his or her ability to use computers in the accomplishment of a task" (Compeau & Higgins, 1995, p. 191). Self-efficacy is developed through positive experiences, vicarious learning, social persuasion or by the reduction of stress reactions and changes of misinterpretations of a person's physical condition (Bandura, 1994). Self-efficacy beliefs can vary in their *magnitude*, *strength* and *generalizability* (Compeau & Higgins, 1995). The magnitude describes the level of difficulty of the tasks which individuals think they are capable to solve. Actors with a high self-efficacy magnitude believe themselves to be capable of carrying out difficult and complex tasks. By contrast, self-efficacy strength covers the "level of conviction about the judgment" (Compeau & Higgins, 1995, p. 192). Finally, the generalizability of self-efficacy accounts for the number of situations which someone's self-efficacy applies to. People with high generalizability of self-efficacy can apply their self-efficacy productively in a broad range of situations, while those with lower generalizability see their self-efficacy limited to a few specific situations. In this sense, the generalizability dimension refers to an individuals' flexibility or adaptability to use their self-efficacy in different situations.

Self-efficacy has proven to be a powerful and encompassing construct in explaining behavior. A large number of empirical studies in different social settings have used this central aspect of SCT (Pajares, 1997; Stajkovic & Luthans, 1998). Often, self-efficacy is a strong predictor for a large number of behavioral and attitudinal outcomes. Bandura (2001, p. 270) summarizes:

> *"Efficacy beliefs influence whether people think self-enhancingly or self-debilitatingly, optimistically or pessimistically; what courses of action they choose to pursue; the goals they set for themselves and their commitment to them; how much effort they put forth in given endeavors; the outcomes they expect their efforts to produce; how long they persevere in the face of obstacles; their resilience to adver-*

sity; how much stress and depression they experience in coping with taxing envi-
ronmental demands; and the accomplishments they realize."

More recently, Bandura applied SCT to communication and (mass) media (Bandura, 2001).
Traditional psychological theories did not consider the symbolic environment enough. The
media form a crucial part of this symbolic environment. Within the media, Bandura stresses
the role of *models*, i.e., actors appearing in the media. The application of SCT to the mass
media puts a heavy focus on self-efficacy and vicarious learning but also tries to embed es-
tablished findings from the diffusion of innovations theory (Rogers, 1995). Four different
modes of thought verification are distinguished: enactive, vicarious, social, and logical veri-
fication (Bandura, 2001). Individuals either transfer their cognitive dispositions into actions
via concrete, spontaneous actions which resemble learning by doing via trial-and-error (en-
active), via taking other people's behavior as the starting point (vicarious), via following so-
cial pressure (social) or via following some sort of logical deduction mechanism (logical).
The influence of media often draws on the vicarious mode. As mass media can reach a huge
audience, a single model, such as an actor or TV presenter, can affect many consumers via
such vicarious or observational learning (Bandura, 2001, p. 271).

In this sense, Bandura (2001, p. 277) sees a *disinhibitory power of mass media*. They dis-
play physical aggression as an acceptable and often successful mode of conflict resolution,
thus trivializing, glamorizing and legitimizing violence. However, the self-regulatory capa-
bilities of human beings weaken and mediate such displays of negative and aggressive be-
havior in the mass media. Moral standards and social norms are especially strong forces
in the process of self-regulation. Fighting these self-regulating forces, a couple of mecha-
nisms can disengage the self-regulation. Bandura (2001, pp. 277-280 – including Figure 3,
the least readable figure in the history of the social sciences) discusses a range of *disengage-
ment techniques*, such as moral justification (arguing that the reprehensible conduct was
actually morally correct), palliative comparison (arguing that the reprehensible conduct was
still better than others' conduct), euphemistic labeling, displacement of responsibility (it
was not my fault), misconstruing the consequences, and, finally, dehumanizing or blaming
the victim.

Bandura's (2001) rather negative and pessimistic take on (mass) media largely excludes
the Internet[7] and is best applicable to TV and, to a lesser degree, to the mass press. However,
later research reflects upon the role of the Internet and how SCT might relate to it (Bandura,
2002; LaRose & Eastin, 2004).

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[7]The exclusion of the Internet might be due to the fact that, at the time of writing the article, it had not seen
massive diffusion yet and the traditional media were still largely dominant.

2.1.2 Applying social cognitive theory to the digital sphere

In a study of US citizens' access to information and the resulting effects on political partic-ipation, Bimber (2001) found that socio-economic variables do affect access to information but cannot directly explain participation. He suggests that "cognitive pathways" should be considered to understand the participatory effect of new media. This notion follows Ban-dura's thinking, who states that "ready access to communication technologies will not nec-essarily enlist active participation unless people believe that they can achieve desired results by this means" (Bandura, 2001, p. 287). Hence, self-efficacy influences how people use new media for their purposes. In this sense, SCT has repeatedly been applied to the adoption of new communication technologies and to users' ability to productively use new media. It provides a differentiated understanding of how demographic antecedents affect online con-tent creation (OCC).

The application of SCT to ICT use shows that environmental and social factors, such as training and ICT access, affect personal dispositions. These, in turn, influence use behavior (Ambrose & Chiravuri, 2010; Compeau & Higgins, 1995; Hoffmann, Lutz, & Meckel, 2014; Hoffmann, Lutz, Meckel, & Ranzini, 2015; Wei *et al.*, 2011). Despite the reciprocity of cogni-tions, the environment, and of behavior, Bandura (2001, p. 267) asserts that "most external influences affect behavior through cognitive processes rather than directly". By applying SCT to the Internet and to online participation, the mediating role of cognitive factors in the effect of demographics on use behavior can be considered. According to SCT, these cog-nitive factors are affected by environmental influences and, in turn, significantly influence behavior.

Given this relationship, SCT provides a helpful explanation of why demographic variables affect the use of new media: These variables can be associated with specific environmental influences and thereby affect the development of personal dispositions (e.g., self-efficacy or privacy concerns) and ultimately of behavior. Whether or not a personal or demographic variable signifies distinct environmental influences depends largely on the social context or environment, such as political (e.g., regulation), cultural (e.g., discrimination), technological (e.g., affordances), economic (e.g., Internet access) or institutional (e.g., education) condi-tions. For example, the influence of gender on Internet use and online participation should depend on the cultural context, as it may have bearing on women's exposure to ICT relative to that of men (Doney & Canon, 1997; Frenkel, 1990; Wei *et al.*, 2011). Similarly, the effect of age on Internet use and participation depends on the institutional context, for example, on school curricula, workplace Internet guidelines, and the existence of online courses for elderly or retired citizens. Likewise, the impact of SES on Internet use is shaped by politi-

cal decisions, for example when certain Internet content is censored and only educated and tech savvy users can access it (Nabi, 2014).

Several studies show how self-efficacy drives users' ability or willingness to apply ICT (Compeau *et al.*, 1999; Venkatesh & Bala, 2008; Venkatesh, Morris, Davis, & Davis, 2003). Self-efficacy has previously been considered in digital divide research and has been helpful in explaining the effect of demographic variables on use behavior (Hoffmann *et al.*, 2015; Hsieh, Rai, & Keil, 2011; Wei *et al.*, 2011). A number of self-efficacy conceptualizations exist in the literature, depending on the ICT considered, e.g., Internet self-efficacy or computer self-efficacy (Compeau & Higgins, 1995; Compeau *et al.*, 1999). The inclusion of self-efficacy as a key construct of SCT has led to substantial increases in the explained variance of Internet use (LaRose, Mastro, & Eastin, 2001; LaRose & Eastin, 2004), especially compared with uses and gratifications (U&G) studies. Going back to SCT and advancing U&G, LaRose and Eastin (2004) conceptualize the gratifications sought (GS) and gratifications obtained (GO) as *expected outcomes* in the tradition of SCT. They argue that expected outcomes, as projected results of actions in the future, should explain Internet use better than past motives (GS) and present motives (GO). Six expected outcomes are distinguished going back to Bandura (1986, pp. 232-240): novel sensory, social, enjoyable activity, monetary, self-reactive, and status. In contrast to the U&G tradition, which mostly uses empirical methods to distinguish gratifications, such as exploratory factor analysis, this typology is theoretically constructed (La Rose & Eastin, 2004, p. 360).

Applying the SCT perspective from general Internet use to online participation, we can also expect *self-efficacy* to play a crucial role in explaining the behavior (Hoffmann *et al.*, 2015; Livingstone, Bober, & Helsper, 2005). Users' propensity to participate on the Internet should be strongly and positively influenced by their participation self-efficacy (Ryu, Kim, & Lee, 2009; Spence & Usher, 2007). Similarly, the expected outcomes of online participation, as motives or incentives for participation, should be strongly associated with the participation behavior (Malinen, 2015). Positive outcome expectations, such as status or monetary gains as well as enjoyable moods/activity (e.g., being cheered up, feeling entertained), should be positively associated with online participation, while negative outcome expectations, such as social isolation, negative self-reactive outcomes (e.g., being bored, feeling stressed), or no novel outcomes (e.g., frustration because some important piece of information is not found) should be negatively connected to participation on the web (LaRose & Eastin, 2004). In that sense, SCT is useful to structure users' various motives or incentives to participate online and the concept of self-efficacy points to the agentic, cognitive potential of how different users engage proactively on the web.

A vein of studies have *empirically* investigated why users participate online and use so-

cial media, especially within the U&G lens. Terras, Ramsay and Boyle (2015) offer a current overview of this research. They summarize a range of other studies (Park, Kee, & Valenzuela, 2009; Pempek, Yermolayeva, & Calvert, 2009; Quan-Haase & Young, 2010; Whiting & Williams, 2013) and name the central motives found in these investigations. In essence, the motives found can be reduced to a small set of gratifications:

- *information* seeking – including stalking and observing other users – and providing information

- *entertainment* and hedonic uses

- *communication* and relationship maintenance

- *self-status* seeking and identity management

The evidence suggests that users' propensity to produce and share information/content on SNS is lower than to consume information/content (Terras *et al.*, 2015, p. 9). Thus, the entertainment and information consumption – and hence passive – aspects of social media use seem to be more pronounced than the participatory or active aspects. However, different platforms, applications and their affordances need to be distinguished. Not all of them provide the same gratifications (Quan-Haase & Young, 2010) and some of them fulfill the participatory, content-producing motives more than others (Terras *et al.*, 2015). Moreover, it should be distinguished whether the motivations in question are GS or GO, i.e., whether users' motivations for initial use (GS) or continuous use (GO) are investigated (Quan-Haase & Young, 2010). In most cases, research has focused on the latter.

Especially research on online communities has also distinguished *intrinsic* from *extrinsic* motivations to participate (Malinen, 2015). Most of these studies found that intrinsic and intangible needs are more prevalent than extrinsic ones (Cook, Teasley, & Ackerman, 2009; Fuglestad *et al.*, 2012; Nov, Naaman, & Ye, 2010; Tausczik & Pennebaker, 2010), even in professional contexts of knowledge sharing (Wasko & Faraj, 2000; 2005). For instance, Wasko and Faraj (2000) analyzed open-ended questionnaires from 342 participants in three technical communities and found that only 21.5 percent of comments refer to tangible or extrinsic motivations (including factors like "personal gain" or "useful-info valuable"). The intangible motives of "learning" and "entertainment/enjoyment", with 19.9 percent of comments, feature similarly prominently. However, the most prominent motives are social ones, i.e., "interaction with the community", which cover 41.9 percent of all comments (Wasko & Faraj, 2000, p. 164). These refer to altruism, reciprocity and "multiple viewpoints". Finally, 16.7 percent of all comments include barriers to participation, among which "group-related barriers" are most common with 10 percent. Again, however, the results might differ according

to the research context, i.e., the topic and type of platform in question as well as the size and expertise of the community (Malinen, 2015; Song, 2010). Some applications and platforms might cater more to the intrinsic needs and motives, while others stress the extrinsic and functional ones. Also, research has shown that motives for online participation can change over time: "The longer members engage in online communities, the more important they perceive their membership: in time, social use motives supersede functional ones" (Lutz *et al.*, 2014, section 6.2; referring to the studies of Cook *et al.*, 2009 and Nov *et al.*, 2010).

I will not rely on the U&G theory for my thesis and the question of motives is only marginally touched by the three articles of the dissertation. On the one hand, my thesis is mainly sociological within the domain of communication and new media studies (see the paragraphs in 2.3.1.1 A sociological perspective). U&G and other frameworks that look at users' motives to engage on the Internet often operate with a psychological, media studies, design science or management focus – all valuable perspectives but not at the core of my attention. On the other hand, such research, especially when it comes to new and social media, often lacks a strong theoretical grounding and resembles a mere acccumulation of research findings (Malinen, 2015). It can be criticized for missing a sociological mechanism to account for the motives (Lutz, 2014). In sum, to me and for this thesis, the social stratification of online participation is more interesting than the motivational foundation. Or, in other words, I am more interested in the *who* and *how* than in the why (Terras *et al.*, 2015). A theory that heavily stresses these aspects of *who* and *how* and one which I rely upon for the third article is Bourdieu's habitus theory, which will be discussed in the next section.

2.2 Bourdieu

2.2.1 Distinction – An overview

Pierre Bourdieu is one of the most influential sociologists of all times and his theory, developed over the course of more than 30 years, has become a modern classic[8]. Bourdieu developed a set of essential concepts for the social sciences, such as habitus, social field, capital, and practice, embeddeding them into a holistic social theory. Despite his theoretical advancements, Bourdieu saw himself as an empiricist and always strived to apply the concepts he developed in rigorous, meticulous research using both qualitative and quantitative methods (Bourdieu, 2002). His research covered topics as diverse as the rites of the Kabyle in Algeria (Bourdieu, 1990a), the marriage practices of farmers in his native region of the Béarn (Bourdieu, 2008), the development of the French literary field as an independent social field

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[8]As of early 2015, Bourdieu has more than 380,000 citations on Google Scholar, making him one of the most cited researchers overall.

in the 19th century (Bourdieu, 1996), homeowners and their attitudes as an inquiry into the social foundations an thus a critique of (orthodox) economics (Bourdieu, 2005) as well as the academic realm (Bourdieu, 1988). In this brief and necessarily stripped down overview, I am focusing on the concept of "distinction" and mostly use the homonymous book as my body of reference.

Indeed, *Distinction* is not only the title of Pierre Bourdieu's grand oeuvre but also one of the central concepts in his theory. In *Distinction: A Social Critique of the Judgement of Taste*, Bourdieu demonstrates, with a rich body of different data, how social differences manifest themselves in people's tastes (Diaz-Bone, 2002). Whenever cultural goods are evaluated with certain aesthetic judgments, they receive distinctive value. An example Bourdieu makes is the evaluation of abstract art (Bourdieu, 1990b). Depending on the cultural capital of a person and her or his social background, artworks are judged differently. For many members of the working class, the functional and technical components matter most: A painting should please the senses and reveal the skills of the painter. By contrast, a person with a high volume of capital, especially cultural capital accumulated as a child at home and in school, will interpret the same painting differently in terms of its formal characteristics as well as its contextual aspects.

Not only does the aesthetic judgment of cultural goods differ depending on a person's social background but also the concrete choice of objects "suitable" for an individual. The structuration and forces of the social space make individuals select distinctively connoted cultural objects that are "close" to them and therefore familiar. Thus, the social space is superimposed by the space of practices – the space where cultural objects as components of lifestyles acquire practical value in people's everyday lives (Bourdieu, 1984). Consequently, there exist practices and goods that are suitable for a person's position in the social space, which are then chosen as taken-for-granted. And there exist practices that are avoided because they are not suited to one's position in the social space. Tellingly, the chooser sees their own act of choice as a subjective expression of freedom of individual taste and not as a structured social assignment.

The unconsciousness and (through incorporation generated) implicitness of social practice becomes apparent in the notion of *habitus*: the connection between the space of social positions and the space of practices. As an "embodied history, internalized as a second nature and so forgotten as history", the habitus "is the active presence of the whole past of which it is the product" (Bourdieu, 1990a, p. 56). At another point, Bourdieu writes about the habitus as a "virtue made of necessity" (Bourdieu, 1990a, p. 54). In the unconscious intuition for the positional adequacy of objects, especially cultural goods, a configuration is revealed that Goffmann (1951, p. 297) has aptly termed "sense of one's place".

Bourdieu analyzed the fine lines of distinction with rich empirical material, both quantitatively and qualitatively[9]. In his analysis of the French society of the late 1960s he distinguishes three broad classes: the dominant class, the petite bourgeoisie (corresponding vastly to the middle class), and the working class. The classes differ in terms of the total volume of capital accumulated, especially cultural and economic capital. Each class is analyzed in great detail and sub-divided into fractions, depending on the composition of capital within that class (Bourdieu 1984, Part III). Again, economic capital and cultural capital, rather than social capital, are the two salient forms of capital Bourdieu considers. Especially in the dominant class, he distinguishes a *rive gauche* fraction, rich in cultural capital but poorer in economic capital, from a *rive droite* fraction, rich in economic capital but poorer in cultural capital. Depending on the position in the social space, i.e., the volume and composition of capital, individuals show specific practices and have a preference for certain goods and lifestyles. In the *rive gauche* (composed of teachers, researchers, artists and more social professions), for example, an intellectual and more alternative lifestyle is preferred, whereas citizens in the *rive droite* (composed of engineers, managers and more technical professions) tend to lay more weight on exhibiting their material possessions and reveal "conspicuous consumption" (Veblen, 1899). The *rive gauche* prefers more challenging and avant-garde cultural goods (e.g., the *Well-Tempered Clavier* and the *Art of Fugue* when it comes to music), while the *rive droite* caters more strongly to "easier" mainstream pieces, such as the *Blue Danube* or *La Traviata* (Bourdieu, 1984, p. 262).

Through their practices, especially through cultural consumption, the classes and fractions distinguish themselves from one another. Or to put it more precisely, they produce distinction. The dominant class has the legitimate taste. Its distinctions strive to separate it from the petite bourgeoisie, which, in turn, tries to imitate and catch up with the dominant class. This is without much success, however, because the dominant class keeps developing new distinctions. The petite bourgeoisie itself attempts to distance itself from the working class. The working class, finally, lacks the means to engage in this ongoing game of distinctions and instead reveals a "choice of the necessary". Members of the working class develop a functional taste, lay heavy focus on physical strength and reveal little understanding and interest for the legitimate taste.

Bourdieu's *Distinction* (as well as other aspects of his work) has been extremely influential in sociology in general and cultural sociology as well as social stratification research in particular. Many studies on the *sociology of taste and cultural consumption* take his the-

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[9]In fact, Bourdieu's methodological approach and his successful combination of different, sometimes new and unusual methods, such as photography and correspondence analysis, is still inspiring for today's research landscape.

ory and research findings as a starting point. In the domain of cultural tastes, for example, Bourdieu's (1984) notion of the social structuration of taste and the strong homology between a person's position in the social space and her cultural practices has been contrasted with other approaches, most prominently the *omnivores thesis* (Peterson & Kern, 1996). It claims that the strong homology of taste and social position is outdated and instead a new hierarchical pattern of cultural consumption is developing. Instead of mainly consuming highbrow culture – as in Bourdieu's (1984) conception – members of the the dominant class are characterized by omnivorousness and openness: They cross symbolic boundaries and consume both highbrow and lowbrow culture or they consume a broad range of different cultural genres. The working class, by contrast, is characterized by less omnivorousness and by a concentration on one or a few genres.

In a similar vein, the study of *symbolic boundaries* draws heavily on Bourdieu (Lamont & Molnar, 2002). Here, the concept of distinction along cultural lines and tastes is one of the primordial concepts when it comes to social structuration, i.e., class boundaries. The habitus is mentioned as the central element in this process: "Hence, through the incorporation of habitus or cultural dispositions, cultural practices have inescapable and unconscious classificatory effects that shape social positions by defining (social) class boundaries" (Lamont & Molnar, 2002, p. 172). Lines of analysis regarding how symbolic, and latent, class boundaries translate into manifest social stratifications include qualitative studies of taste and consumption as well as quantitative inquiries into how cultural capital at home translates into educational achievement. In this vein, Bourdieu's (1984) class theory has been criticized for being overly deterministic. Research in the US, especially, tends not to find the same clear structuration of tastes along social lines as Bourdieu did in France (Bryson, 1996; Lamont, 1992; Peterson & Kern, 1996). A study by Hall (1996; as cited in Lamont & Molnar, 2002, p. 173) about home decoration in the New York area shows how certain cultural practices, such as landscape art, are equally prevalent in all classes and thus not distinctive. The study concludes that "the link between involvement in high culture and access to dominant class circles [...] is undemonstrated" (Hall, 1996, p. 198).

Bourdieu's influence is strongly visible in social stratification research as well, especially in the German speaking world. Here, various typologies apply a Bourdieuian, *multidimensional conception of social inequality* (Otte, 2004 for an overview). By doing so, they not only consider resources/status as the basis for analyzing societies but also more symbolic markers of social position, such as attitudes, beliefs and family structures. This more holistic approach to social stratification is subsumed under the label of lifestyles research ("Lebensstilforschung") in Germany but also includes the study of social milieus (Schulze, 1992; Vester, von Oertzen, Geiling, Hermann, & Müller, 2001) – a concept I will take up in Article 3 of the

dissertation. Bourdieu's work also provides interesting avenues for future inquiries in new media research, as the next sub-chapter will show in more detail.

2.2.2 Digital distinction

Despite the popularity of Bourdieu's theory in the social sciences, relatively few studies in Internet and new media research have used it and especially not when it comes to social media and web 2.0 applications (Chong & Xie, 2011). This is a pity because the theory could be used to shed light on important aspects of the digital sphere and on the connection between social characteristics and digital practices (Song, 2010).

Bourdieu's theory of distinction has been most successfully applied in the area of *digital inequality and digital divides* (Kvasny & Keil, 2006; Robinson, 2009; Sims, 2014). Traditionally, this research domain has investigated how aspects or dimensions of the Internet – from access to motivation, skills, use, and outcomes – are shaped by social characteristics (see Articles 2 and 3 for a more thorough discussion of the digital divide literature). Most prominently, gender, age and SES, as measured by education, income, parental education or occupation, are used as explanatory factors for differences in Internet access, motivation, skills, use, and outcomes (Van Dijk, 2006). However, digital inequality research often does not have a strong theoretical backing and has been criticized for oversimplifying the relation between the social and the technological (Halford & Savage, 2010; Sims, 2014). Bourdieu's social theory is a fruitful avenue to solidify that link because, with its central ideas of habitus, field, capital, distinction and practice, it offers a strong set of conceptual tools to analyze the mechanisms (Song, 2010). It can thus help specify *how* social inequality translates into unequal practices on the Internet by considering the social context and mechanisms of stratification (Kvasny & Keil, 2006).

Internet scholars are slowly but increasingly adopting Bourdieu's theory in the area of digital divides. So far, they mainly use qualitative, especially ethnographic, methodology. Two good examples are the studies by Robinson (2009) and Sims (2014). Both of them share some commonalities: They research digital inequalities in the institutional settings of schools and thus their research subjects are children. They apply a long-term perspective, accompanying and surveying the children over an extended period of time. They use ethnographic techniques to account for the social context of children's technology and Internet use. And their participants cover a broad range of social backgrounds, from privileged to less privileged. The latter allows for a comparison of different technological habitus (plural). Accordingly, the two studies share some findings. Robinson (2009) as well as Sims (2014) reveal how children's attitude towards technology (Sims, 2014) and their opportunities and leeway to

make use of it (Robinson, 2009) are heavily affected by their social background, i.e., whether they come from privileged of less privileged families. The social background overrides the assumption that all children have the same opportunities at school. Thereby, both studies point to the cultural forces at work to (re)produce digital inequality.

Despite the similarities of the approach and findings, each of the two studies has its own contribution. Robinson's (2009) focus is on *access*. She shows that despite the shift from access to use – or from the first-level digital divide to the second-level digital divide (Hargittai, 2002) – in recent research, aspects of access should not be neglected because there are new, evolving differences in access that can manifest themselves in specific habitus (pl.). She draws on Bourdieu's concept of the "taste for the necessary" and shows how the children from under-privileged backgrounds develop a habitus that resembles the one Bourdieu (1984) described for the working class. Since these children often lack broadband access at home, they have to use the Internet in a precarious mode, such as from the library or with a slow connection, thus not allowing them to develop the same playful and exploratory habitus as the dominant class children. Instead of access, Sims (2014) focuses on *practices* and *attitudes*. In his study, all the students share the same opportunities for participatory and creative digital courses in school. However, the children from privileged backgrounds – and the boys more than the girls – tend to make more use of the offers whereas the ones from under-privileged backgrounds either drop out or opt out. They do so mostly because such a "techie" habitus is discouraged and not fitting with the value system of their social environment.

North *et al.* (2008) reveal similar findings in their qualitative and ethnographic study about teenagers' new media use in Victoria, Australia. Drawing on Bourdieu's (1984) class theory and using the example of four teenagers, they show how the adolescents' habitus is strongly shaped by their social class and socio-economic background. The children in aspirational middle-class families use the Internet in a more purpose-driven manner and for learning and information. By contrast, the teenagers from under-privileged backgrounds use it more for entertainment, especially gaming, and consumption. The habitus developed at home is transferred to school to a certain extent. Like Sims' (2014) study, the research of North *et al.* (2014, pp. 908-909) demonstrates how both access to and knowledge about digital media does not suffice to explain digital practices. The latter depend strongly on the children's social background, including their parents' geographic location, occupations and education. These aspects are captured in a specific habitus. When the habitus corresponds with the social environment or field, users are like fish in the water and feel right at their place. In this sense, the habitus, as incorporated history, illustrates the presence of invisible and unconscious social structures, as demonstrated by the Davis Foster Wallace quote at the beginning

of this thesis.

Not as strongly anchored in Bourdieu's theory as the studies discussed, Zillien & Hargittai (2009) investigate differentiated Internet uses, as practices in a Bourdieuian sense. They show that higher SES users use the Internet in more capital-enhancing ways than lower SES users. The latter are more inclined to cater to entertainment uses. Similar results have been revealed in more recent large-scale studies on participatory inequalities in the UK, Germany, the US and the Netherlands (Blank, 2013a; Hoffmann *et al.*, 2015; Lenhart, 2015; Van Deursen & Van Dijk, 2014). In all of these studies some forms of Internet use or OCC are negatively associated with indicators of SES. Bourdieu's theory could be a suitable framework to account for these counter-intuitive findings in terms of digital divide scholarship, where Internet use in general should be positively affected by SES. Instead of using blanket measures of Internet use, such as years of Internet experience or time spent online, research should differentiate subtle forms, as Bourdieu (1984) did with cultural practices. This can be as detailed as asking for platform-specific application uses (e.g., Facebook group use in contrast to Facebook games use).

Next to studies on the digital divide, Bourdieu's theory has been applied to describe a *new habitus* that comes with the diffusion of social media (Papacharissi & Easton, 2013) and web 2.0 (Song, 2010). Papacharissi and Easton (2013) tie Bourdieu's concept of habitus to the notion of affordances. They add the affordance of shareability to boyd's (2010) affordances of networked publics. These affordances "present a set of embodied dispositions that come to form a habitus of the new, characterized by persistence, replicability, scalability, searchability and shareability" (Papacharissi & Eastin, 2013, p. 176). In addition, the habitus of the new is characterized by a blurring of boundaries between public and private and is centered on expressive and connective practices. As for the latter, three characteristic practices of the habitus of the new can be distinguished:

- *Authorship and disclosure*: Users become storytellers and use their linguistic capabilities to create content on blogs, social network sites (SNS), microblogs, and other social media. By doing so, they can create social capital and are rewarded (Papacharissi & Eastin, 2013, p. 178).

- *Listening*: The habitus of the new also entails specific modes of consumption, described as flaneuring and voyeurism. In this sense, the practices of lurking, following, and observing all form part of a specific practice of listening. Attention is a scarce and valuable good and by listening users can communicate attention (Papacharissi & Eastin, 2013, p. 180).

- *Redaction*: Next to producing content and listening to others, the habitus of the new

also requires editing in the form of remixing or re-tweaking. This concerns other users' content as well as self-produced one: "In the habitus mediated through social awareness systems, self-awareness and self-monitoring are heightened as individuals advance into a constant state of redaction, or editing and remixing of the self" (*ibid.*).

This habitus of the new requires digital literacy and the skills to navigate the new information environment in a productive way (Hargittai, 2010). A certain acumen and flexibility is necessary to reap the benefits from the habitus of the new. Such attributes are in turn strongly tied to existing social inequalities, especially class (Papacharissi & Eastin, 2013, p. 182).

In a similar vein, Song's (2010) study on the development of award-winning online communities between 1998 and 2004 draws on Bourdieu's field and habitus theory. It shows how early online communities between 1998 and 2001 focused more on communality, cultural capital and an overarching sense of commitment. These early communities, e.g., *The Well*, gave way to more functional ones, such as *Meetup*, where the community was not so important in its own right but mainly served organizational purposes for offline activities.

> *"Therefore, the early community field consisted more of symbolic producers competing for symbolic, non-economic capital such as fostering liberation, freedom, community, and social harmony. As the market brought the Internet to mainstream use, the participatory habitus that had been inflected with countercultural ideals was progressively overtaken by the venture capitalist's eye for profit. In this way, one might view the evolution of the community field as a shift from websites primarily animated by the cultural pole of legitimacy, to groups mainly oriented towards the economic pole."* (Song, 2010, p. 267)

With this shift comes a new habitus, indicating cultural changes. Song (2010) – as well as Papacharissi and Eastin (2013) – cautions against interpreting this new habitus too negatively, in the sense that the new participatory habitus is one of narcissism and infinite individualism. Instead, she suggests to adopt the notion of *personalism*, developed by Lichterman (1996), to describe this new habitus. Personalism refers to a self-aware, reflective and critical frame of mind that defies traditional authorities, such as religious or political power. At the same time, personalist individuals develop their personality through social interactions and in networks. In this sense, the personalist conception strongly resembles Rainie and Wellman's (2012) networked individualism, a theory discussed later in the dissertation. The technological developments of social media or participatory platforms, such as online communities, were not the cause but rather rather a catalyzer for this habitus of personalism to thrive (Song, 2010, p. 270).

The studies discussed so far look primarily at the intersection of offline characteristics, as indicators of a person's position in the social space, and of online practices. Less evidence is available on how status and distinction is produced in the online domain and in various (sub)fields of it. Levina and Arriaga (2014) give an overview and convincingly demonstrate that *distinction online* is an important and worthwhile topic of inquiry. In contrast to offline, the technological affordances of many online platforms[10], such as SNS (boyd, 2010), and computer-mediated communication in general allow distinction patterns that differ from the ones in other fields. Levina and Arriaga (2014) conceptualize the online sphere as a social field according to Bourdieu's (1993) notion of social fields. Thus, they write about the online fields and the specific logic of status production or distinction within them. Platform-specific and often well visible status cues, such as number of followers on Twitter, number of YouTube video views or the editor status on Wikipedia, signal a person's position in that field and thus create distinctions.

Levina and Arriaga (2014) summarize four current approaches on the topic of status and distinction on the Internet: social network analysis, which conceptualizes status online as a favorable and central position in a social network[11], research on online communities, online reputation literature, mostly in the context of e-commerce, and literature on specific online settings, such as blogs and massive multiplayer games. They explain how each of these four approaches is insufficient to address the particularities of online distinction and status creation. In turn, Bourdieu's theory, as a broad and refined social theory, can account for the weaknesses of these four approaches. It provides a more holistic and fruitful avenue to analyze online status production and distinction. In contrast to the offline sphere, the online field is characterized by reduced importance of traditional capital forms, such as economic capital, and instead entails new forms of symbolic capital. Also, the aspect of social capital is very important in the online field. However, Levina and Arriaga (2014) discuss how capital accumulated in the offline sphere can be transferred to the online sphere and back again. Moreover, their notion of distinction in the online field entails a process perspective that considers changes over time. Figure 2 shows the central model of their paper.

According to the model, the status of online content producers relies on consumers' evaluation of their content. Consumers' tastes, depending on their positions in the online field, thus influence how producers are judged. This dyadic perspective lays emphasis on the public or reception of content produced on the Internet. Hence, it could inspire studies on the participation divides to consider the recipients' point of view. For example, online partic-

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[10]I discuss the topic of affordances in more detail in subsection 2.3.1.2

[11]A recent special issue of *American Behavioral Scientist* provides some inspiring work on the notion of influence in social media with a focus on the social network and social capital perspective (Gruzd & Wellman, 2014).
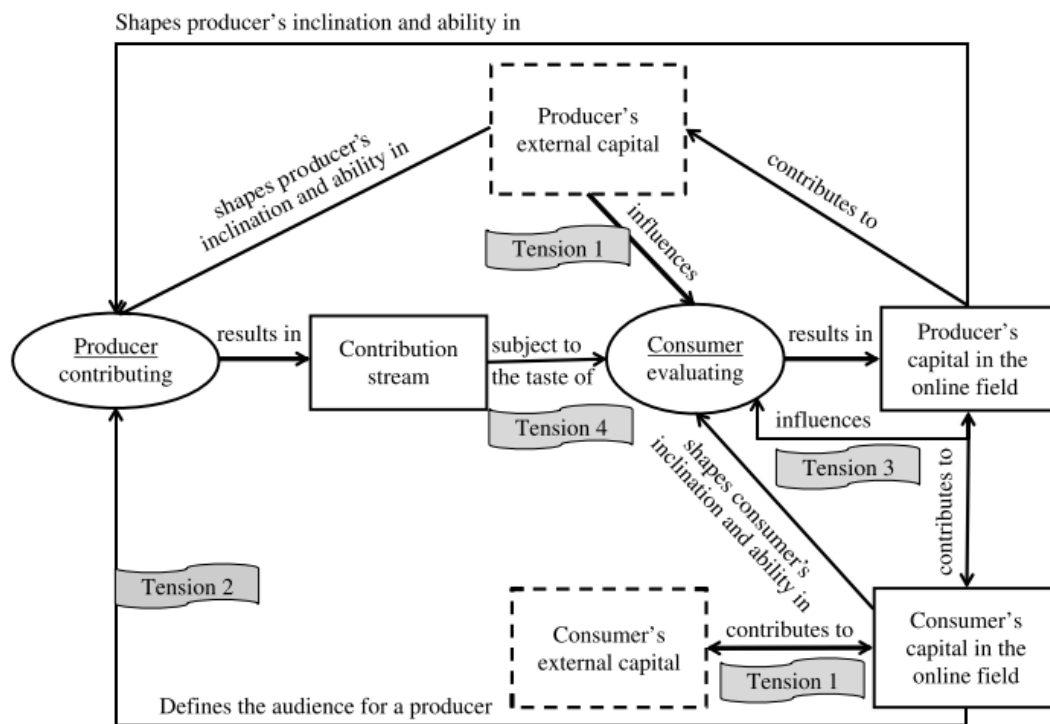
Figure 2: *Process model of power and status production in online fields according to Levina & Arriaga (2014, p. 480)*

ipation research on Twitter within a digital divide lens could not only ask who (i.e., what groups of users in terms of demographic and socio-economic characteristics) tweets (Hargittai & Litt, 2011) and what or how they tweet but also who reads the tweets and how the readers evaluate these tweets. Of course, this requires a lot of methodological effort and is not always realistic. However, visible markers or cues, such as number of followers, number of views, endorsements, badges and scores, serve as a proxy for the consumers' evaluation and capture someone's status in the online field (Levina & Arriaga, 2014). The model outlined in Figure 2 stresses the importance of a relational perspective – something imminent in Bourdieu's theory of habitus and field and inspirational for sociological research on digital divides. Such a relational perspective is also characteristic of the theory of networked individualism, the central framing approach of the dissertation discussed in the next section.

2.3 Framing of the dissertation

In the following paragraphs, I will first elaborate on the conceptual framing, i.e., I will describe and justify the conceptual underpinnings of the dissertation as well as its blind spots in that regard. Then, I will discuss the methodological framing in more detail. I will briefly

describe and justify the plurality of methods applied in the dissertation and how that relates to the global concept.

2.3.1 Conceptual framing of the dissertation

2.3.1.1 A sociological perspective

The overall approach of this dissertation is predominantly sociological and strongly influenced by previous research on the digital divide. I assume that and test how pre-existing social conditions shape users' participatory practices on the Internet. Such a perspective, as with every research endeavor, necessarily entails blind spots, for example the negligence of organizational/meso and environmental/macro aspects of online participation. In the tradition of reflective social science (Bourdieu, 1988; Bourdieu & Wacquant, 1992), however, I attempt to reflect on these blind spots throughout my dissertation whenever possible, especially in the overarching parts, i.e., the framing chapter and the conclusion.

The choice of a sociological lens, rather than a management, psychological or design and computer science perspective, has several reasons. *First*, online participation is a social phenomenon taking place in different domains or fields of society (Lutz *et al.*, 2014). Sociology is the science of the social and thus suited to investigate the nuances of online participation. *Second*, my background is in social sciences and I was trained in sociological theories and methods. Of course, this is a very "poor" justification in academic terms but I believe that my social science background lends the work some strengths. *Third*, the questions of participatory inequality and participation divide(s) – inherently sociological questions – are not well explored yet. Instead, much research on online participation focuses on its effects (Boulianne, 2009; 2015; Lutz *et al.*, 2014). In general, sociology has long been hesitant and sometimes even blind towards the Internet (DiMaggio, Hargittai, Neuman, & Robinson, 2001). Therefore, my dissertation can provide new insights into ongoing sociological research on social inequality and structuration. In the sense of the Digital Methods paradigm (Rogers, 2013), I am convinced that investigating online processes can help understand the fabric of offline life as well. *Fourth*, the project in which a large part of the dissertation operates has a sociological focus (DIVSI, 2015). It is specifically interested in how German citizens from different social milieus differ in their participation patterns on the Internet and is thus a fundamental research project. *Finally*, the sociological approach, with fine-grained empirical analyses, permits the application of theories which are insightful in Internet research. It offers a solid basis for commenting on the normative aspects of online participation, i.e., how and why to (not) incentivize online participation in Germany.

At certain points and where it is appropriate, I also include non-sociological aspects. For

example, the use of the concepts of self-efficacy and privacy concerns in Article 2 and the application of SCT in general brings social psychology into the dissertation. I will also make references to more technological aspects, as developed in the affordances theory (boyd, 2010; Gibson, 1977; Hsieh, 2012; Wellman *et al.*, 2003). However, this is not the core of my dissertation and the focus is on the social aspects, not so much the technological ones, although these are necessarily intertwined. The concentration on the social shaping of technology does not imply that I think of technology – and especially participatory platforms, such as Facebook, Wikipedia or Twitter – as completely socially constructed and neutral. Instead, I follow Van Dijck (2013) in the sense that technology carries certain encoded or embedded values (Brey, 2010) and that it is "neither good nor bad; nor is it neutral" (Kranzberg, 1986, p. 545). However, for the empirical parts of the thesis I aim at taking a vastly non-normative standpoint. I do not claim that (online) participation is inherently desirable or undesirable. Instead, I find a nuanced and descriptive understanding more useful that takes into account the application space of online participation and its outcomes. When participation results in emotional harm, such as is the case of cyberbullying on social media, it is obviously negative and undesirable. When it results in user empowerment and social benefits, it is desirable.

2.3.1.2 The case for technological affordances
As stated in the research goals and the previous paragraphs, this dissertation uses an encompassing sociological approach. It does not include case studies of individual platforms, such as Facebook, Instagram or Twitter, and does not even focus on a single type of social media or application, such as SNS (boyd & Ellison, 2007; Ellison & boyd, 2013). Instead, it attempts to generalize and look across platforms and applications. The work thus covers a huge range of technological affordances, which makes it difficult to apply the affordances perspective (Wellman *et al.*, 2003). At the same time, I am well aware that the technological affordances[12] of online participation options strongly shape users' propensity to engage with the medium. This can be directly, for example when users with less skills or self-efficacy refrain from participating online because they find the applications too difficult to use[13]. It can also be indirectly, for example when users develop privacy concerns because of the specific affordances of SNS, such as searchability, replicability and persistence (boyd, 2010). Hsieh (2012) has shown how the affordances perspective can be applied to digital inequality.

Not sufficiently considering how the technological affordances of individual platforms shape user participation and engagement makes the dissertation susceptible to criticism. Despite this, the careful development of the participation construct, as carried out in Article 1 of the thesis, can attenuate some of the criticism. All platforms that afford online participation – be it Wikipedia, Avaaz, Twitter or more obscure online communities – al-

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[12]Following Gibson's (1977) definition, I understand affordances as "the perceived and actual properties of objects and surrounding environments by animals or humans" (Gibson, 1977, as quoted in Hsieh, 2012).

[13]The ease of use or effort expectancy construct of the Technology Acceptance Model covers this aspect well (Davis, 1989; Venkatesh, Morris, & Davis, 2003).

low users to share personally meaningful content relatively easily to a certain and often very broad audience. Hogan and Quan-Haase (2010) offer an overview of what unites social media under a *social affordances* perspective. According to their argument, social media afford *many-to-many communication* (Hogan & Quan-Haase, 2010, p. 310). In many cases, however, it is not clear whether a medium or communication technology is many-to-many, and thus part of the group of social media, or just two-way. One example where the boundaries between many-to-many communication and two-way communication are blurring is Instant Messaging (Quan-Haase & Young, 2010). Moreover, online participation, as defined in this dissertation, in most cases leaves traces about the user that are more visible, accessible and traceable than those produced by more consumptive and passive uses of the Internet, such as information (e.g., Google search, looking up something on Wikipedia), consumption/entertainment (e.g., watching videos on YouTube) or communication (e.g., writing and reading Whatsapp messages or e-mails).

One could argue that the structural affordances boyd (2010) ties to networked publics – persistence, replicability, scalability and searchability – are characteristic for most online participation platforms. Next to the many-to-many character of social media and their persistence (which the users often perceive as ephemerality because of the constant stream of status updates in the newsfeed), Hogan and Quan-Haase (2010, p. 313) mention other characteristic aspects: the diversity of content filtering, the usefulness of existing social theories, such as U&G, homophily or impression management, to explain social media, and the blurring distinction between online and offline.

Figure 3: *Facebook notification button*

Majchrzak, Faraj, Kane and Azad (2013) provide another typology of social media affordances. In contrast to boyd (2010) and Hogan and Quan-Haase (2010), their article focuses on the organizational domain and the phenomenon of knowledge sharing in the workplace. They discuss the affordances of metavoicing, triggered attending, network-informed associating and generative role-taking. Metavoicing refers to the possibility of engaging with other users' original content, for example via liking, commenting, tagging, pinning or retweeting. Triggered attending describes the functionality of social media to provide users with alerts and notifications. Facebook's notification button is an example (Figure 3). Network-informed associating covers the opportunities of establishing new contacts based on one's existing network, including features such as LinkedIn's "People you may know" and Twitter's "Who to follow". Finally, generative role-taking is defined as "enacting patterned ac-

tions and taking on community-sustaining roles in order to maintain a productive dialogue among participants" (Majchrzak *et al.,* 2013, p. 45). Wikipedia's different user categories and functions provide an example (Van Dijck, 2013).

Levina and Arriaga (2014) distinguish different sub-types of user-generated content platforms, which is an overlapping term with social media and vastly refers to online participation platforms: social news sharing (e.g., Digg, Reddit), video or image sharing (e.g., YouTube, Flickr), social networking (e.g., Facebook, Twitter), product/service review (e.g., Amazon, Tripadvisor, Yelp) and crowdsourcing (e.g., Innocentive, Dell Ideastorm, Wikipedia). Each sub-type has specific affordances and status-producing distinction mechanisms, although the general affordances of social media, as presented by boyd (2010) and Hogan and Quan-Haase (2010), apply to all of them. All of these types are considered in my dissertation, since they allow for online participation as defined in Article 1 of the thesis.

The dissertation also largely leaves aside the rapidly evolving domain of *mobile communication* and the specific affordances mobile applications present (Campbell, 2013; Schrock, 2015). Very interesting questions emerge from there, also in terms of OCC and participation divides. Napoli and Obar (2014), for example, argue that mobile Internet access is second-class Internet access for a variety of reasons, such as decreased levels of functionality and content availability compared with desktop access, less flexible and open platforms, and diminished levels of user engagement. "In the realm of content creation there are a number of ways in which mobile access likely falls short of PC-based access. [...] Such differences ultimately cast the mobile device as more of an information retrieval device and less of an information creation and dissemination device than the PC." (Napoli & Obar, 2014, pp. 328-329) Unfortunately, the thesis cannot do justice to these questions and instead the aspect of access – where, how and by which devices users access the Internet to participate online – is largely left aside. Instead, my thesis focuses much more on the second-level digital divide (Hargittai, 2002), not the first-level digital divide. Again, the context-insensitivity – or to put it more generously: context-neutrality – limits the scope of the results and requires some precaution.

2.3.1.3 Networked individualism as a framework for contextualizing the dissertation
My cumulative dissertation does not have a single underlying big theory and applies a theoretical pluralism, as outlined in the previous sections of this chapter. However, the theory of *networked individualism* (Rainie & Wellman, 2012) fits well to describe major developments that build the context of online participation. It will be useful to understand the findings of the dissertation. I thus use *networked individualism* as the contextual and conceptual framing to the individual articles. In the following paragraphs, I summarize the theory and

specify how it serves as an appropriate framework to reflect upon the context of my thesis.

Rainie and Wellman (2012) distinguish three core developments – or the "triple revolution" – that shape the lives of networked individuals of our time: the rise of *social networking*, the capacity of the *Internet* to empower individuals, and the connectivity of *mobile* devices. They discuss each of these three developments in great detail and provide statistical evidence as well as personal stories and anecdotes to describe them. Rainie and Wellman (2012) see networked individualism as the new social operating system. People in Western, highly technologically saturated countries [14] increasingly lead lives characterized by networked individualism. Their theory is mainly descriptive but also has some prescriptive elements on how to thrive in such an environment. It offers a positive outlook on new technological developments – much in opposition to pessimistic voices, such as Sherry Turkle (Turkle, 2012) or Evgeny Morozov (Morozov, 2013).

The rise of *social networks* is the first and earliest of the three developments that form the triple revolution. It describes how people are increasingly moving away from tight group memberships to more sparsely-knit and diverse networks. In this vein, individuals develop a multiplexity of connections in different contexts and manage them more diligently than ever before (Baym, Zhang, & Lin, 2004; Hsieh, 2012; Kim, Kim, Park & Rise, 2007). This is reflected in increased mobility (flight connections have become much cheaper), new work patterns and a number of other sub-developments, such as the availability of more international products because of globalization. So, the first aspect of networked individualism concerns societal shifts that several sociologists and political scientists have observed and tied to the notion of individualism (Beck, 1983), experience orientation (Schulze, 1992) or post-materialism (Inglehart, 1977; Inglehart & Baker, 2000). Rainie and Wellman (2012) add to this the aspect of social networks, substantiated by Wellman's extensive research within the field of social network analysis (Wellman, 1979; Hampton & Wellman, 2003). They take an agentic perspective – similar to that of SCT – in the sense that individuals are actively shaping their fate and networking as part of their work and private life. "The hallmark of networked individualism is that people function more as connected individuals and less as embedded group members" (Rainie & Wellman, 2012, p. 12).

The second aspect of the triple revolution is the capacity of the *Internet* to empower individuals. The Internet has accelerated the rise of social networking since Internet-enabled

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[14]Barry Wellman gave a keynote speech about the book at the *OII Summer Doctoral Programme* in 2013 and was asked whether the model of networked individualism also applies to non-Western societies. He answered that the book is about the American and Canadian context and that we have to be careful not to extrapolate it too much to other cultural contexts, such as South Asia, Africa or South America. In the book, Rainie & Wellman (2012, p. 11) write: "Although we focus on North America, our home and the source of most of our evidence, we believe that our conclusions generally hold true for the entire developed world." I see Germany as a country where the theory also applies.

connectivity complements existing modes of communication, such as the telephone, mail and face-to-face. Rainie and Wellman (2012) see the Internet revolution as reinforcing rather than weakening social ties. Here, the *affordances* perspective becomes important, as certain software and hardware design choices around the personal computer have enhanced networked individualism (Rainie & Wellman, 2012, p. 65). Some of these computer affordances include its personal, connected, and humanized character as well as its decentralized and asynchronous nature, allowing for communication to be more customized and private.

Next to the technological aspects, the cultural developments around the Internet revolution have also contributed to networked individualism (Rainie & Wellman, 2012, p. 77). Depending on the time of adoption and involvement in the medium, different salient *Internet cultures* can be distinguished, such as techno-elites, hackers, virtual communitarians, and entrepreneurs (Castells, 2001). The first two were important to provide the political and technical foundations of the Internet whereas the third and fourth groups had crucial parts in shaping its social forms and making it available to a broad section of society. Rainie and Wellman (2012, p. 79) add a fifth group, the so-called *participators*: Internet users who create and share content. Empirical evidence from recent PEW surveys shows that in the US "roughly one-third of internet users are participators who actively post material that is meant to influence others or be helpful to them" (Rainie & Wellman, 2012, p. 79). This group of participators corresponds strongly with my understanding of online participation, as outlined in Article 1 of the thesis. The theory of networked individualism sees these participators, especially the most active among them, as the avant-garde of networked individuals on the Internet (Rainie & Wellman, 2012, p. 79). They constitute what Dutton (2009) calls "The Fifth Estate", an emerging class that challenges existing notions of government and politics and uses the opportunities of the Internet for holding these accountable.

Finally, the always-on connectivity of *mobile* devices constitutes the most recent of the three macro-developments that form the triple revolution. It allows people to be connected on the road and on-the-go. *Texting* emerged as one of the fundamental modes of communication with the advent of the mobile revolution. Especially among young people, texting is extremely common. In the US, for example, teens receive and send around fifty texts on an average day, with one third handling twice that volume (Rainie & Wellman, 2012, p. 89). The main reason why texting as a specific form of mobile communication has become so popular among American teenagers is its unobtrusiveness. It allows for more privacy, more intimacy and less parental control than communication via desktop computers and landline phones. In addition to texting, mobile Internet has brought about increased *connectivity*. The sharing of photos and videos, in particular, has become easier. Consequently, already by mid-2011, 74 percent of mobile phone users in the United States sent photos and videos to other

users (Rainie & Wellman, 2012, p. 92). A third major development within the mobile revolution is the rapid diffusion of applications or *apps*. Games (and among them puzzle/strategy games, card games, and arcade games), weather reports, maps, and social media platforms are especially popular in that regard (Rainie & Wellman, 2012, p. 92). In this sense, the mobile revolution has led to *hyperconnectivity* (Quan-Haase & Wellman, 2006; Wellman, 2001): Many individuals use a multitude of devices to connect with each other. They are "almost always online or on their mobile phones: available to others, capable of searching for information, and usually able to create online material if they wish" (Rainie & Wellman, 2012, p. 95). In this sense, the Internet becomes ubiquitous and disappears into the background, increasingly fulfillling Weiser's (1991, p. 19) prophecy: "The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it."

All of the three developments of the triple revolution are crucial for the boom of online participation. In this dissertation, the second aspect, in particular, is touched upon, i.e., the Internet revolution, not so much the first and third, i.e., the network and mobile revolution. Rainie and Wellman (2012, pp. 197-221) provide a chapter on *networked creators* or individuals who use the Internet very actively for content production and online participation. They show how ordinary citizens can develop a strong voice on the Internet by posting meaningful and valuable content for others. The chapter, by using the examples of the Egyptian revolt 2011 (Tufekci & Wilson, 2012), an amateur blogger in Boston, Wikipedia editing around the Fukushima earthquake, and self-made YouTube stars, shows how online content creators can have real world impact and change established institutions and industries. The authors mention several advantages of being a networked creator, namely self-expression, learning, collaboration, belongingness and community, and empowerment (Rainie & Wellman, 2012, pp. 217-220). When it comes to the downsides, the problem of information reliability and trustworthiness is addressed but not the question of participation divides and the issue of exclusiveness of online participation.

For the Internet revolution, especially, substantial gaps or divides between different population segments exist, as the PEW data featured in *Networked* show. However, the theory of networked individualism places more weight on the positive affordances of digital communication and the opportunities rather than the constraints and downsides. Brake's (2014) analysis of PEW data in the US and OxIS data in the UK describes the social structuration of OCC and the extent of unequal participation. Age is the most important predictor for content creation but social class and education also influence how inclined users are to participate by producing content. In the UK, "regular blogging did appear to be significantly more popular among the upper middle class than among the working class" (Brake, 2014, p. 596). Simi-

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Table 1: *Overview of theories in dissertation*

	Social cognitive theory	Bourdieu	Networked individualism
Central ideas and concepts	Self-efficacy; triadic reciprocity; self-regulation; vicarious learning (learning through observation); focus on cognitive processes	Habitus as connection between social space and practices; field; capital: cultural, economic, social and symbolic; class	Triple revolution: networks, Internet, mobile; from groups to networks; affordances
Key texts	Bandura (1977); Bandura (1986)	Bourdieu (1984); Bourdieu (1990a); Bourdieu (1993); Bourdieu (2010)	Rainie & Wellman (2012); Wellman et al. (2003)
Point of view	*Agentic and empowering*: individuals' confidence in mastering complex tasks; cognitive capacity to learn via different modes, such as experiential (by doing), vicarious, by social pressure and via logic deduction; strong position of models, especially in the mass media	*Structural and critical*: individuals' shaping by their social environment and background at the center of attention; incorporation of social conditions as a child and in school; inertia of social structure due to distinction games and problematic power imbalances	*Agentic and descriptive*: individuals' potential to form ties and build social capital in order to manage multi-faceted social realities (work, family, community etc.), especially fostered through Internet-enabled communication but partly constrained through affordances
Application to Internet and online participation	Integrating self-efficacy as the central connecting element between users' environment and their Internet use; studying the role of other cognitive constructs as cognitive pathways	Studying how social background – class, socio-economic position, geographical area, gender, age, family – shapes users' habitus, which, in turn, shapes how users employ the Internet for their purposes	Investigating how networked individuals make use of the Internet and mobile technology to enhance existing modes of communication and build social capital; ICT are embedded in already existing networks at home and at work
Exemplary studies applying theory to Internet	Hsieh et al. (2011); LaRose et al. (2001); LaRose & Eastin (2004); Wei et al. (2011)	Harambam et al. (2013), North et al. (2008), Robinson (2009), Sims (2014)	Mascheroni (2012), Rainie & Wellman (2012), Tseng & Hsieh (2015)
Findings of studies applying theory to Internet and online participation	Increased self-efficacy leads to more proficiency in Internet use and more online participation. Self-efficacy is in turn affected by demographic characteristics. Expected outcomes – as usage motives – have a strong effect on actual use.	Users' social background strongly shapes their access to technology as well as their skills and specific uses. Users with more capital – especially cultural capital – are more proficient in using the Internet and participating online, e.g., in creative activities. However, age seems to matter more than SES.	Networked individuals apply the Internet for information, communication and participation. Around one third of US Internet users belong to the "networked creators", i.e, individuals who actively and regularly create content online via social media. Online participation empowers citizens in various ways.

larly, other forms of content production, such as Wikipedia editing and citizen journalism, depend strongly on education with higher-educated users being much more likely to perform the activity. The three articles of the dissertation, and especially the empirical pieces, will all focus on this blind spot of the theory of networked individualism. *Table 1* gives an overview of the three main theories of the dissertation. It summarizes the conceptual foci as well as the empirical applications on the Internet, with exemplary studies.

2.3.1.4 Digital dualism

More and more, consensus is emerging that a clear separation between online and offline is both increasingly difficult and not reflecting the experience of many individuals (Jurgenson, 2011; Rainie & Wellman, 2012). People embed the Internet into their daily practices as never before due to mobile phones, tablets, and digitized, connected objects ("Internet of things"). The Internet becomes embedded and increasingly disappears into the background. Thus, instead of clearly separating between online and offline participation, it might make more sense to treat participation as a single phenomenon. However, at the moment the process of the Internet disappearing into the background is probably not yet wide-reaching enough to justify a complete entanglement of online and offline.

2.3.2 Methodological framing of the dissertation

This dissertation uses a mix of methods to investigate the nuances of online participation. In the first article, a systematic literature review is conducted, in the second article we use structural equation modeling and in the third article I rely on focus groups and online communities. Originally, I intended to write a thesis with a predominantly quantitative methodology. In the course of my doctoral studies – attending conferences, going to workshops, talking with other researchers, writing my research proposal and reading current literature – I realized that such an one-sided quantitative approach would not do justice to the breadth of the topic because it cannot sufficiently account for users' own narratives about how they participate online. Or in other words, it cannot sufficiently capture the meaning users attach to their participatory practices and their motives to engage in different online contexts. Participation on the Internet depends a lot on a user's mindset (Harambam *et al.*, 2013). This mindset, in turn and following Bourdieu's (1984) habitus theory, is strongly shaped by the social environment the user is embedded in (North *et al.*, 2008). Qualitative methodology is better suited to capture the nuances of such mindsets than quantitative approaches.

Therefore, I decided to include a qualitative article, which breaks up the quantitative – and maybe mechanistic – logic of the previously planned dissertation, as outlined in my

proposal[15]. This third and single-authored piece uses focus groups and online communities and thus includes "deep" data about user engagement and participation. Especially in the online communities, many users described in great depth how and why they (do not) participate online and what participation means to them. This research contains several excellent real life examples in the form of narratives, something almost impossible to obtain from standardized surveys. The sampling also allowed a limited generalization of the results. However, one has to be careful not to quantify the findings of the qualitative phase. Instead, the second article taps into the generalizable aspects of online participation in Germany. In that sense, the three contributions complement each other. As outlined in Figure 1 in the introduction, the methodological approach also proceeds in the way of a funnel: The systematic literature review is a broad, encompassing summary of many studies. In this sense, it covers a large territory of research findings from different years, countries and methodological as well as theoretical perspectives. The study of Article 2 is already "smaller" in the sense that it only contains a single empirical inquiry, is limited to one country and one point in time. However, within these boundaries, it is a relatively large-scale study, featuring almost 1500 survey respondents. Finally, the study of Article 3 is the "smallest" in terms of the number of participants and its geographical scope, since it only includes citizens of two cities in Germany. At the same time, it features the "deepest" and most detailed or individualized data. In this sense, going from the first to the third article, the level of generalization and abstraction decreases but the level of depth and specificity increases.

Compared to previous studies in online participation research my thesis is relatively pluralistic in terms of the methodological approach. "Most studies reviewed [in Article 1] either rely on quantitative, explanatory methods based on survey data (mostly regression) or on qualitative, descriptive approaches (mostly case studies). Few conceptual studies complement this rather uniform picture. Therefore we find a lack of mixed methods approaches and data sources beyond surveys and interviews." (Lutz *et al.*, 2014, section 9.3) Because research on social media and online participation is a new and rapidly evolving domain of inquiry (as the increasing number of publications shows; Lutz *et al.*, 2014; Rice & Fuller, 2013), some methodological considerations and constraints are only being approached at the time of writing. This concerns above all the use of user-generated data via *big data* (Mayer-Schönberger & Cukier, 2013) and the ensuing issues (boyd & Crawford, 2012). More and more studies in top-tier communication and Internet journals rely on user-generated big data via online participation, especially Twitter, and thus address the call for more obser-

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[15]In hindsight, I am very grateful for my supervisor's foresight to include a qualitative phase in the DIVSI research project (DIVSI, 2015). When the idea came up, I was skeptical and uneasy because the qualitative phase delayed the quantitative phase, from which I had hoped to get the data as quickly as possible.

vational data. However, they mostly proceed data-driven and rarely include contextual information, e.g., about users' social backgrounds, or a combination of different methodological approaches via triangulation or mixed-methods. Sadly, I cannot do these discussions on current methodological frameworks – for example the interesting approach of "Digital Methods" (Rogers, 2013) – and big data full justice in my dissertation, since I do not carry out a big data study. Instead, I rely on small data. In my case, this is justifiable because the data are of high quality, i.e., rich and deep (Article 3) as well as generalizable (Article 2) and carefully gathered and analyzed.

3 Articles

This chapter includes the individual papers. It begins with an overview of the contributions (3.1) and their submission history. It then presents the three articles of the dissertation (3.2, 3.3 and 3.4).

3.1 Article overview and submission history

Table 2: *Publication overview of the dissertation*

Paper and authors	Conferences	Target Journal	Status
Article 1: *Beyond just politics: A systematic literature review of online participation* (Lutz, Hoffmann & Meckel, 2014)	Presented at a preconference of the 2014 ICA Annual Conference	*First Monday*	Published in July 2014
Article 2: *Content Creation on the Internet – A Social Cognitive Perspective on the Participation Divide* (Hoffmann, Lutz & Meckel, 2015)	Presented at the 2014 ICA Annual Conference	*Information, Communication & Society*	Published in January 2015
Article 3: *A Social Milieu Approach to the Online Participation Divides in Germany* (Lutz, 2016)	Presented at the 2015 Connected Life Conference	*Social Media + Society*	Submitted to journal on the 27th of March 2015, 3rd review round

Article 1 was published in *First Monday*, a leading open access journal in Internet studies, with a broad and international readership. We chose to submit the article to *First Monday* because it attracts a diverse audience and high visibility for the article – also beyond the scholarly community. Going back to 1996, *First Monday* is one of the earliest and best established journals in Internet research. It is listed in the Scopus journal database. According to the 2013 Google Scholar ranking, it has an h-index of 30, placing it among the top 10 journals in communication, in the same league as *Communication Research, Public Opinion Quarterly* and *Public Relations Review*. The article was first submitted on the 15th of March 2014.

Two weeks later, on the 28th of March 2014, we received detailed feedback on how to improve the article. The review stated that the notion and definition of participation should be strengthened and made more concise. After implementing the suggestions, we re-submitted the paper on the 18th of June 2014. It was accepted one week later, on the 26th of June 2014, and subsequently published in the July issue of *First Monday*.

A first version of Article 2 was presented at the *64th ICA Annual Conference* in May 2014 in Seattle. The review feedback was integrated into the article to form a journal paper for *Information, Communication & Society*. This is one of the top-tier Internet and communication journals, especially when it comes to sociological approaches. It is listed in the Thomson Reuters Social Science Citation Index – with an impact factor of 1.283 – as well as in the Scopus journal database. According to the 2013 Google Scholar ranking, it has an h-index of 29, placing it among the top 10 journals in communication, in the same league as *Communication Research*, *International Journal of Communication* and *Public Relations Review*. We chose to submit the article to *Information, Communication & Society* because of the excellent reputation of the journal, its outstanding editorial board, its relevance in the discourse on online participation[16] and its fair and transparent review process. We first submitted the article on the 24th of April 2014. On the 10th of July 2014, we received detailed reviewer feedback on how to improve the manuscript. The reviewers suggested to strengthen the contribution and to clarify the concept of "participation" and the "participation divide". The paper was revised accordingly in July and August 2014, resubmitted on the 29th of August 2014, and accepted on the 12th of November 2014. It was published as an online first article on the 19th of January 2015 and added to the June (6/2015) issue of *Information, Communication & Society*.

Article 3 was written in its first form in late 2014 and submitted to the *65th ICA Annual Conference* in November 2014 as an extended abstract. It was rejected for the conference. Subsequently, the article was revised and finalized during the first phase of my stay at the Oxford Internet Institute (OII). It was accepted, as an extended abstract version, for the *2015 Connected Life* conference, a day long conference dedicated to Internet research at the OII taking place in June 2015. The manuscript was submitted to *Social Media + Society* on the 27th of March 2015 and is currently in the third review round. On the 1st of August 2015, the paper received a major revision decision. The reviewers suggested to focus more on the social milieu perspective and less on Bourdieu's habitus concept. They also criticized the wording of the milieu typology as normatively charged. After implementing the reviewer

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[16]The number of studies in the literature review or Article 1 of the dissertation published in *Information, Communication & Society* exceeded that of all other journals, showing the prominence of that journal in the research domain.

comments, I re-submitted the manuscript on the 6th of August 2015. On the 2nd of October 2015, the paper received a minor revision decision. The reviewers seemed to be content with the revisions and proposed to a add some additional information on the milieu typology and on the numerical distribution of the milieus. After implementing these suggestions, I re-submitted the paper on the 14th of October 2014. Since then, the paper has been under review again. *Social Media + Society* is a new, interdisciplinary journal dedicated to the inquiry of social media from a range of perspectives. It is open access and published its first articles in April 2015. The journal has an excellent editorial board and will likely become a major outlet for cutting-edge research on social media and online participation. I chose to submit the article to *Social Media + Society* because of its open access philosophy, the promising approach of the journal and the opportunity to have an article in a journal that is likely to grow fast in the next couple of years.

3.2 Beyond just politics: A systematic literature review of online participation

Abstract

This paper presents a systematic literature review of the current state-of-research on online participation. The review draws on four databases and is guided by the application of six topical search terms. The analysis strives to differentiate distinct forms of online participation and to identify salient discourses within each research field. We find that research on online participation is highly segregated into specific sub-discourses that reflect disciplinary boundaries. Research on online political participation and civic engagement is identified as the most prominent and extensive research field. Yet research on other forms of participation, such as cultural, business, education and health participation, provides distinct perspectives and valuable insights. We outline both field-specific and common findings and derive propositions for future research.

3.2.1 Introduction

A recent review of theoretical perspectives in communication and Internet research identified "online participation" as one of six emerging global themes (Rice and Fuller, 2013[17]). Rice and Fuller found that the number of articles addressing participation increased dramatically in the previous decade – in fact, among the six identified themes, the topic of participation experienced the strongest growth in interest. Yet, many studies lack a clear understanding or definition of online participation. Furthermore, among studies addressing online participation, few subtopics dominate the agenda – most notably aspects of political participation and civic engagement. Such findings call for a differentiated, more comprehensive look at online participation and a further clarification of the concept. In this contribution, we present the results of a systematic literature review on online participation. We address the following research questions: *"Which forms of online participation can be distinguished in current research? What are salient discourses and the current state-of-research on each form of online participation?"*

Accordingly, the first goal of our paper is to distinguish different forms of online participation and identify relevant sub-discourses. Second, we discuss the current state-of-research for each identified form. Third, we conclude the paper by presenting some research propositions that may serve as guidance for future empirical research. Thereby, this study will serve

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[17]This article uses the *First Monday* citation system, which differs slightly from APA (http://firstmonday.org/ojs/index.php/fm/about/submissions#cite). Throughout the text, references are listed in the *First Monday* citation system but in the reference section I use APA as the referencing style for reasons of consistency with the other articles, which all use APA, and the overall dissertation.

to address the current lack of common understandings, definitions and conceptual frameworks in the field of online participation research – and allow for a more comprehensive perspective on the diverse forms and aspects of online participation.

3.2.2 Online participation – The concept

What is "online participation"? Despite its popularity, the concept still remains rather vague and ill-defined. To date, there is no established or widely accepted and applied definition of the term. In fact, many studies on online participation suffer from a lack of a clear conceptual and theoretical foundation (Hoffman, 2012). In a recent discussion of the concept of online political participation, Gadras and Greffet (2013, p. 260) note how difficult it is "to distinguish between participating, discussing, engaging and other activities such as reading, particularly, but not specifically, in an online context." Jenkins (2006, p. 7) proposes that participation – both on and off the Web – constitutes "a property of culture". Accordingly, a "participatory culture" is suggested to be one "1) with relatively low barriers to artistic expression and civic engagement; 2) with strong support for creating and sharing one's creations with others; 3) with some type of informal mentorship whereby what is known by the most experienced is passed along to novices; 4) where members believe that their contributions matter; 5) where members feel some degree of social connection with one another".

Although not expressly defining the concept of "online participation", Jenkins' description encompasses a number of elements or definitional dimensions frequently encountered in online participation research. We propose that three such dimensions are of critical importance to the concept of "online participation": (1) The *creative* dimension: online participation is commonly associated with the creation and sharing of content on the Web; (2) The *social* dimension: the creation and sharing activity is commonly embedded in some form of social group or community; and, (3) The *motivational* dimension: online participation is commonly associated with the pursuit of a social purpose.

In current definitions, one of these dimensions may feature more prominently than others. A number of contributions focus on content creation and sharing (Hargittai and Walejko, 2008). Its creative nature clearly distinguishes online participation from mere consumption or aimless surfing on the Web: Online participation entails an increased level of activity, effort, or action. It is more resource-intensive than mere consumption (Hoffman, 2012, p. 219), it also requires a more extensive skill set (Hargittai, 2002; Van Dijk, 2005).

Yet, it is easy to grasp the equal importance of the social and motivational dimensions of online participation if we consider the question of what Internet "participants" actually participate in. Whether Internet users sign political petitions on the Web, are engaged in fan

groups, edit Wikipedia articles, create and upload artistic Vimeo videos, or answer a question on an online health forum; all of these activities can be seen as a form of online participation because they are geared towards a broader audience, some kind of social group or community (Schradie, 2011). Thereby, online participation goes beyond computer-mediated interpersonal communication (Hoffman, 2012). A definition provided by Wikipedia (2014) even focuses strictly on the social embeddedness of online participation: "Online participation is used to describe the interaction between users and online communities on the Web."

Finally, the concept of online participation implies a motivation to affect others, to influence or change the status quo, even if only in a very minor way. This dimension is the most apparent in the context of political participation. Verba, *et al.* (1995, p. 7), for example, define political participation as an "activity that is intended or has the consequence of affecting, either directly or indirectly, government action". In a similar vein, Park and Perry (2008, p. 191) define (civic) participation as "individual and collective engagement in public affairs". As Jenkins (2006) points out, online participants need to believe that their contribution matters, that someone or something will be affected by their contribution.

For the purpose of this paper, we propose the following definition of "online participation" encompassing all three dimensions discussed above: *Online participation is the creation and sharing of content on the Internet addressed at a specific audience and driven by a social purpose.* It should be noted that all three definitional dimensions are not necessarily equally salient in all forms of online participation. Users can, for example, participate online by e-mailing a complaint to a politician, which, at first glance, constitutes a mere act of interpersonal communication, but is clearly driven by a social purpose. Creating crowdsourced art, instead, may not follow an instantly apparent social purpose, but engages a social audience in a clearly creative act. Finally, running a blog on feminist culture may not address a very clearly defined audience, yet constitutes a both creative and purpose-driven use of the Internet.

Over the past years, many studies have shown that socio-demographic variables influence individuals' ability to access the Internet and use online media (DiMaggio, *et al.*, 2004; Van Dijk, 2006; Hargittai, 2002, 2010; Hargittai and Hinnant, 2008; Van Deursen and Van Dijk, 2011; Van Dijk, 2005; Zillien and Hargittai, 2009). Increasingly, though, research interest is turning to the question of what individuals actually do once they're online: How (inter)active, productive or capital-enhancing are various Internet uses? Which users are especially prone to using the Web in a capital-enhancing manner? In other words, research interest is migrating from the "digital divide" to the so-called "participation divide" (Blank and Reisdorf, 2012; Correa, 2010; Hargittai and Walejko, 2008; Schradie, 2011). Van Deursen and colleagues (2014) discuss how active and participatory Internet uses lead to increased

economic, social and cultural benefits.

While these findings indicate that online participation can have important social conse-
quences, recent studies also indicate that the effect of socio-demographic antecedents on
online participation (as well as its outcomes) may actually vary by the form of participation
under observation (Blank, 2013a; Hoffmann, *et al.*, 2015; Van Deursen, *et al.*, 2014). In other
words: The "participation divide" may differ in width and shape depending on the social
domain of participation. Accordingly, research is beginning to explore the multidisciplinary
nature of online participation: A 2014 pre-conference on the current state of digital divide
research organized by the International Communication Association (ICA) featured sessions
focusing on domains of Internet use as varied as education, entertainment or health. In
summary, all of these recent developments document the rising importance of the "online
participation" construct in Internet and communication studies. They also document the
complexity of the issue at hand and the variety of perspectives applied to it.

By systematically reviewing the current literature on online participation, this study will
provide an overview of the state-of-research on online participation. It will differentiate
forms of online participation currently under observation and identify both distinct ques-
tions or findings and common themes emerging across disciplinary boundaries. Aside from
suggesting promising avenues for future research, this study is also intended to contribute
to the understanding and definition of the concept of "online participation" and the devel-
opment of a theoretical foundation or framework underlying this dynamic research domain
(cf., Rice and Fuller, 2013). Defining the concept is one important step in this direction.
Identifying sub-fields of research and common themes is another.

3.2.3 Method – Systematic literature review

A systematic literature review requires the specification of conceptually guided keywords.
These keywords are then used to search fitting databases and to reveal a holistic corpus of
literature on a given topic. Out of this population, the authors select the relevant studies
based on clearly defined criteria (Denyer and Tranfield, 2009; Jesson, *et al.*, 2011; Webster
and Watson, 2002).

For the literature review presented in this paper, we searched four databases: ISI Web of
Knowledge (WOK), ProQuest, EBSCOhost, and Mendeley. WOK is often used for systematic
literature reviews because it is relatively comprehensive (Denyer and Tranfield, 2009). How-
ever, we opted for adding other databases to assure maximum coverage of current research.
Both ProQuest and EBSCOhost allow the search of a number of distinct databases. We used
the meta-search option that aggregates results across all databases. Finally, Mendeley was

included to allow for a more user-centered literature selection.

Only peer-reviewed journal articles and conference proceedings in English were considered. Again, the four chosen databases were assumed to guarantee a broad and exhaustive overview of the peer-reviewed literature. Of course, focusing on the peer-reviewed literature necessarily excludes a number of more recent studies and important contributions contained in the grey literature. A more comprehensive overview of these contributions would be possible by employing tools such as Google Scholar. For an overview of the sub-domains of online participation research as well as salient discourses within these domains, the peer-reviewed literature was held to sufficiently represent the state-of-research.

Six keywords were employed in the search process and applied to the studies' titles: (**online** OR **Internet** OR **digital** OR **social media**) AND (**participation** OR **engagement**). The first four terms were intended to focus the search results on research addressing online or Internet phenomena, the second two terms further focused the search results on studies addressing any form of participation. Overall, the terms were chose so as to yield as wide a choice of studies as possible potentially pertaining to online participation. Other, additional search terms, such as "Web" or "Web 2.0" were considered, but eventually dropped for the sake of parsimony as their inclusion did not add to the identified research corpus.

Applying the search terms to the studies' titles alone constitutes an important limitation of the review. A number of contributions would by necessity be excluded from the review if their titles did not indicate that they address some aspect of online participation. This approach was chosen because, first, it resulted in a number of hits large enough to be considered a reliable representation of the research field, and because, second, an application of the search terms to both the studies' titles and abstracts resulted in an exponential increase in hits overwhelmingly not pertaining to the issue at hand (i.e., the quality of the search results was significantly lowered, necessitating even more selective interventions by the authors, rendering the analysis less replicable).

We conducted the literature search over a period of 10 days in mid-February 2013 and included all articles published between 1990 and 2013. The coding was subsequently conducted by three experienced communication and Internet researchers, with discussions and resolution of critical cases. A student assistant helped in the first phase of the literature review, downloading the papers and removing doubles, but was not involved in the synthesis of the results.

In a *first step*, we collected the meta-information of the identified population of articles. This search approach resulted in 1,788 hits (ISI: 500; EBCSO: 533; ProQuest: 463; Mendeley: 292). In a *second step*, we merged the search results across the databases, in the course removing 840 multiple entries (remaining sample=948). In a *third step*, we scanned all ti-

tles and abstracts, removing 295 clearly irrelevant papers, i.e., studies not addressing any form or dimension of online participation (remaining sample=653). In a *fourth step*, papers were categorized according to their overall field of inquiry, resulting in five distinct research areas: political/civic participation (286), business participation (63), cultural participation (21), education participation (219), and health participation (64). Overwhelmingly, studies could clearly be attributed to one of the areas both by keywords employed in their titles and abstracts (i.e., "health", "school", "student", "music", "customer service", etc.) and by publication outlet. In some cases, studies featured a topical overlap, in which cases the research team scanned the entire article and assigned the study according to the field to which the study targeted its core contribution. In a *fifth step*, we downloaded and analyzed the remaining papers. In this process, the number of papers was further reduced based on two aspects: One group of papers addressed Internet access in general, and preconditions of Internet use such as skills and literacy. We deemed these questions too broad to contribute to the research question at hand. Another group of papers focused very narrowly on ways and means to increase user engagement in specific online platforms. We deemed this understanding of "engagement" as "platform use" too narrow and excluded these papers. This left 194 articles, 132 of which are on political participation & civic engagement, 15 on business participation, 15 on cultural participation, 20 on education participation, and 12 on health participation (Figure 4).

Figure 5 shows the development of research on each form of online participation over time. It confirms that online participation has quickly gained attention in the past years. Yet our initial findings also document the dominance of political & civic participation in current online participation research.

In order to address our research question, we will proceed to discuss each of the identified forms of online participation and describe the salient discourses and state-of-research for each field of inquiry, starting with political & civic participation.

3.2.4 Online political participation and civic enagement (OPP&CE)

With a total of 132 identified articles, this is by far the most extensive field of inquiry when it comes to online participation. This chapter will provide an overview of key findings on online political participation and civic engagement (OPP&CE). For the sake of clarity, not all identified articles will be discussed in detail, but a table listing all articles is provided in the Appendix[18].

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[18]The appendix is available in the online version of the article by following this link and scrolling to the bottom of the page: http://firstmonday.org/ojs/index.php/fm/article/view/5260/4094
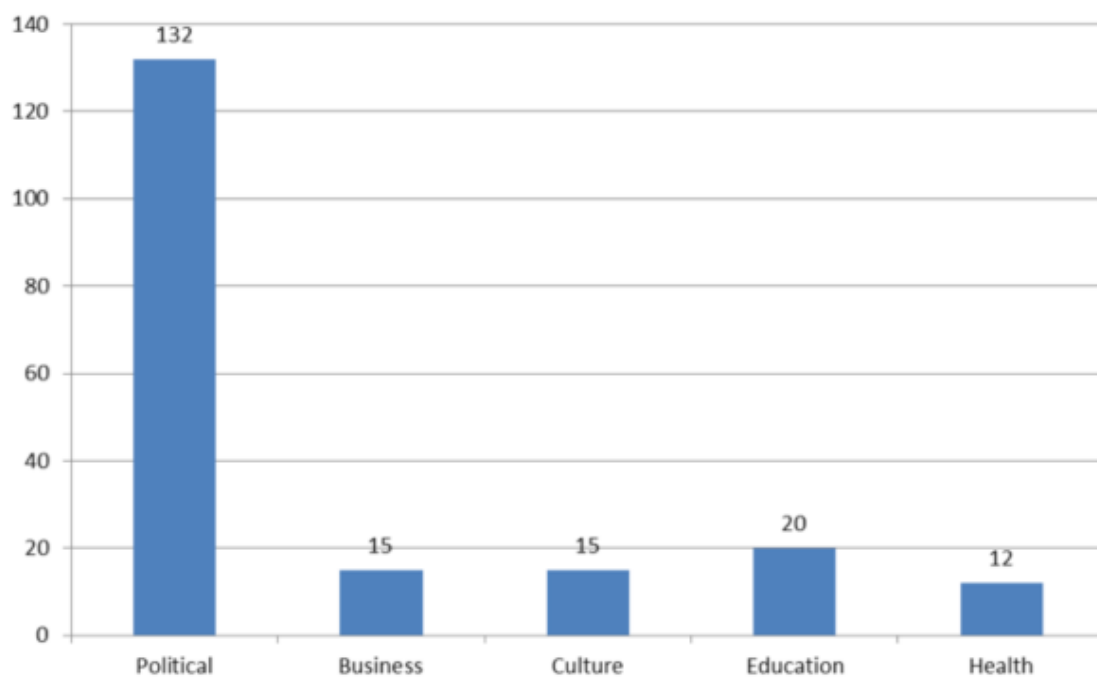
Figure 4: *Article sample according to participation category.*

3.2.4.1 Definitions and Conceptual Demarcarcations

While there is no generally accepted definition of online participation in this field, a number of the identified articles rely on a definition of participation provided by Verba, *et al.* (1995, p. 7), which conceptualizes the term as an "activity that is intended to or has the consequences of affecting, either directly or indirectly, government action". Yet, many of the identified studies lack a systematic definition of participation. Some studies apply broader definitions that include acts like voluntary and community work. Such activities are frequently summarized as "civic engagement": "Civic engagement refers to citizens' individual and collective involvement in public affairs" (Park & Perry, 2008, p. 191). We find that political participation and civic engagement are often investigated as a composite construct in empirical studies. Accordingly, we consider political participation and civic engagement a common field of inquiry.

A broad spectrum of online activities figures under the label of OPP&CE: In some cases, the mere search for information – such as googling a politician's name – is already seen as a form of OPP&CE (e.g., Di Gennaro and Dutton, 2006). Some studies address generic activities that are possible offline as well as online, such as signing petitions, others look at forms restricted to the online world, like creating a political blog. OPP&CE is commonly operationalized as an index of several activities that may include (but is not restricted to):
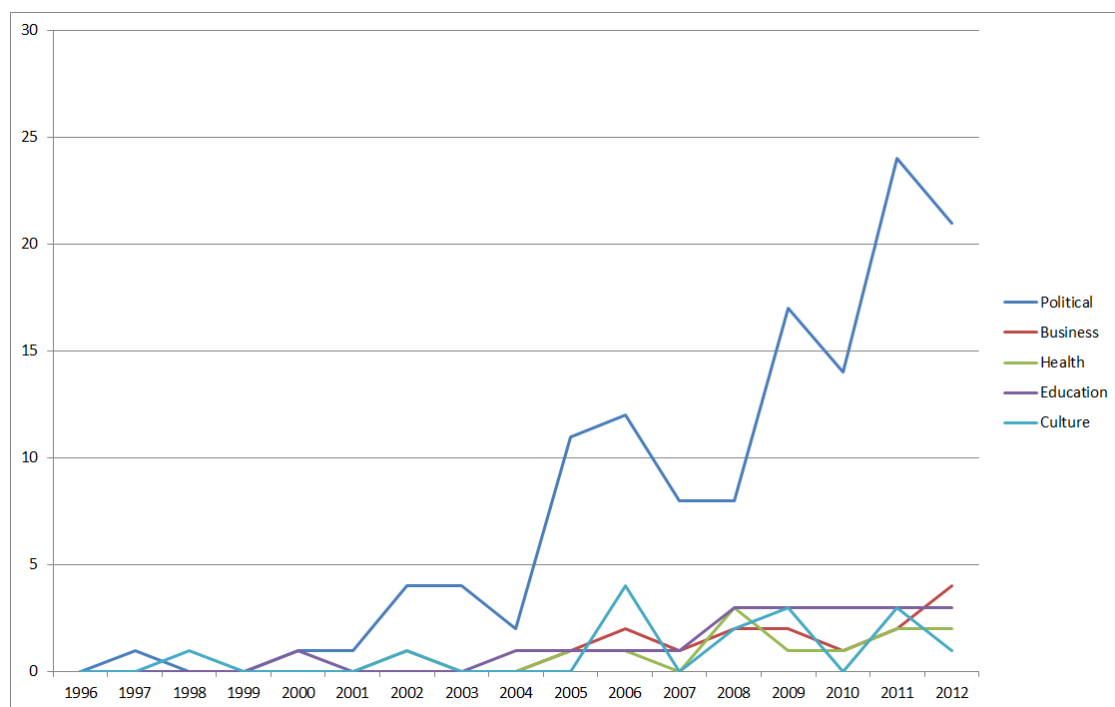
Figure 5: *Development of published articles on different forms of participation over time (articles of 2013 not considered for figure).*

political information search and consumption, donating money, writing an e-mail message to a government representative or politician, connecting with like-minded individuals in online communities, sharing photos, videos or sound material, protests, boycotts, and e-voting (Best and Krueger, 2005; Calenda and Meijer, 2009; Cogburn and Espinoza-Vasquez, 2011; Gil de Zúñiga, *et al.*, 2012; Di Gennaro and Dutton, 2006; Emmer, *et al.*, 2012; Hoff, 2006; Hoffman, 2012; Jugert, *et al.*, 2013; Kahne, *et al.*, 2012; Kaufhold, *et al.*, 2010; Kavanaugh, *et al.*, 2008; Krueger, 2002; Livingstone, *et al.*, 2005; Oostveen and Besselaar, 2004; Oser, *et al.*, 2012; Rojas and Puig-i-Abril, 2009; Vissers, *et al.*, 2012; Ward, *et al.*, 2003). It is apparent that the activities covered by OPP&CE differ substantially in institutionalization as well as resource intensity. This provides a challenge to comparisons across studies or meta-analyses.

As Figure 4 shows, the research corpus on OPP&CE is by far the largest of the five identified forms of online participation. In some cases, online participation is even equated with OPP&CE. Despite this apparent popularity in research, most empirical analyses find that OPP&CE is not a very common activity among citizens (Di Gennaro and Dutton, 2006). Of course, the prevalence of OPP&CE depends upon its operationalization, i.e., the activities subsumed under the concept – and also on the country surveyed. Most data on the prevalence of OPP&CE is available for the U.S. Here, 16 percent of the population have published

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political pictures or videos online during the last 12 months, and 34 percent have carried out one of these four activities online: signing a petition, contacting a member of parliament, writing a letter to the editor, or publishing a news or blog commentary (Smith, 2013).

Regrettably, such current numbers are missing for many other countries. However, some evidence indicates lower levels of OPP&CE outside of the U.S. A study by Emmer and colleagues (2012), for example, shows that German citizens' offline political participation far outweighs their online participation. Most citizens are not engaged in political discussion and other forms of participation on the Internet. However, the authors also describe a notable increase for some of the surveyed activities between 2002 and 2010. Overall, the prevalence of most OPP&CE activities in Germany is still in the single-digit percentages (Köcher and Bruttel, 2011).

Many empirical articles focus on traditional forms of engagement, such as voting or donating money, i.e., forms of engagement not exclusive to the online world. New(er) forms, such as writing blogs or sharing political videos, are less researched. Still we observe an increasing focus on OPP&CE through social media in the past five years. Of the 132 articles in this cluster, 92 analyze general Internet use, 20 focus on social media, and 20 consider applications, such as campaign Web sites (Park and Perry, 2008) or e-voting (Carter and Bélanger, 2012). The earliest article on social media applications in our sample dates back to 2008 (Breindl and Francq, 2008).

3.2.4.2 The Internet's effect on participation and the discourse on slacktivism

A key research focus in this field, covering disciplines such as political science, sociology, communication and Internet studies, is the Internet's effect on citizens' participatory practices. In general, we can distinguish three perspectives on the topic (Anduiza, *et al.*, 2009; Gil de Zúñiga, *et al.*, 2009; Gibson, *et al.*, 2005; Uslaner, 2004; Ward, *et al.*, 2003): Optimists claimed that the Web would enhance engagement and encourage wider sections of the population to participate politically. Thus, the Internet would strengthen democracy and political engagement. This "mobilization thesis" concurs with early cyber-optimist views (Rheingold, 1993; Turkle, 1995).

Pessimists, on the other hand, warned that Internet use would displace time previously dedicated to political and civic engagement (Putnam, 2000). Realists, in turn, expect the Internet to have little effect on participatory practices (Bimber, 2001). Active citizens would embrace the Internet for their purposes, while those not participating offline would not bother engaging online, either. Non-participants would tend to use the Internet for non-participatory purposes, such as entertainment. Instead of bringing new population segments (e.g., lower educated, youth) to participate, the Internet could ultimately even rein-

force existing divides (Norris, 2001). The realist perspective has also been termed "normalization hypothesis".

Empirical investigations tend to find a positive effect of Internet use on offline political engagement (Bakker and de Vreese, 2011; Di Gennaro and Dutton, 2006; Moy, *et al.*, 2005). This finding has proven robust across different cultural contexts (Hwang, *et al.*, 2006; Kwak, *et al.*, 2006; Wang, 2007). Also, civic engagement was found to be positively influenced by Internet use (Stern and Dillman, 2006). A meta-analysis by Boulianne (2009) of 38 studies in the field reveals hardly any negative effects but a clear and strong positive effect is not identified, either, lending support to the normalization hypothesis. Similarly, Anduiza, *et al.* (2009) discuss the effects of Internet use on both online and offline political participation. Their literature overview suggests a stronger link between Internet use and online political participation than offline political participation. In line with the vast majority of quantitative studies, the few qualitative or case-based investigations in the field indicate a positive relationship between Internet use and political or civic engagement (e.g., Collin, 2008; Davis, 2010).

Increasingly, studies analyze political behavior on social media, for example SNS or blogs (Conroy, *et al.*, 2012; Gil de Zúñiga, *et al.*, 2012; Macafee and De Simone, 2012; Rojas and Puig-i-Abril, 2009). Consequently, a debate is emerging on which online activities should actually be considered "true" participation – and which ones can be considered mere symbolic participation or "slacktivism" (Ritzi, *et al.*, 2012). According to some voices, clicking a "like" button on Facebook does not constitute actual participation and merely serves to appease one's conscience – or even constitutes an act of self-staging (Morozov, 2011). Empirical results do not support the slacktivism thesis, though: Vitak, *et al.* (2011) show that low-threshold forms of political participation, such as liking political content on Facebook, are not only widespread among American students but also go hand in hand with more resource-intensive forms of participation, like engaging in a political organization. Conroy, *et al.* (2012) find a positive connection between political group membership on the Internet and offline political engagement. Generally, research on social media largely confirms previous findings on general Internet use, and finds a positive rather than negative effect of new media use on PP&CE (Gil de Zúñiga, *et al.*, 2009; Gil de Zúñiga, *et al.*, 2010).

Our analysis reveals a number of challenges in current research on OPP&CE: A methodological challenge for most empirical studies concerns the isolation of Internet effects, something nearly impossible to achieve with survey data. Additionally, early studies tended to apply very broad measures of Internet access and use, e.g., time spent online. However, later research found that some Internet uses can be considered more participatory, social and active, than others (e.g., information vs. entertainment). Thus, participation studies should

differentiate Internet uses when analyzing participatory effects (cf., Dutta-Bergman, 2006; George, 2005; Hampton, *et al.*, 2011).

Using the Internet for information purposes, such as news consumption, has been shown to be positively associated with both online and offline participation, whereas consuming media for entertainment purposes is negatively related to participation (Bakker and de Vreese, 2011; Gil de Zúñiga, *et al.*, 2012; Holt, *et al.*, 2013; Wang, 2007). In a similar vein, Moy, *et al.* (2005) identify seven types of Internet use: information, e-mail, household, political, consumer, social, and community uses. Of these, only information, e-mail, political, and community uses are positively associated with all forms of civic engagement. Active and social forms of using the Web also seem to foster and supplement civic engagement. Dutta-Bergman's (2006) study shows that users who were active in online discussion forums in the wake of 09/11 were more active in neighborhood and local communities.

3.2.4.3 Antecedents of OPP&CE

A range of studies show that a participatory use of the Web is unequally distributed in the overall population (Albrecht, 2006), leading to a participation divide (Hargittai and Walejko, 2008). Not all citizens are equally likely to participate politically or civically – a finding that is true for both offline and online participation. Demographics are helpful in differentiating political interest and participation (Best and Krueger, 2005). Di Gennaro and Dutton (2006) find that while online and offline participants share some similarities, they do not completely overlap. Online participants are more partisan and less trusting in traditional media than offline participants (Kaufhold, *et al.*, 2010).

Looking at *gender* differences, most studies find that men politically participate more actively than women (Calenda and Meijer, 2009) – offline as well as online (Albrecht, 2006; Di Gennaro and Dutton, 2006; Gibson, *et al.*, 2005). The gender effect may well be moderated by political interest, though, as studies indicate that males score higher in this regard (Gibson, *et al.*, 2005; Wang, 2007).

Age is another important predictor of online and offline participation (Bridges, *et al.*, 2012; Burwell, 2010; Dahlgren, 2011; Jugert, *et al.*, 2013; Kissau and Hunger, 2008; Macafee and De Simone, 2012; Theocharis, 2011; Vromen, 2008). In fact, a number of studies in this research field focus on young citizens (Bakker and de Vreese, 2011; Bennett, *et al.*, 2011; Collin, 2008; Kann, *et al.*, 2007; Kaun and Guyard, 2011; Lariscy, *et al.*, 2011; Livingstone, 2008; Spaiser, 2012). Current debates on political apathy and insufficient knowledge among adolescents often serve as the starting point for such inquiries. Since age tends to impact political participation positively (Wang, 2007; Gibson, *et al.*, 2005), but negatively impacts Internet use, the overall effect of age on online political participation is ambivalent. Di Gennaro and Dut-

ton (2006) show that younger citizens rely more heavily on online than offline participation. According to Oser, *et al.* (2012), among politically active citizens, those using the Internet for participation are younger. Institutional barriers to offline participation (voting age, developmental correlates, political interest) may explain why young people's political engagement is strongly driven by the Web and its affordances (Collin, 2008).

Table 3: *Summary of literature on OPP&CE*

Definition	Online engagement in public affairs and online activities geared towards influencing government action.
Conceptual foci	Internet effects; new forms of engagement; participation divides; online – offline link (slacktivism).
Exemplary activities	Signing e-petitions; writing political blogs; donating money online.
Antecedents and prevalence	Despite extensive research attention only limited prevalence: single to low double-digit percentages, depending on country and operationalization. Focus on demographic and political antecedents; *Gender*: men show higher rates of OPP&CE than women; *Age*: ambivalent net effect; *Education and SES*: positive effect but (partly) mediated through online skills; *Political interest*: positive effect (possibly mediator for socio-demographic effects).
Outcomes	Internet use is weakly but positively related to offline political participation and civic engagement; various forms of Internet use have differing effects on offline engagement: active and information-rich uses most strongly affect the offline sphere; newer, less institutionalized forms of OPP&CE offer opportunities for young citizens and those at the margins of the political system to engage.
Exemplary studies	Best and Krueger (2005), Calenda and Meyer (2009), Di Gennaro and Dutton (2006), Moy, *et al.* (2005)
Number of studies	132

Still, even among youth, male, higher status and better educated citizens are more politically engaged online than their female, lower status and less educated counterparts (Livingstone, *et al.*, 2005). Education and income, both indicators of *SES*, positively impact offline and online political participation (Gibson, *et al.*, 2005; Kwak, *et al.*, 2006; Wang, 2007). The digital divide literature identifies social status as an important predictor of Internet use (Hargittai and Hinnant, 2008; Hargittai, 2002; Van Dijk, 2006). Hargittai and Walejko (2008) find that those with higher social status tend to use the Internet more heavily for content pro-

duction. Controlling for SES, Web experience positively affects online political engagement (Gibson, *et al.*, 2005). Experience and self-efficacy increase diversity of Internet use, also in terms of political content (Livingstone, *et al.*, 2005; Di Gennaro and Dutton, 2006). Best and Krueger (2005) find that online political participation is best predicted by Internet skills and online mobilization, while civic skills and offline participation do not foster online participation.

3.2.5 Online business participation (OBP)

3.2.5.1 Definitions and conceptual demarcations

A second cluster of studies addresses Internet users' online engagement in business affairs. Accordingly, online business participation (OBP) encompasses online participation geared towards corporations. Most articles on OBP focus on the relations between companies and customers – often from a corporate point of view. Therefore, studies in this area tend to have a marketing focus. The small number of publications in this field shows that the management and business literature on Web use is seldom framed within a participation discourse. Of the initial list of 63 papers in this stream, 48 papers were excluded because of a narrow focus on user engagement in specific platforms, or management opportunities to increase platform engagement. This finding documents a functional perspective – only few studies recognize that the subject at hand is part of a larger social phenomenon.

3.2.5.2 Customer participation: co-creation, prosumers and shifting power relations

Eleven of the identified papers focus on customer participation in business processes. Some of them address customer engagement in the sense of customer service improvements. These studies explore how new media can strengthen the exchange relationships between businesses and their customers in the vein of relationship marketing (Dabholkar and Sheng, 2012; Sashi, 2012). More extensive customer engagement has been addressed under labels such as "co-creation" or the "prosumer", combining consumption with productive input (Chaney, 2012; Ramaswamy, 2008; Sawhney, *et al.*, 2005). The underlying hypothesis states that digital media facilitate the interaction of producers and consumers and allow for collaborative value creation. Thus, such participation goes beyond a mere customization of products or services (cf., Chang, *et al.*, 2009). New media enable creative customer input into the development ("open innovation"), design, and production of business offers (Franquet, *et al.*, 2011; Ramaswamy, 2008).

The literature tends to stress the benefits for businesses and consumers made possible by new media. Whether these changes also constitute a shift in control or power is barely

problematized. This may be seen as surprising as consumer participation does appear to shift control from the corporation to the consumer (Chang, *et al.*, 2009; Riegner, 2007). The accessibility of new media and their role as a public platform for interest groups require companies' attention. Here, power asymmetries can be reduced and interactions can potentially become more dialogue-oriented (Sawhney, *et al.*, 2005).

As for empirical findings, new media are shown to allow for a wider variety of customer engagement, increasing interactivity and richness in the exchange relationships. Some studies notice that customer participation entails a shift in value creation – commonly increasing the benefit received by the customer, in some cases decreasing the benefit for the business (Chaney, 2012), in others providing new sources of value creation (Franquet, *et al.*, 2011). This shift does not need to be material in nature, as participation can also increase customer satisfaction and trust (Chang, *et al.*, 2009; Dabholkar and Sheng, 2012; Sashi, 2012). One study suggests that power realignments due to consumer participation may be moderated by consumers' sense of belonging to the organization they engage with ("organizational citizenship"; Yen, *et al.*, 2011).

3.2.5.3 Stakeholder involvement and word-of-mouth

Only few studies investigate stakeholder groups beyond customers. However, we do find analyses of how critical stakeholder groups use new media to advocate for their interests via word-of-mouth communication (Riegner, 2007; Chaney, 2012). A number of studies address the concept of "advocacy" – but only in the sense of word-of-mouth promotion: it is achieved when "delighted or loyal customers share their delight or loyalty in interactions with others in their social networks and become advocates for a product, brand, or company" (Sashi, 2012, p. 264). Only one study addresses potential dangers in businesses misusing or opposing customer word-of-mouth online (Campbell, *et al.*, 2012).

One article explores the potential of online media for stakeholder engagement in a more traditional sense: Adams and Frost (2006) analyze the use of online tools for communicating social and environmental performance to stakeholders in Australia, Germany and UK They find that businesses' online tools and corporate Web sites are primarily geared towards customers and shareholders, but not towards other stakeholder groups. By contrast, stakeholder groups recognize the potential of new media to articulate their voice. They use social media to exchange information and critically monitor companies' behavior (Kane, *et al.*, 2009). Social media, especially, allow communities to share knowledge and monitor corporate behavior, while simultaneously shortening the available response time for corporations. Finally, one study shows that frequent use of the Internet increases the likelihood of shareholder participation (Bogan, 2008). The Internet provides access to financial information

and also facilitates access to the capital market (online banking/brokerage).

Table 4: *Summary of literature on OBP*

Definition	Online participation in business affairs and engagement geared towards corporations.
Conceptual foci	Customer service; relationship marketing; co-creation, crowd-sourcing and open innovation; word-of-mouth marketing; stakeholder engagement; creative industries.
Exemplary activities	Participating in open innovation and idea contests; co-creation; recommending or criticizing corporations on social media.
Antecedents and prevalence	No representative data on prevalence due to insufficient conceptualization; focus on psychological antecedents (e.g., self-efficacy) and perceived platform and Web site attributes (e.g., usefulness, ease of use).
Outcomes	Increased interactivity and richness in stakeholder relations can increase trust and customer satisfaction; new media provide new tools for critical engagement of corporations, but online engagement also creates buy-in effects (organizational citizenship); online participation constitutes a disruptive innovation for some business models (e.g., creative industries).
Exemplary studies	Chaney (2012), Sashi (2012), Kane, *et al.* (2009), Nguyen (2006), Campbell, *et al.* (2012)
Number of studies	15

3.2.5.4 The creative industries

A small subset of studies focuses on creative industries, such as journalism or the music industry. Creative industries are especially receptive to changes in consumer-producer interaction caused by new media as their output consists of a combination of creativity and productive resources – the latter being directly affected by changes in media technology (Franquet, *et al.*, 2011). Therefore, digital and social media constitute a disruptive innovation for creative industries, including journalism (Nguyen, 2006). New media enable the creation and distribution of content to a broad public. Thereby, users become potential media producers (Chaney, 2012). This disruption of traditional business models is explored in the context of music piracy, the self-promotion of semi-professional producers and citizen journalism (Nguyen, 2006). Such activities lead to a shift of revenue streams from traditional players to new actors. New forms of creative participation do not have to be detrimental to established actors, though. Again, the inclusion of customers into the production process can increase their attention and loyalty – adapting the business model accordingly can open

up new business opportunities and revenue streams (Chaney, 2012).

3.2.5.5 Antecedents of OBP

Studies on OBP rarely consider demographic antecedents of participation. Customer interaction, participation in co-creation, and the independent production of creative output depend on different interests, motivations, and skills. Psychological drivers play an important part in shaping user readiness to participate in business affairs. Information systems studies have shown that perceived usefulness and ease of use strongly affect users' intention to adopt new media in a professional capacity (Davis, 1989; Venkatesh and Davis, 2000; Venkatesh, *et al.*, 2003). Furthermore, attitudes shape people's willingness to engage. Those with an open-minded attitude towards technology and a playful approach should be more likely to interact with companies online than those riddled with concerns, e.g., about online privacy. Finally, social-cognitive studies indicate that self-efficacy acts as an important driver in fostering online engagement (Compeau, *et al.*, 1999). Again, a number of studies apply these findings to the analysis of user engagement in specific online platforms – a field of inquiry not considered in this review.

3.2.6 Online cultural participation (OCP)

3.2.6.1 Definitions and conceptual demarcations

A number of studies address the creative self-expression of Internet users. We subsume these studies under online cultural participation (OCP). The activities considered in this field of inquiry are very diverse, ranging from the production and sharing of music to the shared creation of identity in online communities. Cultural participation is frequently related to productive Internet uses. In this domain, participants create something – although this "something" can vary drastically in nature. In most cases, creative engagement in this domain does not serve commercial purposes (Ryu, *et al.*, 2009). Some authors consider the creation of meaning, understanding or insights a creative act, with new media facilitating the processing or adaptation of content (Deuze, 2006). The question of what activity constitutes a creative act can be seen as contentious, since new media facilitate the reconfiguration of existing content (remixing, mash-ups, bricolage). Finally, cultural participation can be directed at a broad spectrum of objects – such as music, movies, philosophy, religion, or fandom.

3.2.6.2 Online communities: Belonging, identity and fan culture

Online communities are a key subject of studies in OCP. Empirical analyses find that engagement in creative communities tends to follow a power law distribution: Few very active users

create the majority of content, some active participants complement this content with occasional contributions, and the vast mass of users just consumes content (Nov, *et al.*, 2010). Ewing (2008) provides a useful typology of participants in creative communities. It rests on established online terminology and describes six groups: lurkers, newbies, regulars, elders, legacy (former elders that gradually "retire" from the community but still command respect), and trolls. Of particular interest are elders, i.e., community members at the upper end of the productivity scale who are essential to the order and vibrancy of a community. By moderating others' contributions, they contribute to the identity and functionality of a community. They determine its purpose and tone (Ewing, 2008). With activity also comes power: decisions of censorship, exclusion of other members and the promotion of certain topics are mainly carried out by elders (Holt and Karlsson, 2011).

The longer members engage in online communities, the more important they perceive their membership: in time, social use motives supersede functional ones (Cook, *et al.*, 2009; Nov, *et al.*, 2010). A key purpose of creative online communities is seen in social support and identity formation – through mutual acts of self-assurance (Ewing, 2008; Rajagopalan, 2011). Such aspects of OCP are particularly important for marginalized social groups, such as sexual or religious minorities (Alon and Brunel, 2007). Their OCP can lead to higher levels of self-acceptance, more self-confidence, and the reduction of perceived isolation (McKenna and Bargh, 1998). In this sense, surfing the Web and the search for a fitting community can be regarded as acts of self-discovery and identity formation (Helland, 2002).

Yet, online communities also serve as a production and distribution tool for more tangible cultural artefacts. Here, friends, supporters and fans exchange ideas, support each other and organize. Thereby, functional use motives do play an important role, especially for initial engagement. An interesting example of the increasing importance of social uses for community members are online fan communities. Case studies show that fans perceive a strong feeling of belongingness to their community, even if they are far removed from their object of admiration (Bennett, 2012). Some communities tend to take on a life of their own, i.e., the exchange, support and identification within the community become more important to its members than the initial object of discussion (Rajagopalan, 2011).

While communities play a key role in OCP studies, empirical analyses have found that online engagement is only rarely transferred to the offline world (Nonnecke, *et al.*, 2006). Online communities have a thematic focus beyond which members share few similarities. Nevertheless, more active participants in online communities perceive themselves as more satisfied and more advantaged than passive members (Nonnecke, *et al.*, 2006). The positive outcomes of OCP – especially social benefits – are perceived more strongly by members of marginalized groups (Alon and Brunel, 2007), in some cases leading to higher activity levels

(Helland, 2002).

Table 5: *Summary of literature on OCP*

Definition	Participation in creative self-expression and engagement in predominantly non-commercial productive Internet uses.
Conceptual foci	Online communities; cultural artefacts; social identity; community roles; use motives; fan culture.
Exemplary activities	Creating and sharing music, movies or poetry online; expressions of social identity; participation in online fan communities.
Antecedents and prevalence	Power law distribution of activity: only few users are heavily engaged in online communities; *Age*: younger users show higher levels of OCP; *Use motives*: OCP is often initially driven by functional motives which are then gradually replaced by social motives; social marginalization is held to increase engagement/OCP.
Outcomes	Social inclusion, belonging and identity formation are considered key outcomes of OCP – again, this outcome is held to be of heightened importance for members of socially marginalized groups; functional outcomes may include attention of peers, critical feedback and public promotion; active participants perceive more benefits and higher levels of satisfaction than do "lurkers"; while social support is a key outcome of OCP, online relations prove difficult to transfer to the offline world.
Exemplary studies	Nonnecke, *et al.* (2006), McKenna and Bargh (1998), Helland (2002), Grace-Farfaglia, *et al.* (2006), Deuze (2006)
Number of studies	15

3.2.6.3 Antecedents of OCP

Many studies in this field of inquiry rely on qualitative methods. There are only few quantitative studies of antecedents of OCP. Analyses have found a negative correlation between age and online engagement (Grace-Farfaglia, *et al.*, 2006; Ho, *et al.*, 2008). Higher levels of experience and self-efficacy, in turn, drive online engagement (Ryu, *et al.*, 2009). Cultural participation is often associated with high levels of use complexity, leading to a large participation divide in this area (Ho, *et al.*, 2008). Some studies apply established theories of media use to OCP, like uses and gratifications: Here, functional motives can be distinguished from social motives (Alon and Brunel, 2007). Because the creation of meaning plays an important part in OCP research, motives of identification and belongingness often figure prominently

in such inquiries (McKenna and Bargh, 1998). Research shows that functional motives often explain users' first contact with online communities. Over time, however, they tend to develop a sense of affiliation, and social motives displace functional ones (Ewing, 2008). Users with a high sense of belonging engage more often in online discussions, and with increasing experience and duration of membership, the depth and richness of their contributions increases (Nov, *et al.*, 2010). Finally, cultural drivers of OCP have been identified. National cultures differ in their conduciveness to online participation (Grace-Farfaglia, *et al.*, 2006). Also, social marginalization is proposed as a driver of OCP: social pressure on marginalized groups increases their ideological polarization, corresponding with rising communication and mobilization needs (Farrell, 2011).

3.2.7 Online education participation (OEP)

3.2.7.1 Definitions and conceptual demarcations
Online education participation (OEP) is the subject of the second biggest research stream in our analysis after OPP&CE. We understand OEP as individuals' participation in educational activities based on online media. A large number of studies in this domain analyze specific platforms or instruments of online learning. Our analysis, however, was geared more towards the overall participatory effect of new media in the domain of education. Optimistic observers expect a strong impact of new media on learning and education: "Providing learning anytime, anyplace and to anyone" (Robinson and Hullinger, 2008). A UK study shows that only 20 percent of the overall population use the Internet for educational purposes (White and Selwyn, 2012). At the same time, another study conducted in the UK finds that 90 percent of all students aged 9 to 19 use the Internet to look for information in a learning context (Livingstone and Bober, 2004). Internet use has been shown to be more widespread among students than among teachers (Erstad, 2006). An American study found that 76 percent of teachers use new media for teaching purposes, but mostly to understand their students' activities and to collect information (Asselin and Moayeri, 2011). Students, in turn, use the Internet for a wider variety of learning-related activities (Erstad, 2006).

3.2.7.2 Student-centered learning and institutional challenges
The Internet reduces barriers to information access and facilitates autodidactic learning (Robinson and Hullinger, 2008). Interactive media, especially, allow for new forms of learning, educational interactions and institutional settings. Computer-mediated learning can overcome some disadvantages of traditional (presence) learning, e.g., social pressure or intimidation (Davies and Graff, 2005; Rambe, 2012). Overall, the Internet is held to weaken

traditional hierarchies in learning institutions and empower the learners/students (Erstad, 2006; Kidd, 2011). These technological and social effects are reflected in current pedagogic theories.

Some authors describe teachers' new role as facilitators who only sporadically intervene in the students' largely self-regulated learning processes (Duncan, *et al.*, 2012). Student-centered learning has become an important keyword of pedagogy in the Internet age (Arbaugh, 2000; Hrastinski, 2008). New media support the exchange amongst learners and support collaborative forms of education (McBrien, *et al.*, 2009). Hence, new forms of co-created learning and knowledge sharing emerge, characterized by transparency and comparability. Not only are learners becoming more independent and self-reliant, "empowerment" may even turn traditional hierarchies on their heads, e.g., when students start evaluating and grading their teachers in public online forums (Asselin and Moayeri, 2011). Accordingly, OEP can be said to imply a power shift in education.

3.2.7.3 OEP versus offline learning

Studies on OEP show that the affordances of the applied technologies influence the effect of online learning. Synchronous platforms are distinguished from asynchronous ones. Synchronous communication has been shown to positively impact learning success (Duncan, *et al.*, 2012), leading to higher levels of involvement (Hrastinski, 2008). Furthermore, research indicates that students in online courses exhibit more engagement than those in offline courses (Robinson and Hullinger, 2008). In many cases, online participation also leads to better test results compared to offline courses (Davies and Graff, 2005; Stewart, *et al.*, 2011). The fact that online courses are more self-regulated and require more self-discipline might explain this finding. When online and offline elements are offered simultaneously, the participation in online options has no negative effects on offline participation (Stewart, *et al.*, 2011).

Many of these findings still imply a hierarchical learning relationship between teachers and students. More far-reaching consequences arise when existing structures are challenged, with the Internet fostering the collaboration among learners. Students then create social capital in networks of learning (Hrastinski, 2009), with individual learners possessing significant autonomy (McBrien, *et al.*, 2009). Thereby, students, their decisions and collaboration, are shifted to the center of the learning experience (Arbaugh, 2000; Erstad, 2006; Hrastinski, 2008). The Internet allows for the mutual exchange between students even when it is not desired by the education providers, as recent controversy about online teacher or professor evaluations shows (Rambe, 2012).

Critical studies point to the Internet's potential for distraction and a reduction of attention

spans (Rambe, 2012). Some investigate the question of whether online learning – without mutual exchange or presence learning – leads to social isolation. Students in online courses indeed experience less frequent personal exchange than their colleagues in offline courses (Rabe-Hemp, *et al.*, 2009). Thanks to the affordances of more recent Web tools, however, distance learning is becoming more social and interactive than in the pre-digital age (McBrien, *et al.*, 2009).

Table 6: *Summary of literature on OEP*

Definition	Participation in educational activities based on online media.
Conceptual foci	Student empowerment; student-centered learning; synchronous/asynchronous technologies; distance learning; literacy.
Exemplary activities	Taking online courses; using collaborative online tools in school.
Antecedents and prevalence	The prevalence of OEP is limited to the proportion of the population engaged in some form of educational activity; among students, the Internet can be shown to be a key learning tool; teachers are catching up in their use of the Internet. Some socio-demographic antecedents of OEP are considered: *Age*: young students participate more actively in OEP than older ones; *Gender*: higher levels of perceived competence and self-efficacy among males, but female students exhibit higher levels of engagement.
Outcomes	OEP is associated with high levels of learning engagement and has been shown to positively affect learning success; strengthening of student autonomy and facilitation of student-centered learning; studies have found only little substitution effects between online and offline learning; purely online learning experiences are associated with reduced levels of social exchange, yet distance learning is becoming more interactive due to online media.
Exemplary studies	Livingstone (2010), Livingstone and Bober (2004), Correa (2010), White and Selwyn (2012), Hrastinski (2008; 2009)
Number of studies	20

3.2.7.4 Antecedents of OEP

Empirical studies find that young students participate more actively in OEP than older ones. This is especially true for creative or productive forms of Internet use (Correa, 2010). As for gender, male users report higher levels of perceived competence and self-efficacy than their female counterparts. This does not imply that OEP is a male-dominated field, though. On

the contrary, women use online courses more often than men (Caspi, *et al.*, 2008). Female students also communicate more actively in online learning environments and make more use of collaborative functionalities (Arbaugh, 2000; Erstad, 2006; Robinson and Hullinger, 2008).

A specific challenge to OEP is the development of the necessary competencies or skills. Higher levels of self-efficacy and a playful attitude towards technology foster OEP (Spence and Usher, 2007). Aside from digital literacies, other important competencies include creativity and critical analysis – e.g., of the quality and credibility of online content (Kimber and Wyatt-Smith, 2010). Because OEP depends on autonomy and independence, a "literacy of empowerment" – the ability to create, collaborate and critically participate – has been proposed as a key asset in OEP (Asselin and Moayeri, 2011). Traditional asymmetries in competencies between teachers and students are challenged in OEP as teachers may be more reluctant to use new technologies (Erstad, 2006). Schools tend to be relatively inflexible institutions, with pedagogical concepts and curricula only changing slowly (Livingstone, 2010). Empowerment and participation do not necessarily correspond to how these institutions function (Kidd, 2011).

3.2.8 Online health participation (OHP)

3.2.8.1 Definitions and conceptual demarcations

We conceptualize online health participation (OHP) as the engagement in health-related issues on the Internet. In questions of health, the Web has become a crucial information source – users can easily access an enormous variety of health information at any time. A large part of the population searches for health information at least occasionally (Schubart, *et al.*, 2011). Hence, users can improve their understanding of their own health – and thus their judgment of sensible treatment methods – due to online media. Some individuals have taken to describing their own health-related experiences online, others comment on or rate health services. At the same time, active participation in self-help groups is still an exception (Van Uden-Kraan, *et al.*, 2011), possibly because certain syndromes that stimulate the need for active online exchange have only limited prevalence.

3.2.8.2 Patient empowerment and self-help

Empowerment is an important keyword in the discussion on OHP, with users being empowered in a number of ways: On the one hand, OHP increases patients' level of information. They also obtain new options for judging their own health situation. Thus, Internet users can take on a more active and self-determined role in the treatment of diseases. Critical voices

note that empowerment of patients can also be risky, e.g., in the case of self-diagnosis and -treatment. Some health professionals perceive the new self-confidence and the Internet-supported knowledge of their patients as irritating (Van Uden-Kraan, *et al.*, 2008). On the other hand, empowerment not only occurs in the exchange with health services providers, but first and foremost among affected patients. Studies on OHP often focus on examples of self-help. Similar to OCP, online communities receive significant attention. Only a small minority (less than 10 percent of users) has been shown to use online self-help groups – still, these groups constitute an interesting case of online engagement (Van Uden-Kraan, *et al.*, 2011), as interactive self-help on the Internet leads to new forms of health care: decentralized and bottom-up.

In OHP – like in OCP – functional use motives can be distinguished from social motives. Users often turn to the Internet in search of information, while motives of support and exchange are far less widespread (Ginossar, 2008; Van Uden-Kraan, *et al.*, 2009). Users suffering from a disease or from subjective social isolation are most likely to engage in online self-help groups (Rodgers and Chen, 2005). Subjective insecurity, low self-competence and a lack of information also motivate users to participate actively on the Internet (Han, *et al.*, 2012). Since some diseases entail social stigmata, the affected users perceive the mutual help and emotional support provided in self-help forums as a strong benefit. These patients appreciate the opportunity to express their thoughts and experiences (Ginossar, 2008; Van Uden-Kraan, *et al.*, 2009). Patients engaged in OHP often possess a certain expert status and take a stand for their health-related interests. The more actively they engage online, the likelier they are to report good coping with their disease, a better general mood, and more optimism in the evaluation of their health expectations (Høybye, *et al.*, 2010; Rodgers and Chen, 2005). By contrast, less engaged users tend to avoid confronting their disease and perceive more fatalism (Høybye, *et al.*, 2010).

Empowerment is not only an objective consequence of online engagement, but also a matter of attitude. Engaged patients often feel they make better health-related decisions and demand more autonomy in their treatment (Van Uden-Kraan, *et al.*, 2009), they become more informed consumers (Sandaunet, 2008). These positive outcomes of OHP are facilitated by social Internet uses. Thus, the social dynamics of online community membership impact individuals' sense of self (Sandaunet, 2008). Sometimes, forms of activism can emerge out of such dynamics, for example when group members propagate their interests to the outside world (Ginnosar, 2008; Van Uden-Kraan, *et al.*, 2008).

Finally, some studies also consider online offers for relatives and friends of patients. Here too, engaged users report higher levels of subjective well-being than non-users (Tanis, *et al.*, 2011). Studies find that in the realm of OHP, online contacts are rarely transferred to the

offline world (Rodgers and Chen, 2005). While online, a mutual cause may suffice to create a feeling of belongingness, this may not be a sufficient basis to form friendships in the offline world. This finding is especially relevant since users who look for and find their support network primarily on the Internet tend to retreat from offline relationships (Epstein, *et al.*, 2002).

Table 7: *Summary of literature on OHP*

Definition	Engagement in health-related issues on the Internet.
Conceptual foci	Health information; patient empowerment; treatment outcomes; self-help and support forums.
Exemplary activities	Seeking out health-related information and information on treatment options; discussing health-related issues in self-help forums; participating in support groups; online engagement in campaigns (e.g., breast cancer awareness).
Antecedents and prevalence	While information seeking is a widely accepted practice, only few users engage in online forums and support groups. Some demographic antecedents are considered: *Age*: younger users engage more frequently than older users; *Gender*: female users engage more often than males; *SES*: higher SES leads to more OHP; *Attitudes* towards the Internet: trust positively affects OHP while privacy concerns inhibits OHP; *Motives*: functional motives are important in the initiation of OHP; subjective insecurity is also a driver of OHP; subjective suffering from a health issue increases likelihood of OHP.
Outcomes	Lower SES users perceive more subjective benefit from OHP than higher SES ones; patients are empowered to play a more active role in their health care; medical professionals feel that OHP makes patients more critical and demanding; OHP fosters coping with diseases and decreases fatalism.
Exemplary studies	Van Uden-Kraan, *et al.* (2008; 2009; 2011), Sandaunet (2008), Rodgers and Chen (2005
Number of studies	12

3.2.8.3 Antecedents of OHP

Age has been found to be an important driver of OHP, with young users engaging more frequently than older users. Similarly, the more experienced users are, the more active their engagement (Han, *et al.*, 2012; Rodgers and Chen, 2005; Steinmark, *et al.*, 2006). Users' attitudes towards the Internet also affect their OHP. The Web lowers access barriers to self-help offers – and anonymity makes it easier to use such options. However, to use them, users need

to trust the medium Internet. The higher their levels of online privacy concerns, the lower the likelihood of OHP (Han, *et al.*, 2012).

In OHP, gender seems to act in the reverse direction compared to other forms of participation, such as OPP&CE, with women participating more actively than men (Van Uden-Kraan, *et al.*, 2011). SES has been shown to affect individuals' chances of healing – independently of their Internet use (Høybye, *et al.*, 2010). Lower SES patients report lower levels of well-being due to their illness compared with their high SES counterparts (Epstein, *et al.*, 2002). Higher SES also corresponds with more online participation. Thus, OHP may compound pre-existing inequalities in health care and healing probabilities. At the same time, lower SES users profit more from their online participation: They value the information and communication options of the Internet particularly highly (Van Uden-Kraan, *et al.*, 2009). The effect of household size on OHP remains unclear. Young users from single households tend to exhibit high levels of activity (Han, *et al.*, 2012). At the same time, users tend to be more strongly engaged when they are encouraged by their social environment (Van Uden-Kraan, *et al.*, 2011).

3.2.9 Conclusion

3.2.9.1 Synthesis

Online participation is a thriving research area that – like its object of study – is constantly evolving. Thus, our analysis should be understood as a summary of the current state of research on the matter. We were able to differentiate forms of online participation considered in current research and identify differing foci, discourses and findings. By differentiating and exploring distinct forms of online participation, this study provides an overview of the research field and allows for a more comprehensive approach to the social phenomena related to online participation. It should help facilitate common understandings and conceptualizations of these phenomena across the identified research streams – and thereby further accelerate the academic exploration of crucial questions such as antecedents, activities, levels and outcomes of online participation.

To date, the various research streams identified in our analysis remain largely unconnected. Disciplinary boundaries prevail and disciplinary perspectives dominate the respective analyses. Researchers in each field show little interest in transferring previous findings from other domains. There is no identifiable common research program on online participation – we expect that researchers do not identify primarily as participation scholars, but rather as management, education or health communication scholars. Accordingly, we find a wide variety of definitions and conceptual frameworks applied to the issue. We also find

some redundancy, as findings from one domain are replicated in other domains. At the same time, the differentiation of research streams provides opportunities to learn from specific insights generated in one area or the other. We will highlight four overarching or recurring issues identified in the identified domains.

(1) One recurring discourse we found in a number of research streams is the one on "empowerment". Empowerment entails user access to online information and conversation. By sharing and discussing information, users not only gain knowledge, but also self-confidence. Accordingly, established authorities – such as doctors, teachers or politicians – are called into question. Traditionally hierarchical relations, e.g., in health care or education, are shaken up by increasingly self-confident and self-organizing users. We find that OPP&CE and OBP researchers, especially, could profit from these findings by considering more subtle forms of empowerment. Like medical professionals and teachers, government officials, politicians and managers may well face ever more informed, engaged and demanding stakeholders in the future – a change that may not become instantly apparent when focusing on voting behavior, engagement in traditional political parties or customer service issues alone.

(2) In some cases, empowerment also calls established business models into question. We find this effect in education, health, business and cultural participation. Examples such as citizen journalism show that the Internet provides users with new opportunities of self-directed value creation. Established providers, in turn, find that the provision of services is no longer their prerogative. Just as lay users start reporting and commenting on current affairs, students self-organize their learning experience and patients find information and support online. These developments need not be disruptive alone, as some institutions strive to incorporate stakeholder input into their value proposition. Findings in OBP indicate that engaging stakeholders may lead to increased identification, loyalty and satisfaction. It remains largely unclear how political, medical or educational institutions will adapt to the empowerment of their stakeholders, though.

(3) A third recurring topic concerns the antecedents of online participation. Here, we noticed differing perspectives depending on the research area. Whereas demographic characteristics, user skills, interests and self-efficacy are crucial antecedents in the OPP&CE and OHP clusters, other areas focus more on user interests and use motivations, e.g., in OCP and OEP. In certain areas, the discourse on the antecedents of participation is more pronounced (OPP&CE) than in others, that, in turn, focus more on consequences (e.g., OEP). Here, we see learning potential for all the identified clusters. Research on OPP&CE could profit from a stronger consideration of user motivations and perceptions. Research on OEP, OBP or OCP, on the other hand, could focus more on users' backgrounds, education, or social capital. Overall, debate on the "participation divide" should be differentiated by the identified areas

of online participation as antecedents may have different effects depending on the form of participation under consideration.

(4) Finally, we find significant interest in the question of the online – offline transfer of participation, i.e., the question of whether users can transfer their online participation beyond the digital sphere. The empirical results provide weak positive evidence in favor of an offline impact, especially in OPP&CE (Boulianne, 2009). In many cases, online participants report benefits from their engagement, e.g., in the context of patient support forums that help individuals cope with illnesses, or in the education area, where participation in online courses allows for more individualized and flexible learning. Yet, a number of case studies found that social relations or support networks created online are difficult to transfer to the offline sphere, as common interests may be sufficiently strong to support an online community, but not to nurture real world friendships. So in some respects, online participation appears limited to the digital sphere.

3.2.9.2 Limitations

When interpreting the findings from our analysis, some limitations should be taken into consideration. First and foremost, the findings presented in this study are determined by the applied research process, including the choice of keywords and databases. These specifications are necessary to structure and distill the extensive literature. While we are confident that the four chosen databases provide a comprehensive overview of the peer-reviewed English literature, and the chosen search terms allow for a broad access to the issues addressed in various disciplines, the application of the search terms to the studies' titles clearly limits the scope of the search results. We acknowledge that a number of important contributions in the respective fields are not included in this overview simply because their titles don't make them instantly recognizable as pieces of online participation research. The research process was designed to allow for a broad overview of the current state of research, to allow for an identification and differentiation of research fields and sub-discourses. Thereby, in each individual field discussed in this review, breadth was chosen over depth. Experts in the respective fields will easily identify individual studies missing from the review. In fact, each individual field identified in this analysis would warrant its own systematic literature review.

Since – as we have seen – the topic of online participation is attracting significant attention and the overall research field is growing at a dynamic pace, the existing body of literature is already too large for us to provide an exhaustive overview. However, due to the standardized research process, we managed to identify a broad selection of pertinent studies, included in the analysis independent of the publication outlet, authors' origin or position within the field. For the less developed research fields, such as business or cultural participation, this

approach is necessary in order to gain a clear understanding of the relevant discourse. For other, more established fields, such as political participation, future reviews might want to weigh search results by centrality or citation frequency (which would also allow for a broader approach, such as applying search terms to titles and abstracts).

Another limitation of our study is its focus on peer-reviewed journal or conference proceedings publications. In some domains, other publication formats, such as books, constitute important contributions to the field and should be considered in field-specific reviews. Choosing peer-reviewed publications only allowed for a comparison across various disciplines, with the consideration of conference proceedings ensuring that more recent, evolving discourses were not being neglected. Finally, we only analyzed publications in English, neglecting other important (research) languages, such as French, Spanish, or German. This language selection may result in a cultural bias – more specifically a distinct Anglo-centric perspective on the issues at hand.

3.2.9.3 Propositions for future research

Finally, we derive a number of propositions from our analysis that may serve to guide future research into online participation. We try to identify propositions that are applicable across all five forms of online participation identified in the review. As we have seen, some research fields are more coherent and advanced than others (most notably the field of OPP&CE). Accordingly, current research interests vary from field to field. In the case of OPP&CE, we find that, due to techniques applied in recent election campaigns, opportunities provided by big data analyses are increasingly gaining attention (Ausserhofer and Maireder, 2013; Bruns and Burgess, 2011; Conover, *et al.*, 2013). Yet, this research interest has not yet spilled over into the other identified research fields. In other words, we will focus on propositions that we deem salient to the overall research domain of online participation – across all the identified forms of participation. Many of these propositions concern the development of a robust theoretical framework necessary for online participation research in all current and further, future domains and disciplines.

Proposition 1: *Online participation should be clearly defined as an activity distinct from information and communication.*

A surprising number range of studies do not provide a definition of online participation. In fact, we did not find any conceptualization that is equally considered in various research fields. Frequently, acts of information search or communication are subsumed under participation or engagement (Hoffman, 2012), while, again, these concepts are not clearly differentiated. One notable approach is to conceptualize online participation as online con-

tent creation and sharing. Several studies on the participation divide have applied this understanding (Correa, 2010; Hargittai and Walejko, 2008). Future studies should strive for a clear(er) conceptual understanding and definition of online participation. We provide a working definition of online participation in this study that we deem applicable to all the identified fields. Yet, further conceptual and empirical work should serve to further refine our understanding of the concept.

Proposition 2: *Research on online participation should be aware of its diversity and consider various forms or areas of participation.*

A rather obvious conclusion of this literature review is that research on online participation could benefit from a more multi- or cross-disciplinary perspective. In many respects, academic institutions (including journals and conferences) are not conducive to cross-disciplinary research. Yet we find that the fragmentation of online participation research into distinct fields or streams leads to both unnecessary gaps within fields and redundancies across fields. To date, online participation strictly adheres to disciplinary boundaries with OPP&CE dominating the overall picture. Yet research from the other identified fields could help interpret existing findings and generate ideas for new research opportunities. Researchers of online participation from various disciplines still have to create mutual awareness of their work – and foster an understanding of their common research agenda.

Proposition 3: *Research on online participation should apply more mixed methods, relational and longitudinal approaches.*

Most studies reviewed either rely on quantitative, explanatory methods based on survey data (mostly regression) or on qualitative, descriptive approaches (mostly case studies). Few conceptual studies complement this rather uniform picture. Therefore we find a lack of mixed methods approaches and data sources beyond surveys and interviews. We detected only few studies analyzing observational data. Social network analysis could be a valuable framework to research participation within a relational perspective that transcends actor-centric views and accounts for individuals' social embeddedness. Finally, a systematic process-oriented perspective based on longitudinal data could complement the cross-sectional studies currently dominating the field.

Proposition 4: *Research on online participation should be more theory-based and cumulative.*

Research on online participation is seldom based on strong social theories, such as social exchange theory, Bourdieu's concept of habitus, Foucault's genealogical approach, rational choice/game theory, social cognitive theory, or social capital theory. This lack of a strong

theoretical foundation inhibits an overarching and cumulative research agenda and inhibits the interpretation and transfer of results. Of course, the research field can still be considered relatively young, so many studies are explorative in nature. Still, in order to further flourish, the field should strive for a more distinct theoretical basis.

Proposition 5*: Research on online participation should transgress geographical boundaries.*

Until now, most research on online participation published in English and in peer-reviewed journals has focused on the English-speaking world – or at least on the "Western" world. At the same time, initial findings show that online participation depends heavily on the specific social, political and cultural context (Calenda and Meijer, 2009; George, 2005). National cultures can be more or less conducive to online participation. Therefore, the field could profit from a more cross-cultural perspective that compares online participation in different social contexts. Comparisons could also serve to contextualize overly optimistic or pessimistic perspectives on the issues at hand.

3.3 Content creation on the Internet − A social-cognitive perspective on the participation divide

Abstract

Socio-demographic variables are held to impact Internet users' willingness and ability to productively use online media. This effect can create a 'participation divide' between distinct user groups. Recently, studies have enhanced our understanding of the participation divide by differentiating types of online content creation. They found that socio-demographics may only affect specific forms of online participation. We suggest that social cognitive theory (SCT) helps explain why and how socio-demographic variables influence different forms of online participation. Based on SCT, we analyse the mediating effect of two cognitive constructs, self-efficacy and privacy concerns, on different types of online content creation. We conduct a survey among German Internet users and apply structural equation modeling to compare three distinct theoretical models. We find that considering the mediating effects of cognitive constructs, based on SCT, improves our understanding of which socio-demographic variables affect which type of online content creation − and why.

3.3.1 Introduction

To an unprecedented degree, social media have made it easy for lay users to publish their musings and opinions and make them accessible to a wide audience (Blank & Reisdorf, 2012; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011). Based on personal profiles, users can quickly connect to like-minded citizens and become members of lively communities of interest (Gil de Zúñiga, Veenstra, Vraga, & Shah, 2010; Woodly, 2007; Zhang, Johnson, Seltzer, & Bichard, 2010). These new media affordances have triggered significant research interest in what is called "online participation": Users employing new media to create and share content with interested audiences in order to affect their social environment.

Online content creation and participatory Internet uses are held to generate social capital, providing both group- and individual-level benefits (Hargittai & Walejko, 2008; Shah, Kwak, & Holbert, 2001). Across a number of civic domains, online participation allows for the identification and coordination of communities of interest, fostering self-help and mutual support and facilitating agenda setting efforts (Epstein, Rosenberg, Grant, & Hemenway, 2002; Livingstone & Bober, 2004; Lutz *et al.*, 2014; Sandaunet, 2008). Online participation has been shown to be closely associated with offline engagement – a relationship most frequently confirmed in the context of political participation (Boulianne, 2009; Towner & Dulio, 2011; Vitak *et al.*, 2011).

Yet, studies have consistently shown that not all users benefit equally from the participatory opportunities provided by new media. Online participation and content creation

require a more extensive skill set than mere consumptive Internet uses (Hargittai, 2002; Van Dijk, 2005). Digital divide research has shown that socio-demographics differentiate participatory web uses (Hargittai, 2002, 2010; Hargittai & Hinnant, 2008; Van Deursen & Van Dijk, 2011; Van Dijk, 2005; Zillien & Hargittai, 2009). Accordingly, research was quick to expand the notion of a "digital divide" to include the socio-economic stratification of online participation, that is, the "participation divide" (Blank, 2013a; Blank & Reisdorf, 2012; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011).

Recently, conflicting findings have triggered a controversy on the scope and prevalence of the participation divide: In a study of British Internet users, Blank (2013a) differentiated three forms of online content creation. He found that socio-demographic variables such as age, gender, or education do not necessarily affect online participation across all domains, but rather only select forms, political participation most notably. In a response, Schradie (2013) pointed to the persistence of large social inequalities when it comes to online content creation. Both authors do not disagree on the existence of a participation divide, but rather on its form and scope – which ultimately also affect evaluations of social effects.

In this study, we will turn to social cognitive theory (SCT) to provide a more nuanced understanding of why socio-demographic variables might affect online content creation – and thereby contribute to the ongoing debate on the scope of a participation divide. SCT suggests that environmental influences shape cognitive predispositions which, in turn, affect behaviour (Bandura, 1977; 1986). We argue that socio-demographic variables indicate environmental influences, such as training or use experience, which shape cognitive factors driving use behaviour (Frenkel, 1990; Wei *et al.*, 2011). Accordingly, cognitive factors mediate the effect of socio-demographic variables on online content creation (cf. Correa, 2010; Hargittai & Walejko, 2008, Schradie, 2013).

We will focus our analysis on the mediating role of two cognitive factors in particular: self-efficacy and privacy concerns. Both have been shown in previous studies to significantly affect the use of information and communication technology (ICT) (Compeau *et al.*, 1999; Gefen & Straub, 1997; Venkatesh & Bala, 2008) and have been applied in digital divide research (Hsieh *et al.*, 2011). Taking the mediating role of these cognitive factors into account will allow us to better explain seemingly conflicting findings on the scope of the participation divide.

We base our analysis on a large-scale online survey conducted in Germany (N=1488). Our study will apply the differentiation of online content creation proposed by Blank (2013a). In order to analyze the effect of the cognitive variables on online content creation, we compare three alternative models conducting structural equation modeling (SEM): a direct, a fully mediated, and a partially mediated model. We will show that considering the mediating role

of self-efficacy and privacy concerns not only increases the explanatory power of the analysis, but it also allows for a differentiation of direct and indirect effects of socio-demographic variables on content creation, and thereby a deeper understanding of the participation divide.

3.3.2 Theoretical background

3.3.2.1 Online content creation and participation

While an increasing number of studies address antecedents, forms and outcomes of online participation, the concept itself remains somewhat ill-defined (Rice & Fuller, 2013). Empirical investigations, especially of political participation, have subsumed vastly different activities under the umbrella of online participation, such as donating money, signing e-petitions, writing e-mails to a government representative, or sharing photos (Best & Krueger, 2005; Calenda & Meijer, 2009; Di Gennaro & Dutton, 2006; Hoffman, 2012; Rojas & Puig-i-Abril, 2009; Ward *et al.*, 2003).

A number of authors agree that the creation of online content constitutes a key element of online participation (Jenkins, 2006; Schradie, 2011). In fact, some consider online participation synonymous with content creation (Hargittai & Walejko, 2008). Others point out that the concept of online participation goes beyond content creation, since content creation may be strictly unidirectional in nature and address an unknown, dispersed audience. Online participation, instead, is commonly more focused on specific reference groups and more social and interactive in nature as its purpose is to engage in a public discourse and affect the social environment (Gil de Zuñiga *et al.*, 2010; Park & Perry, 2008; Schradie, 2011).

A recent literature review of online participation, accordingly, has defined the concept as "the creation and sharing of content on the Internet addressed at a specific audience and driven by a social purpose" (Lutz *et al.*, 2014). Such a broad understanding of online participation is not limited to the political domain, but may encompasses other civic spheres (Verba, Schlozman, & Brady, 1995), as in the case of cultural, business or educational participation (Lutz *et al.*, 2014). Also, online participation may lead to or be closely associated with participation in the offline world. For example, Moy and colleagues (2005) found that interactive and community uses of the Internet are positively associated with offline civic engagement (cf. Dutta-Bergman, 2006).

Studies of online participation agree that participation can be distinguished from more passive or consumptive Internet uses (Hoffman, 2012). Yet, consumptive Internet uses may facilitate online participation: Bakker and de Vreese (2011) found that using the Internet for information purposes, such as news consumption, is positively associated with both online

and offline participation (cf. Pasek, More, & Romer, 2009; Shah *et al.*, 2001; Wang, 2007).

In summary, there exists a significant overlap between the concepts of online participation and content creation, in some cases rendering both indistinguishable (Schradie, 2011). Online participation is considered more resource-intensive than other, more consumptive Internet uses, requiring a more extensive skill set (Hargittai, 2002; Van Dijk, 2005). It can also be considered a more capital-enhancing use of the medium (Hargittai & Walejko, 2008). This may be one reason why research interest has been migrating from the "digital divide" to the so-called "participation divide".

3.3.2.2 From the digital divide to the participation divide

Digital divide research suggests that offline inequalities are reproduced online. More specifically, socio-economic differences tend to be replicated online, with socio-economic disadvantages limiting user access to the Internet and benefits from Internet use. Antecedents frequently explored in the digital divide literature include education, income, gender, and age. While early studies of the digital divide tended to focus on access to the Internet or the extent and frequency of Internet use, more recent studies began to differentiate forms of Internet use as well as the associated skill requirements:

Socio-economic status (SES), as measured by income, occupational status, social background or education, is a key construct in the digital divide literature. Those with high SES are held to more easily take advantage of the Internet, because they command the necessary resources (material, human and social capital) allowing better access to modern information and communication technologies (ICT) (DiMaggio, Hargittai, Celeste, & Shafer, 2004; Van Dijk, 2006) – e.g., broadband Internet connection, smartphones or tablets. They also possess the necessary skills to use new media (Gui & Argentin, 2011; Hargittai, 2002, 2010; Hargittai & Shafer, 2006; Van Deursen & Van Dijk, 2011). Hargittai and Walejko (2008) found that higher social status is associated with more expressive Internet uses. Compared with low SES users, those with high SES are expected to use the Internet in more capital-enhancing ways (Hargittai & Hinnant, 2008; Zillien & Hargittai, 2009). Education and income have both been shown to positively impact online participation (Gibson *et al.*, 2005). Even among youth, male, higher status and better educated citizens are more engaged online than their female, lower status and less educated counterparts (Livingstone *et al.*, 2005).

As for *gender*, although differences in access to the Internet have almost leveled out in many Western countries, inequalities remain (Helsper, 2010; Li & Kirkup, 2007; Ono & Zavodny, 2003). Online games or sexual content, for example, have been shown to be male-dominated uses, while online health information seems to be more popular among female users (Helsper, 2010, p. 356-357). Studies tend to find that men are more active and eager to

participate online than women (Calenda & Meijer, 2009; Di Gennaro & Dutton, 2006).

Age is found to be a strong predictor of Internet use and skills, with younger users being more active and skillful (Bridges, Appel, & Grossklags, 2012; Dahlgren, 2011; Hargittai, 2002, 2010; Jugert, Eckstein, Noack, Kuhn, & Benbow, 2013). On the other hand, the effect of age on online engagement can be moderated by the users' interest – e.g., older users being more interested in political affairs (Gibson *et al.*, 2005; Wang, 2007).

In summary, the digital divide literature provides substantial support for the notion that socio-economics not only impact if, but also how individuals use the Internet. These findings have implications for the participatory effect of new media, as different use patterns are more or less conducive to individuals' participation in a number of civic domains. Given the provided definition of online participation, the "participation divide" can be understood as differences in the online creation and sharing of purpose-driven content with specific audiences due to socio-economic influences. An increasing number of studies have tried to examine the participation divide, resulting in some controversy and need for further exploration.

3.3.2.3 Differentiating participation divides

Current findings on the antecedents of online participation are closely in line with those developed in digital divide studies. It is noteworthy, though, that many studies of the participation divide define and operationalize online participation strictly as online content creation (Correa, 2010; Hargittai & Walejko, 2008). Recently, SES has been shown to significantly affect content creation, while gender affects the type of content created by users (Hargittai & Walejko, 2008). Schradie (2011) finds that the effect of SES is even more pronounced on participatory than on consumptive Internet uses. Variables such as income and education, particularly, affect users' propensity to create and share content. Correa (2010) finds that among college students, gender, age and race (but not SES) affect the level of online content creation. As for age, the consistent finding is that younger users are more prone to make use of the participatory forms of the web, such as blogs (Schradie, 2012).

Previous studies – while significantly extending our understanding of the participation divide – are associated with some limitations (see Table 8): Some studies did not rely on random samples, but focused on college students alone (Hargittai & Walejko, 2008; Correa, 2010). Schradie (2011) based her analysis on a representative sample of the US population, Blank (2013a) on one of the UK population. Most studies focus on data collected in the US (cf., Blank, 2013a). Methodologically, previous studies relied on either linear or logistic regression, alone.

Recently, Blank (2013a) pointed out a limitation of previous studies that goes to the heart

Table 8: *Key studies of online content creation*

Study	**Hargittai & Walejko (2008)**	**Correa (2010)**	**Schradie (2011)**	**Blank (2013a)**
Main findings	Age and online skills predict online sharing of creative content. Production of creative content also depends on SES.	Psychological factors (motivation, skills) and demographics predict content creation, SES does not.	SES affects user propensity to create and share content, effects differ by online activity.	Differentiates types of content; the effect of SES on content creation differs by type of content (mainly political content).
Sample	First year college students from an urban US public university (N=1060)	US College students (N=3139)	Pew sample representative of US population	OxIS sample representative of UK population
Types of content	Four types of creative content	Aggregates ten different types of content into one measure	Focus on activities rather than content type	Differentiates political, skilled and social and entertainment content
Method	Logistic regression, stepwise	Linear regression, stepwise	Logistic regression, stepwise	Logistic regression, stepwise

of the established understanding of the participation divide: a lack of differentiation of the type or form of content produced by users. Given that content creation is such an integral element of online participation, research should take account of the complexity of the concept by taking a closer look at the content produced. In his analysis, Blank (2013a) differentiated three forms of online content creation using exploratory factor analysis: skilled content, social and entertainment content, and political content. Skilled content includes activities such as writing a blog, maintaining a website, and posting writing (or other creative content). Social and entertainment content captures the use of SNS for posting pictures, and uploading video or music files. Finally, political content entails disseminating political content and commenting on political/social issues.

Using logistic regressions, Blank (2013a) differentiates the antecedents of the three forms of content creation. He finds that skilled content is produced by young, technically savvy people who use multiple devices and are comfortable revealing personal information. So-

cial status did not affect this form of content creation. Social and entertainment content is produced by young, technically skilled people of lower incomes. It is more likely to be created by non-elite users. Finally, political content is produced by well-educated users who are either students or use the Internet at work. They constitute a highly educated elite.

In other words, Blank finds that the shape and scope of the participation divide are actually contingent upon the type of content created by Internet users. More specifically, the positive effect of SES on content creation is limited to the political domain. The creation of social and entertainment content, instead, appears to be more of a non-elite phenomenon, with higher SES being negatively associated with online participation. These findings and implications triggered a heated exchange on the antecedents of online participation, the prevalence of social inequalities on the Internet and methodological challenges when addressing these issues (cf. Blank, 2013b; Schradie, 2013). Schradie (2013) notes that stronger theoretical foundations are necessary to explain the differing effects of socio-demographic variables on content creation.

We propose that our understanding of online content creation and participation divides can be enhanced, and the effect of socio-demographic variables better explained if we consider learnings from SCT. The next segment will provide a brief overview of SCT and its application to Internet use, in order to derive our research models.

3.3.2.4 A social cognitive perspective

In a study of US citizens' access to information and the resulting effects on political participation, Bimber (2001) found that socio-economic variables do affect access to information, but cannot directly explain effects on participation. He suggests that 'cognitive pathways' need to be considered to understand the participatory effect of new media. SCT, particularly, has repeatedly been applied to the adoption of new communication technology and the ability of users to productively use new media. It provides a suitable approach to obtaining a more differentiated understanding of the socio-demographic antecedents of online content creation.

SCT posits that environmental factors, personal factors, and behaviour form a causal model of 'triadic reciprocity'. Within this model (a) an individual's environment influences personal dispositions (such as cognitions and affect), which in turn shape its choice of environment; (b) personal dispositions influence behaviour, which in turn influences these personal factors; and (c) behaviour affects the environment, which in turn impacts behaviour (Bandura, 1977; 1986). This framework has been applied to ICT use, showing that social and environmental factors – such as training and ICT access – impact personal dispositions, which in turn affect use behaviour (Ambrose & Chiravuri, 2010; Compeau & Higgins, 1995; Wei *et*

al., 2011).

Basing an analysis of the participation divide on SCT allows for a consideration of the mediating role of cognitive factors in the effect of socio-demographics on use behaviour. According to SCT, these cognitive factors are affected by environmental influences and, in turn, significantly affect behaviour. Given this relationship, SCT provides a helpful explanation of why socio-demographic variables affect the use of new media: These variables can be associated with specific environmental influences and thereby affect the development of personal dispositions (i.e., self-efficacy or privacy concerns) and ultimately behaviour. Whether or not a socio-demographic variable signifies distinct environmental influences is largely dependent on exogenous factors, such as economic (i.e., access), institutional (i.e., education), technological (i.e., affordances), or cultural (i.e., discrimination) conditions. For example, the impact of gender on Internet use should depend on the cultural context, as it may have bearing on women's exposure to ICT relative to that of men (Doney & Canon, 1997; Frenkel, 1990; Wei *et al.*, 2011).

Foremost among the cognitive factors considered in SCT is self-efficacy, users' perceptions or judgments of their own ability to perform a specific behaviour (Bandura, 1977; Compeau & Higgins, 1995). Self-efficacy has variously been shown to drive users' willingness or ability to use ICT (Compeau *et al.*, 1999; Venkatesh & Bala, 2008; Venkatesh, Morris, Davis, & Davis, 2003). It has previously been considered in digital divide research, and has been shown to be helpful in explaining the effect of socio-demographic variables on use behaviour (Hsieh *et al.*, 2011; Wei *et al.*, 2011). The literature provides for a number of conceptualizations of self-efficacy, such as computer self-efficacy or Internet self-efficacy – depending on the ICT considered for use (Compeau & Higgins, 1995; Compeau *et al.*, 1999).

While self-efficacy contributes to a willingness to use ICTs as well as an open, positive or playful attitude towards ICT, the reverse is the case for user anxiety or concerns. The more concerns regarding an ICT, the less willing individuals are to use it (Compeau *et al.*, 1999; Venkatesh & Bala, 2008). One concern variously discussed in the information systems literature and shown to inhibit Internet use is a user's concern for privacy online (Smith *et al.*, 2011). Both self-efficacy and concerns have been shown to be affected by socio-demographic variables. In a number of studies, younger, male and higher SES users have reported higher levels of self-efficacy and lower levels of ICT anxiety or concerns than their older, female and lower SES counterparts (Gefen & Straub, 1997; Venkatesh & Morris, 2000; Wei *et al.*, 2011).

Our study sets out to contribute to the current debate on the antecedents of online content creation by analyzing the mediating role of two cognitive factors: self-efficacy and privacy concerns. Schradie (2011) acknowledges that a playful attitude towards ICT is a key driver

of creative use, while user concerns inhibit content creation. She calls for a consideration of the mediating effect of these cognitive factors in participation divide research (Schradie, 2013). Previous studies have found that use skills or perceived skills moderate some effects of socio-demographic variables on content creation (Blank, 2013a; Correa, 2010; Hargittai & Walejko, 2008). Correa (2010) finds that skills have no significant effect on use behaviour when perceived competence is taken into consideration. Self-efficacy goes beyond a mere estimation of use skills, as it conceptualizes a user's judgment of his or her ability to achieve certain goals given a specific skill set (Bandura, 1986; Compeau *et al.*, 1999).

By analyzing the mediating role of self-efficacy and privacy concerns, we hope to contribute to the understanding of why certain socio-demographic variables affect specific types of online content creation, while others do not.

3.3.2.5 Research models

We will show that the consideration of cognitive factors contributes to our understanding of online content creation by comparing and analyzing three models. These models are based on Blank's (2013a) typology of online content creation. In all the three models, we consider age, gender and education as independent socio-demographic variables (cf., Blank, 2013a; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011). As discussed in the previous segment, we also consider two cognitive variables: self-efficacy and privacy concerns. Figures 6-8 show the competing research models of this article. The first model most closely corresponds to the (full) regression models used in previous studies. Here, the cognitive constructs are included as additional independent variables.

Since we employ SEM as opposed to regression analyses, we are able to more closely examine the mediating role of the two cognitive factors: Accordingly, the second model conceptualizes the cognitive constructs as mediators, as suggested by SCT as well as some previous studies (Blank, 2013a; Schradie, 2013). In order to gauge the mediating role of the cognitive factors, it – somewhat boldly – assumes that the effects of the socio-demographic variables are fully mediated by the cognitive concepts. Considering this model will allow us to compare the model fit and explanatory power of the unmediated and the fully mediate models.

Finally, the third, partially mediated model allows for examining the direct effects of the socio-demographic variables. Since it not only takes the mediating effect of both the cognitive concepts into consideration, but also allows for further effects not captured by these mediators, we expect this model to display the highest goodness of fit – superior to the first and second models.

As to the mediating effects, we propose that age, gender, and education affect self-efficacy and privacy concerns with younger, male and highly educated users reporting higher self-
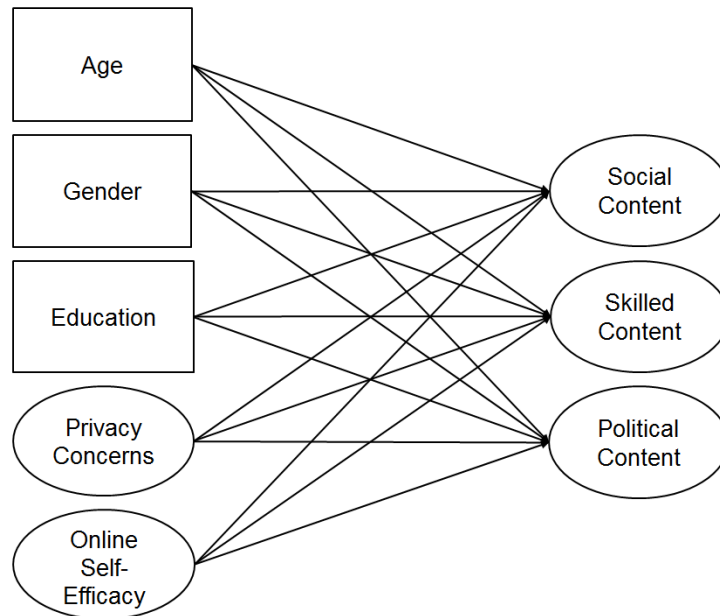
Figure 6: *Only direct model*
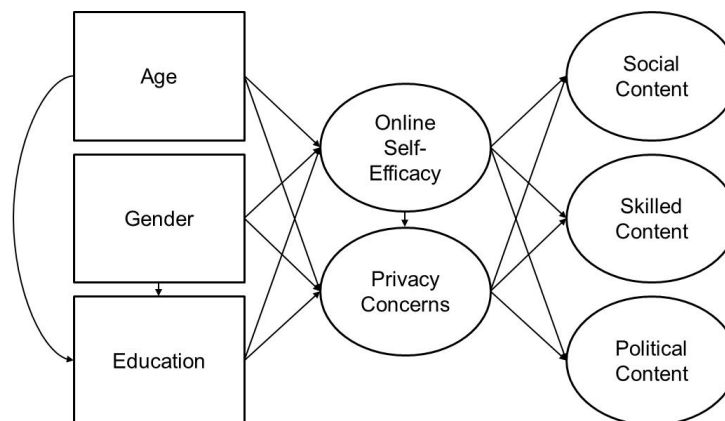
Figure 7: *Fully mediated model*

efficacy and lower privacy concerns (Gefen & Straub, 1997; Venkatesh & Morris, 2000; Wei *et al.,* 2011). We further propose that self-efficacy positively affects the creation of all three forms of online content while privacy concerns negatively affects content creation. Self-efficacy has previously been shown to reduce privacy concerns, so we will also take account of this effect (Compeau *et al.,* 1999). Finally, we will control for an effect of age and gender on education. The former accounts for education expansion, i.e., the fact that today, young people tend to attend school longer and face a wider variety of educational options, while the latter attempts to capture different educational paths between men and women.
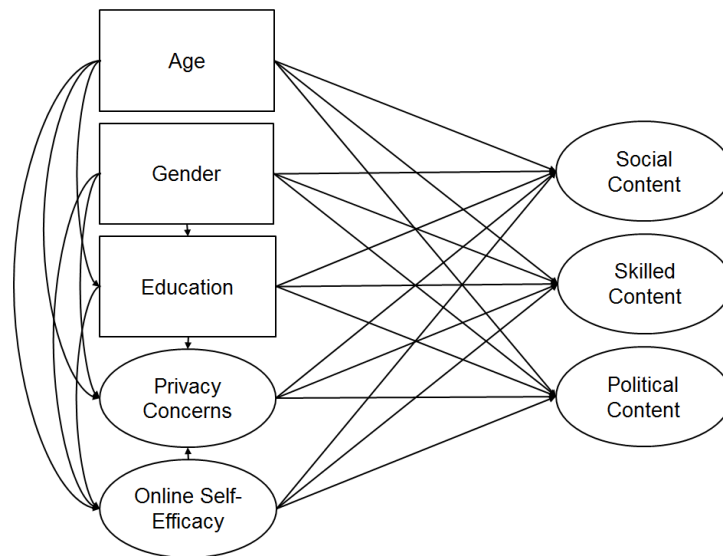
Figure 8: *Partially mediated model*

3.3.3 Methodology

3.3.3.1 Data and measures

The survey sample was recruited from a pool of German Internet users demographically representative of the German adult population, provided by a leading market research institute. During August 2013, 4089 users were invited to participate in the survey by e-mail. Participants were offered a small monetary incentive. A total of 1488 users responded (response rate 36%). The overall sample composition is summarized in Table 9. A gender, age and regional distribution composition of the sample representative of the German general population was ensured by defining quotas on these attributes. Income and marital status were not assessed in the survey but respondents were asked whether they had children. Table 9 also displays the distribution of this variable.

As to choosing Germany as the context of our analysis, we recognize that online participation is dependent on the social and cultural context (Calenda & Meijer, 2009; George, 2005). Yet, little research has been directed at socio-cultural contextual influences on online participation. Most studies have focused on the US population with few country-by-country comparisons (cf. Blank, 2013a; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011). We find that Germany does not differ much in overall Internet access and use from other Western countries (EUROSTAT, 2013). In terms of civic engagement and political participation, Germany also closely resembles other European countries: Online political participation in Germany is limited to a small proportion of the population, whereas various

Table 9: *Demographic structure of the sample*

	Category	**N**	**Percent**	**Missing**
Age	18-29 years	231	16.9	
	30-39 years	201	14.1	
	40-49 years	301	19.8	
	50-59 years	271	17.7	
	60 years and above	484	31.5	
	Total	1488	100	0
Gender	Female	746	51.1	
	Male	742	48.9	
	Total	1488	100	0
Education	Primary	195	13.2	
	Secondary	797	53.8	
	Tertiary	490	33.0	
	Total	1482	100	6
Children	Yes	873	59.8	
	No	587	40.2	
	Total	1460	100	28

forms of offline participation are more prevalent (Emmer, Wolling, & Vowe, 2012). Social and entertainment-oriented uses of the Internet enjoy greater popularity than online political participation (ARD/ZDF Onlinestudie, 2013). Compared to the US, German citizens tend to use the Internet for political purposes somewhat less frequently (Köcher & Bruttel, 2011; Smith, 2013).

The questionnaire addressed the participants' media consumption, Internet use, online participation, and several questions on offline civic engagement and political participation. We measured participants' online self-efficacy based on three items, each addressing their judgments of their own ability to publish different forms of content online. This measure was based on previous measures and focused on online tools that allow for content creation (cf. Compeau *et al.*, 1999; Venkatesh *et al.*, 2003; Venkatesh & Bala, 2008). Privacy concerns were measured with three items from Malhotra, Kim and Agarwal's (2004) global information privacy concern measure.

The measures of the three types of online content creation were derived from Blank's (2013a) typology. Skilled content creation encompasses publishing texts and comments on the Internet and commenting on the writings of others. Social and entertainment content creation covers the use of SNS and the posting of photos or videos online. Political content

creation covers not only commenting on political issues, but also participating in political discussions online. Our measure of political content creation therefore is somewhat broader than that proposed by Blank (2013a). The wording of all items is reported in Appendix A.

3.3.3.2 Methods

We relied on SEM to address the research questions. In contrast to normal regression analysis, SEM can address indirect effects and latent variables. Furthermore, it takes into account measurement errors in the specification of latent constructs and gives out global goodness of fit measures, such as RMSEA, SRMR, CFI, TLI, to allow for model comparisons. Previous studies on online content creation relied either on (stepwise) logistic regression (Hargittai & Walejko, 2008; Schradie, 2011; Blank, 2013a) or linear regression (Correa, 2010), complicating the test for indirect effects.

   We used MPlus Statistical Software (Version 7) to carry out the analyses, relying on robust maximum-likelihood estimation to account for non-normality and other sources of distortion, such as heteroscedasticity and non-normal distribution of error terms (Byrne, 2012). The complete measurement model of all latent constructs is reported in Appendix B. It satisfies the necessary conditions (Bollen, 1989; Netemeyer, Bearden, & Sharma, 2003), i. e., has convergent and discriminant validity (Fornell & Larcker, 1981; see Appendix C). The only exceptions are the AVE of privacy concerns, which falls slightly short of the threshold value, and the correlation between skilled and social and entertainment content. We opted for retaining the privacy concerns measure with three items because it is derived from a well-tested scale. Given the large (squared) correlation between skilled content on the one hand and social and entertainment content on the other hand, discriminant validity cannot be assumed for these two constructs. We chose to retain the three categories, though, because of conceptual reasons and to replicate Blank's (2013a) typology of online content.

3.3.4 Results and discussion

Overall, participants report only little enthusiasm for creating content online. Only about 10 percent create skilled content often or very often. About half of the sample never publishes texts on the Internet, or comments or discusses in online communities. For social and entertainment content, these numbers are markedly higher. On average, users are active on SNS and online media platforms several times a month. Yet, over three thirds of the German online population never or only rarely posts pictures or videos. Finally, political content creation is even less common than the other types considered. Both the average values and the relative frequencies point to low participation rates.

   Figure 9 shows the results of the first, direct model. This model most closely resembles the

analysis of previous studies, and, indeed, we find results closely in line with those reported by Blank (2013a). We find that older users are less likely to publish skilled and social and entertainment content, while there is no significant effect for political content – presumably because the higher activity levels of younger users are offset by the higher political interest of older users. While Blank (2013a) did not find any effect of gender on content production, we find that political content is less likely to be produced by female users. The only direct effect of education on content production is a negative effect on social and entertainment content production, replicating Blank's (2013a) finding in this regard. We find that self-efficacy drives all three types of content creation, while privacy concerns reduce the production of social/entertainment and, surprisingly, weakly increases that of political content, while not affecting skilled content creation.
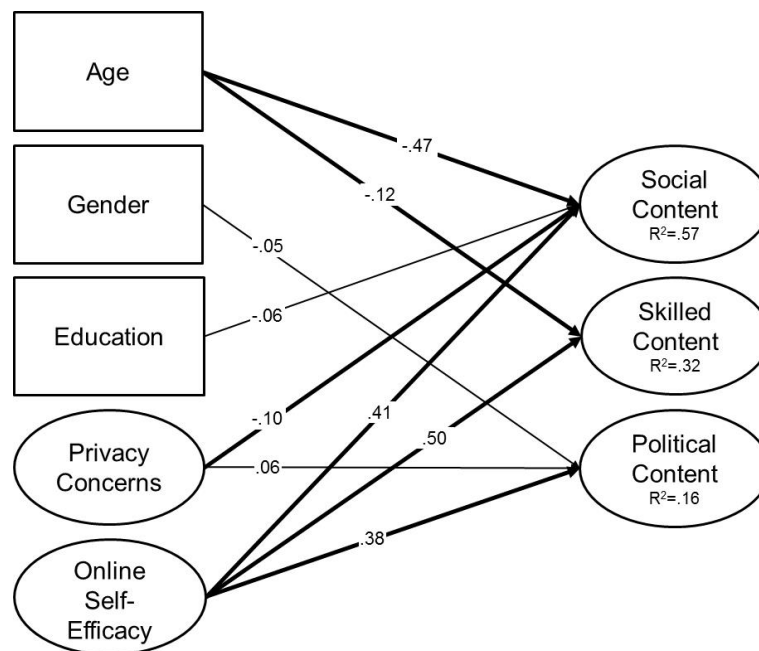
Figure 9: *Only direct model, significant effects only (thin line p<.05, fat line p<.001)*

The fully mediated model (Figure 10) shows strong effects of self-efficacy on all three types of content production and a negative effect of privacy concerns on social and entertainment content production only. As to the effects of the socio-demographic variables on the cognitive factors, we find that self-efficacy is markedly higher for younger users, and also significantly higher for male and highly educated users. At the same time, older users report higher levels of privacy concerns. These findings are in line with previous studies of self-efficacy (Gefen & Straub, 1997; Venkatesh & Morris, 2000; Wei *et al.*, 2011). In fact, the limited effect of privacy concerns on actual use behaviour has been observed in previous

studies, too (Compeau *et al.*, 1999). We also find that the level of education is lower for older and female users. Overall, our findings confirm the proposition derived from SCT that socio-demographic variables indicate distinct learning experiences that affect ICT attitudes and use behaviour.
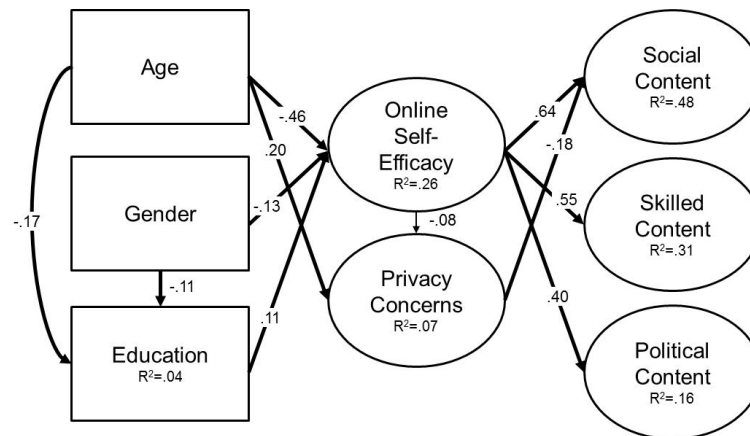
Figure 10: *Fully mediated model, significant effects only (thin line p<.05, fat line p<.001)*

Figure 11 shows the partially mediated model. This model presents the most complex and refined description of the direct and indirect effects of socio-demographic variables on online content production. When considering the mediating effect of the cognitive factors, we still find significant direct effects of age and education: younger users are more likely and highly educated users are less likely to create social/entertainment and skilled content. We do not find a direct effect of gender on content creation. Also, political content creation is not directly affected by any of the socio-demographic variables. Self-efficacy, again, strongly and significantly drives all three types of content creation, while privacy concerns negatively affect social and entertainment content creation.

Again, privacy concerns are positively associated with political content creation. Since the only socio-demographic antecedent of privacy concerns is age, we would again argue that age is associated with political interest which drives political content creation. Another possible explanation for the somewhat counterintuitive effect of privacy concerns might reside in the fact that privacy protection constitutes a politically contested topic, thereby, politically interested users may be more critical in regards to their online privacy protection. Privacy concerns also show a negative effect on social and entertainment content creation in the partially mediated model.

Again, we find that the effect of socio-demographic variables is clearly mediated by cognitive factors, as suggested by SCT. We find that younger users report significantly higher levels of online self-efficacy. Education also contributes to self-efficacy, with older and fe-
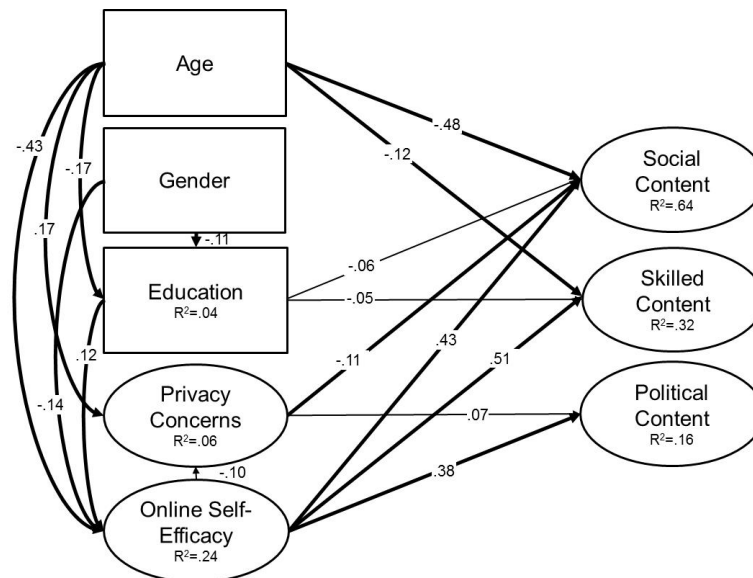
Figure 11: *Partially mediated model, significant effects only (thin line p<.05, fat line p<.001)*

male users reporting lower educational levels. Female users report significantly lower levels of self-efficacy, which cannot be explained by differing educational levels alone.

Looking at the explained variances in all the three models, we find some noteworthy tendencies. Model 3 exhibits the highest R^2 for social/entertainment and skilled content creation, with Model 1 showing better results than Model 2. The R^2 for political content creation is quite low, overall, indicating that there are other important drivers for this form of participation not captured by the models. Also, this value barely varies across the models. The R^2 for social and entertainment content creation varies most across models. These findings demonstrate that it is important to consider both direct and indirect effects of socio-demographic variables on content creation. We also find that the socio-demographic antecedents explain a substantial part in the variance of online self-efficacy, a finding that marks the prevalence of a digital divide, even in 2013 and in a developed country like Germany.

Finally, Table 10 shows the goodness of fit values for the three models. Model 3 performs best and exceeds the threshold valued specified in the literature for SEM goodness of fit measures (Hu & Bentler, 1999). Model 1 performs better than Model 2 with a similar number of degrees of freedom. However, given that Model 2 is based on the assumption that the effects of socio-demographic variables on content creation are fully mediated by cognitive factors, it performs quite well – almost as well as Model 1. This result shows the importance of taking indirect effects into account when exploring the participation divide. It also speaks in favor of extending the methodology applied to the issue beyond regression models alone.

Table 10: *Goodness of fit model comparison*

	Model 1: direct	**Model 2: indirect**	**Model 3: direct and indirect**
χ^2	737	924	633
df	130	135	126
CFI	0.95	0.94	0.96
TLI	0.94	0.92	0.95
RMSEA	0.06	0.06	0.05
SRMR	0.04	0.05	0.04
AIC	69925	70123	69818
BIC	70333	70503	70249

3.3.5 Conclusion

3.3.5.1 Summary and implications

Our findings contribute to the current debate on the scope of the so-called participation divide by highlighting the mediating role of cognitive factors, allowing for a more differentiated understanding of why and how socio-demographic variables affect online content creation. Derived from SCT, our analysis focuses on two cognitive factors in particular: online self-efficacy and privacy concerns.

In line with previous calls for a consideration of "cognitive pathways" in the analysis of online participation (Bimber, 2001), we find that the two analyzed cognitive factors significantly affect online content creation. Online self-efficacy, especially, has a strong, positive impact on the creation of social, skilled and political content. The effect of online privacy concerns is less pronounced, showing a weak negative effect on the creation of social content, and a weak positive effect on the creation of political content. The latter might be explained by privacy concerns being more pronounced among older Internet users who are more interested in politics, or with political interest increasing the awareness of online privacy risks. Overall, we find that the limited effect of privacy concerns on use behaviour is in line with previous findings (Compeau *et al.*, 1999).

Analyzing the mediating role of the two cognitive factors does allow for a more nuanced understanding of the participation divide: SCT implies that socio-demographic variables may indicate environmental influences, such as access or training. These influences shape cognitive dispositions, which in turn affect use behaviour. We find that online self-efficacy decreases with age, increases with education and is more pronounced among male users. These findings hold even when controlling for the fact that older, female users exhibit lower

levels of educational attainment. Given the strong positive effect of online self-efficacy on all three forms of content creation, our analysis contributes to a theoretical explanation for why previous studies found younger, educated and male users to be more active creators of online content (Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011).

As our analysis differentiates direct and indirect effects of socio-demographic variables on content creation, we are able to contribute to the current debate on the scope of the participation divide: By basing our study on the differentiation of content creation suggested by Blank (2013a), we find that established findings do apply even if types of content creation are differentiated – counter to the suggestion that socio-demographic variables might only affect specific types of content production. Self-efficacy is a key driver of all forms of content creation, and it clearly differs by age, gender, and education. Thus, a participation divide exists for all types of content creation.

Also, we are able to confirm a key finding of Blank (2013a): There is a significant negative effect of education on the production of social/entertainment and skilled content, even after taking age and indirect education effects into consideration. Thereby, education is in fact negatively associated with some types of content creation. We interpret this finding as highly educated users being less interested in online interactions, especially for social or entertainment purposes. This effect holds even though highly educated users report higher self-efficacy, which generally drives content production on the Internet.

Some important implications can be derived from the insights gained by considering the mediating role of cognitive factors, based on SCT: We do find evidence for persisting social inequalities when it comes to online content creation (cf., Schradie, 2013). Age and education clearly affect user self-efficacy, and thereby content creation. Ensuring access and training opportunities might help ameliorate these differences as they have been shown to affect user self-efficacy. It is noteworthy that gender also impacts self-efficacy. Additionally, we find a compounding indirect effect with female users reporting lower educational levels. These findings indicate a need for further examinations of gender differences in socialization experiences, especially as they pertain to the use of and familiarity with new media.

Differentiating the forms of content creation reveals that previous research might have overestimated the scope of the participation divide by focussing heavily on political content creation (Lutz *et al.*, 2014). Yet younger, less educated users appear more prone to create and share social and skilled content. Of course, our analysis sheds little light on the question of whether there are distinct user groups, continuously engaging in distinct social domains – or whether there may be a dynamic component at play, with experiences gained in one domain being transferred to another over time. In other words, could younger, less educated users gain use experience and increase their self-efficacy by creating social or skilled content, ulti-

mately facilitating the creation of other content, such as political? Of course, this question is related to a normative evaluation of different types of content creation: Should we consider the creation of political content more valuable or desirable than the creation of skilled or social content?

Finally, it is noteworthy that the predominant socio-demographic effect on content creation is that of age – both a direct effect and one mediated through cognitive factors. Thereby, our analysis shows that the participation divide is largely caused by an age gap in online content creation. We find that younger users are clearly more geared towards interactive, social and entertainment uses of the Internet, and they report significantly higher levels of online participation. This effect remains strong even after taking self-efficacy and educational attainment into consideration. We would conclude that a better understanding of the specific socio-technical socialization of younger Internet users should provide a bigger contribution to our understanding of the participation divide than analysing the effect of users' socio-economic status.

3.3.5.2 Limitations and suggestions for future research

This research has some limitations, which limit its scope and provide avenues for future research. First, the study is based on an online survey, participants were recruited through e-mail invitations. Self-selection unavoidably affects user participation in these kinds of survey. We tried to counter this effect by defining quotas on critical socio-demographic variables. Also, the chosen method excludes the segment of the population without Internet access (in Germany about 15 percent). Thus, our results are only generalizable to the online population and not the overall population. Future research could also consider offliners to compare their profiles with online participants and online non-participants.

Second, some authors have noted that online participation depends on the social and cultural context (Calenda & Meijer, 2009; George, 2005). Our study was conducted among German Internet users, which might have an effect on its findings. We find that the German online population is very similar to that of other Western countries, both in access to the Internet, use frequency and preference for online participation. Our findings, accordingly, appear to be closely in line with those derived from US or UK studies. Yet, more research into the socio-cultural determinants of online participation would certainly be helpful to facilitate cross-national comparative analyses.

Third, the collected data only covers one point in time. Thus, inferences across time are not possible and the issue of isolating different causal effects (e.g., of the cognitive constructs on content creation) remains. Future research on online content creation, especially the migration across various forms of online creation, could use panel designs to describe and

explain changes over time.

Fourth, additional explanatory factors should be included in the research model. Future studies might include broader indicators of users' social and cultural background, such as income and ethnicity.

Fifth, additional forms of online content could be considered in future research. We replicated Blank's (2013a) typology to add to a cumulative research agenda on online content creation. However, other forms of content not originally considered by Blank (2013a) should not be neglected. This includes health-related content or educational content.

Sixth and finally, we had to rely on self-reported data. Such data are subject to challenges such as memory bias and social desirability. Online participation research should therefore combine different data sources, including observational data.

Overall, this study contributes to the research of online content creation by solidifying its theoretical basis, expanding its geographical scope, and advancing the applied methodology. Yet, it also demonstrates that research into the participation divide is still relatively recent and provides ample opportunities for further investigation.

Appendix

Appendix A

Table 11: *Questionnaire*

Construct	Item	Wording
Skilled Content Creation (SCC)	SCC1	*I comment on content that other people have published.*
	SCC2	*I publish my own texts and comments on the Internet.*
	SCC3	*I actively participate in discussions in online communities.*
Entertainment Content Creation (ECC)	ECC1	*Social network sites (e.g., Facebook, XING).*
	ECC2	*Media platforms (e.g., YouTube, Flickr).*
	ECC3	*I share on the web photos and videos I have created.*
Political Content Creation (PCC)	PCC1	*I like and share political content on the Internet.*
	PCC2	*I publish commentaries about political topics on the Internet.*
	PCC3	*I try to persuade others online to become politically active.*
	PCC4	*I actively participate in a political online group or online community*
Privacy Concerns (PC)	PC1	*All things considered, the Internet could cause serious privacy risks.*
	PC2	*Compared to others, I am more sensitive about the way online services handle my personal information.*
	PC3	*To me, it is the most important thing to protect my privacy from online services.*
Online Self-Efficacy (OSE)		*How well do you think you are able to...*
	OSE1	*...publish information on a blog or on Twitter?*
	OSE2	*...publish a video on the Internet (e.g., on YouTube)?*
	OSE3	*...create or edit an article on Wikipedia?*

Appendix B

Table 12: *Measurement model of the latent constructs*

Construct	Item	Standardized Loading	R^2	α	C.R.	AVE
Skilled Content Creation (SCC)	SCC1	0.89	0.80	0.89	0.89	0.74
	SCC2	0.88	0.78			
	SCC3	0.80	0.64			
Entertainment Content Creation (ECC)	ECC1	0.70	0.48	0.71	0.79	0.55
	ECC2	0.68	0.46			
	ECC3	0.84	0.52			
Political Content Creation (PCC)	PCC1	0.77	0.60	0.91	0.91	0.72
	PCC2	0.93	0.87			
	PCC3	0.87	0.75			
	PCC4	0.82	0.67			
Privacy Concerns (PC)	PC1	0.52	0.27	0.72	0.78	0.47
	PC2	0.75	0.57			
	PC3	0.76	0.58			
Online Self-Efficacy (OSE)	OSE1	0.86	0.74	0.88	0.88	0.71
	OSE3	0.89	0.79			
	OSE4	0.77	0.60			
Criterion		≥ 0.5	≥ 0.4	≥ 0.7	≥ 0.6	≥ 0.5

Appendix C

Table 13: *Discriminant validity test*

	Nr. of Items	AVE	SCC	ECC	PCC	PC
SCC	3	0.74				
ECC	3	0.55	0.83			
PCC	4	0.72	0.47	0.38		
PC	3	0.47	0.02	0.07	0.00	
OSE	3	0.71	0.30	0.42	0.14	0.03

3.4 A Social Milieu Approach to the Online Participation Divides in Germany

Abstract

Research on digital divides has been helpful in advancing our understanding of the social structuration of Internet access, motivations to go online, digital skills, and Internet (non-)use, including participatory uses. However, digital divide research has been criticized for oversimplifying the relationship between demographic characteristics and Internet use and for its under-theorization. A social milieu approach, inspired by Pierre Bourdieu's sociological theory, presents an excellent set of concepts to address these criticisms and thus advance digital divide research. This article uses the social milieu approach for an empirical investigation of the participation divides in Germany. Focus groups and online communities with 96 participants from seven distinct Internet milieus serve to differentiate online participation along social lines. The results show that German citizens are strongly segregated into distinct Internet milieus that differ in their intensity, variety, understanding and attitudes towards online participation. Each milieu displays specific participatory patterns and some of the findings challenge existing research on digital and participation divides. Implications are derived and limitations of the approach carved out.

3.4.1 Introduction

Research on digital divides[19] has shown that not all citizens experience the same positive and negative consequences from new media (Van Dijk, 2006). Age, gender and socio-economic status (SES) affect if and how citizens use the Internet (Van Deursen & Van Dijk, 2014).

However, digital divides research has been criticized for oversimplifying the relationship between demographics and Internet use (Halford & Savage, 2010). By focusing on individual user characteristics, digital divides studies neglect the social embeddedness of individuals' Internet use. The motivation and ability to use the Internet in a capital-enhancing way is strongly affected by each user's social environment, such as teachers, colleagues, friends and families (Robinson, 2009; Sims, 2014).

I propose that a deeper understanding of the effect of demographics on online participation, and the resulting digital divides, requires a consideration of the social embeddedness of Internet use. In this study, I apply social milieu theory to seven distinct milieus of Internet users, characterized by both demographics and attitudes towards the Internet. I analyze

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[19]I use the expression "digital divides research" to refer to the broad area of digital inequalities studies. I am well aware of the problems the term "digital divide" carries with it and that "digital inequality" might be the more appropriate expression (Halford & Savage, 2010). However, given the relevance of the term in the development of the research field and its remaining importance in the scholarly discourse I chose to use "digital divides". The plural form is used to stress the plurality of divides.

patterns of online participation in each milieu using focus groups and online communities conducted among German Internet users in fall 2014. A social milieu describes an individual's social environment (Oxford Dictionary, 2015). Accordingly, an Internet milieu is defined as the context where an individual's Internet use takes place.

This paper will answer the following research questions: *How does online participation in Germany differ by Internet milieu? What is the participation pattern in each milieu?*

My *understanding of online participation* is strongly tied to online content creation (OCC). Brake (2014) discusses some problems of defining OCC and assessing it empirically: Where to draw the boundaries between passive consumption of web content and active OCC? How to deal with the "problem" of platforms and the distinction of application use and OCC, especially with social network sites (SNS)? Despite not resolving the issues completely, I employ the following working definition of online participation: "Online participation is the creation and sharing of content on the Internet addressed at a specific audience and driven by a social purpose" (Lutz *et al.*, 2014, section 2). As a consequence, participation divides are "differences in the online creation and sharing of purpose-driven content with specific audiences due to socio-economic influences" (Hoffmann et al., 2015, p. 699).

3.4.2 Literature review

3.4.2.1 Digital divides and participation divides
According to digital divides research, individuals' social positions affect their online behavior. More precisely, social inequalities are reproduced online, with structural disadvantages limiting user access to as well as advantages from using the Internet (Van Dijk, 2006; Van Deursen, Van Dijk, & Helsper, 2014). The most common indicators of social inequality in the digital divides literature are SES, gender, and age.

SES, mostly measured by income or education, is a key construct in the digital divides literature. It captures the "vertical" dimension of social inequality, indicating where users stand on the social ladder. Digital divides scholarship proposes that those with high SES can more easily take advantage of the Internet as they command the necessary resources in terms of human, cultural, social and economic capital (Bourdieu, 2010). These resources give them easier *access* to modern technology (DiMaggio *et al.*, 2004), such as the most current gadgets and fast broadband Internet. Moreover, high SES users, in contrast to those with low SES, tend to possess the *skills* necessary to use new media productively (Hargittai, 2010; Van Deursen & Van Dijk, 2011). Hargittai and Walejko (2008) find that higher social status is associated with more *expressive and participatory* Internet uses. Compared with low SES users, those with high SES are also expected to use the Internet in more *capital-enhancing ways*

(Zillien & Hargittai, 2009) and draw stronger *benefits* from their Internet use (Van Deursen *et al.*, 2014).

As a research area strongly shaped by sociology, digital divides scholarship puts much emphasis on this vertical dimension of social inequality. The empirical results, however, are weaker than expected, especially when it comes to participatory uses. Some studies on participation divides find no SES effects (Correa, 2010), others counter-intuitive ones, in the sense that SES influences certain forms of OCC negatively (Blank, 2013a; Hoffmann *et al.*, 2015; Van Deursen & Van Dijk, 2014). Such findings call for a more nuanced understanding of participation divides (Lutz & Hoffmann, 2014) and allude to a differentiation of participation areas or domains (Blank, 2013a). They also call for the inclusion of non-vertical or horizontal forms of social inequality. Two horizontal indicators are commonly included in digital divides studies in the form of demographics: gender and age.

As for *gender*, although differences in access to the Internet have almost leveled out in many Western countries, inequalities in the usage remain (Li & Kirkup, 2007). Online games or sexual content, for example, are male-dominated uses, while online health information tends to be more popular among female users (Helsper, 2010). Studies have found that men are more involved in political online participation than women (Calenda & Meijer, 2009).

Age is a strong predictor of Internet use and skills, with younger users being more active and skillful (Hargittai, 2010; Schradie, 2012). On the other hand, the effect of age on online engagement can be moderated by users' interest, e.g., older users being more interested in political affairs (Wang, 2007).

In summary, the digital divides literature provides substantial support for the notion that both SES and demographics influence how individuals use the Internet. With the advent of social media, digital divides research is increasingly incorporating the investigation of social media (Hargittai, 2007) and OCC or online participation (Blank, 2013a; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011). Brake (2014) summarizes the existing evidence on the social structuration of online participation – understood as OCC: "Nonetheless the balance of the evidence does seem to suggest that stratification of OCC is an observable and widespread if not universal phenomenon" (p. 599).

3.4.2.2 The theory problem in digital divides research

Digital divides research has been helpful in pointing to the social stratification of Internet uses. However, explanations for the observed divides are often absent or remain vague. What is it, for example, that makes younger people participate more in most domains of the Internet than older people? Why are certain participatory Internet uses associated with SES, while others are not? Digital divides research mostly fails to address and answer such questions.

Accordingly, one of its main points of criticism is its *under-theorization* (Halford & Savage, 2010; Van Dijk, 2006).

Several digital divides studies have used social theories, from sociological, such as Marxist readings (Fuchs & Horak, 2008), to communication approaches, such as diffusion of innovation or knowledge gap (Mason & Hacker, 2003), to psychological frameworks and mixed approaches, like the affordances perspective (Hsieh, 2012). Overall, however, the problem of under-theorization seems to persist as a recent call for "Theorizing the digital divide" shows[20].

A prominent line of research addressing this criticism has attempted to strengthen the cognitive pathways from demographics to participation (Bimber, 2001). Accordingly, differences in users' environment lead to unequal cognitions and attitudes towards technology, which, in turn, affect individuals' online activities. Hargittai and Shafer (2006), for example, show that women's digital skills do not significantly differ from men's but their perceived skills or self-efficacy does.

Social cognitive theory (SCT; Bandura, 1986) has been helpful in explaining how social conditions shape new media use. By pointing the attention to cognitions as mediating factors between demographics/SES and digital practices, a more fine-grained picture is drawn than in most digital divides research. SCT with its focus on agency and self-efficacy is thus helpful in "translating" social conditions into concrete digital practices. Several studies have employed SCT with promising results (Wei *et al.*, 2011; Hoffmann *et al.*, 2015). However, SCT does not sufficiently account for the temporal dimension and lacks a historical grounding. Hence, it cannot satisfyingly explain why social inequalities occur in the first place and how they perpetuate themselves over time. Here, other theories, such as gender- and identity-focused theories (Wajcman, 2007) or structural theories that concentrate on the black box of "the environment" in SCT are more useful. They give a better understanding of the context of Internet use.

Accordingly, a number of studies have shed light on the effect of social conditions on Internet uses by employing qualitative methods with a theoretical grounding in structural sociology, especially Bourdieu's social theory (Robinson, 2009; Sims, 2014). However, the social milieu approach has not been applied yet to study social media use and online participation. In the following section, I therefore give an outline of the concept.

3.4.2.3 The social milieu approach for research on participation divides

The social milieu approach enjoys a long history in sociology. Durkheim (1964) was one of the first to theorize the idea of social milieus. He saw them as an "emergent system" that

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[20]http://bit.ly/1AX3CGS

is characterized by two attributes: their size and their cohesion or concentration (Sawyer, 2002, p. 233). In this traditional definition, social milieus organize communication and ties. Members of a social milieu are expected to share some type of relation and are thus often spatially connected (Sawyer, 2002), for example by living in the same neighborhood.

More recently, Bourdieu's (1984) research on tastes has reinforced the interest in the milieu perspective. Especially in German sociology, various researchers have used milieu or lifestyle typologies to advance social stratification research (Otte, 2004). In many cases, these typologies are strongly influenced by Bourdieu's (1984) understanding of the social space as structured not only vertically in terms of class and SES but also horizontally in terms of cultural preferences and attitudes. In contrast to Durkheims's (1964) definition, milieus in that understanding have largely lost their spatial and communicative closure. Instead, they unite people with similar tastes, practices and comparable resources.

In this current form, social milieu or lifestyle theory is mostly descriptive and lacks a strong sociological mechanism (Rössel, 2008). However, Bourdieu's social theory offers a way out. Its central concept of habitus , as the connector between the social space and individuals' practices, can partly explain why social milieus differ and how these differences are perpetuated via distinction practices. In this vein, Bourdieu presents a relational perspective that takes into account how social groups differentiate themselves unintentionally and mostly unconsciously. I do not rely on the habitus concept here - and thus cannot sufficiently account for the relational dimension – because the data do not allow for a thorough investigation of user habitus (pl.) and distinction. Instead, I focus on describing milieu differences. Thus, I make the point that horizontal characteristics are crucial in explaining online practices and should be more salient than vertical characteristics.

Although I do not focus on the habitus, social milieu theory incorporates another important notion of Bourdieu's theory that is taken up: the concept of *social fields* (Bourdieu, 1996). Fields are areas of society with specific rules and forms of capital. Examples include the field of literary production (Bourdieu, 1996) and the academic field (Bourdieu, 1988). To understand social practices we need to understand the field where they take place. Different classes and class fractions engage differently in different fields (Bourdieu, 1984). Similarly, different social milieus exhibit varying propensity to engage in certain social fields, such as art and politics (Schulze, 1992).

Both aspects – the importance of horizontal characteristics and the necessity to distinguish fields – have not sufficiently been taken up by current digital divides research. The majority of digital divides studies operate with few social indicators, neglecting users' endowment with cultural capital. The incorporated dimension of cultural capital might provide especially useful to differentiate how Internet users participate in different online con-

texts.

Research on online participation also suffers from a plethora of operationalizations of participation types, without a clear concept or typology (Blank, 2013; Lutz et al., 2014). Bourdieu's concept of field is helpful in strengthening our understanding of how online participation depends on field-specific characteristics.

3.4.3 Methodology

I base the analysis on a combination of focus groups and online communities among German Internet users, conducted in September and October 2014. Overall, 96 users participated in the focus groups and online communities. The focus groups took place in September 2014 in Frankfurt and Berlin. Twelve focus groups were carried out with eight participants per group and with seven milieus in total (DIVSI, 2012). The milieu categorization used in this study is based on the "Sinus-Milieus". This typology was developed in the 1980ies by the German social science and market research company Sinus and applied in a large variety of contexts, mainly in the German-speaking world (see Otte, 2004 for a discussion in German and Schmid & Bruckner, 2011 for a summary in English).

Six focus groups took place in Berlin and six in Frankfurt. Each focus group was composed of a different age and social profile. Two of the seven milieus can be categorized as digital outsiders: elderly people who hardly use the Internet and are cautious and inexperienced in using Internet applications. These milieus were analyzed with one focus group each. The remaining five milieus are characterized by more open attitudes towards the Internet. They can be categorized as either digital natives or digital immigrants (Prensky, 2001) and were analyzed with two focus groups each.

Appendix A gives an overview of the seven milieus and Figure 1 shows a graphical depiction (in German). The focus groups were moderated by two experienced employees of a cooperating German social research institute. Four additional members of the research team observed the conversations but did not actively intervene during the discussions. All focus group discussions were recorded on video and audio and transcribed.

The online communities were comprised of the participants of the focus groups, plus a small number of additional milieu representatives to ensure lively online discussions. Overall, 96 people participated in the online communities over the course of ten days in the beginning of October 2014. Each day, participants carried out a small task, such as describing their daily Internet use. Findings from the online communities complement and illustrate the findings from the offline focus groups.

All data were analyzed in November and December 2014. The analysis did not use a partic-

ular coding scheme, such as grounded theory, but heavily relied on the focus group guideline as the main structuring element (Appendix B). I was guided by current studies using focus group methodology for the analysis (e.g., Hargittai, Neuman, & Curry, 2012). To analyze the data, I read each focus group transcript several times and did the same for the online community files. I then selected the sections that described users' participation behavior for each transcript, as opposed to the other sections of the transcripts that described attitudes, definitions and general Internet use (Appendix B: sections/bullet points 1-4, 7 and 8). From these excerpts, I synthesized the main tendencies in each milieu, illustrating them with suitable comments.

3.4.4 Results: Participation patterns in different social milieus

I will draw strongly on a typology of online participation developed from a systematic literature review which distinguishes five areas of online participation (Lutz *et al.*, 2014): political and civic, economic/business, cultural, educational, and health-related.

3.4.4.1 Digital natives

Immersed natives

Because the Internet takes a central role in the life of immersed natives, various areas of participation become apparent. Immersed natives concentrate their online participation on cultural, economic and educational affairs, not so much in political or health-related domains. Moreover, immersed natives engage in civic activities on the Internet but rarely political ones.

Certain members of the milieu are very up-to-date about recent technological developments, especially in the economic realm, such as the "sharing economy" – a topic that did not come up in the focus groups of the other milieus. They are also most trustful in that regard, sometimes sharing their places with *Airbnb* or *Couchsurfing*. In a similar vein, several members of this milieu are confident about presenting themselves online and sharing their creativity, also for commercial purposes.

> *'I post a ton but also because of my fashion label and that is all of the same size. I create videos on YouTube, where I wear the jumper and it looks awesome and you can buy it in my store. You sell an image with a brand and the image of my brand, well, that's me! It might sound disgusting but that's the way it is and that's why I must post constantly. Actually, I post something on Instagram almost every day. I post a lot on Tumblr.'*
> (M., female, 26, stylist, focus group Berlin)

Their online participation in economic contexts often intertwines with their cultural and educational participation. Members of that milieu frequently exhibit their online participation on blogs and online communities.

> *'Online communities are a different form of communication for me. I mean, also specialized, so that I can really tap into a certain circle of people. I use them a lot for professional purposes but also privately.'*
> (D., male, 29, project manager, focus group Berlin)

Finally, political participation on the Internet is not common in this milieu. When the immersed natives engage for political purposes on the web, they do it in non-traditional ways, e.g., for critical consumption. Social media, especially Facebook, are used for such low-threshold forms of participation. *'On Facebook, I'm campaigning for the right things and I criticize the wrong ones, political opinions and so on, critical consumption.'* (A., male, 35, freelance photographer, online communities Berlin)

Selective natives

Selective natives do not invest much time and effort into their online participation. A consumption- and purpose-driven use of the Internet dominates. Active participation takes mostly place in the business area and often has economic motives.

> *'I would say that I'm not participating on the Internet, personally. I'm more of a consumer. For example, on social media, I'm more of a stalker. [...] Sometimes, I like or comment on something.'*
> (S., female, 33, fundraising manager, online communities Berlin)

Although in general, selective natives do not participate very actively on the Internet, there are exceptional users who participate in various contexts, sometimes intensively. However, the participation takes place mostly on well-known and large platforms, such as Facebook or Ebay. Since many selective natives participate in economic contexts and favor low-threshold forms, rating products is a common activity in this group. The purpose- and task-driven use of the Internet is sometimes reflected in online cultural participation. In the few cases where it occurs, it can have economic motives.

> *'I'm member of a forum for collectors, drivers and fans of Japanese motorbikes from the 70s. I answer questions, post information and pictures, start threads, try to sell my special interest books, look for interesting offers and get informed about*

> *meetings, rides, exhibitions and other events.* [...] *The main reason for my partic-*
> *ipation in the forum is the promotion and sale of my books and the development*
> *of my collection through cheap purchases. Self-interest, basically... but not only,*
> *of course. I also enjoy posting information and pictures and getting praise and*
> *recognition for it.'*
> (A., male, 47, financial adviser, online communities Frankfurt)

The participation in online communities is the exception rather than the rule, though. By contrast, efficient performers use the Internet for educational participation somewhat more frequently than members of other milieus. This can be informal, via YouTube tutorials, or in formalized settings, via e-learning.

Finally, selective natives overwhelmingly refrain from political participation on the Internet. Likewise, online civic engagement is restricted to few exceptions. Although they view social engagement and participation positively, selective natives do not feel motivated to engage for political or civic purposes. The few that participate prefer low threshold activities which create a clear benefit. *'I'm actively engaged on Facebook, where I post various "likes" and "comments" to articles of a new party so that they will have more votes for the coming elections.'* (P., male, 40, police officer, online communities Berlin)

Entertainment-oriented natives
The entertainment-oriented natives use the Internet mainly for consumption and entertainment, especially gaming and shopping. At the same time, certain participatory traits can be found but generally the communication in closed, small groups is preferred, above all on SNS (especially Facebook) or via mobile communication (especially WhatsApp).

Compared with the other digital native milieus, health-related participation takes a more important part. Moreover, members of this milieu participate in commercial and cultural contexts. By contrast, political, civic and educational participation are not at the center of attention. *'I'm very much engaged on Facebook. I inform myself about what moves me at the moment and what disturbs me.'* (O., male, 24, unemployed, online communities Frankfurt)

Among entertainment-oriented natives, auction and vending platforms, such as Ebay or mobile.de, are very popular. Also, entertainment-oriented natives participate in surveys or contests as a means to earn a small additional income.

Next to their participation in commercial activities on the Internet, entertainment-oriented natives (disproportionally) often use forums and online communities. Depending on their hobbies, participation for varied purposes can evolve, such as sports, pets, music or cars. Active users spend much time in communities and actively participate in different online discussions.

> *'You are registered... and you have a profile of your animal there, and you can*
> *discuss what kinds of illnesses you* [i.e., the animal] *already had... Our tomcat*
> *died of a virus and he was four months old, and therefore I came across the place*
> [the platform]*, swapped views with others who had had similar problems and*
> *talked about what could be done about it.'*
> (B., female, 19, apprentice custom tailoring, focus group Frankfurt)

The younger entertainment-oriented natives shift their cultural participation to SNS like Facebook. Their stance towards these platforms is more critical than towards forums and they criticize other users' flamboyant exhibitionism and sharing of banal news.

Finally, entertainment-oriented natives tend not to participate for political purposes on the Internet. The main reason for this is lack of interest. When they participate for political or civic purposes, it is for specific, non-traditionally political topics, like animal rights. This happens mostly on Facebook.

> *'I participate on Facebook. I post comments and share postings that I think are*
> *worthy of my voice: Sea Shepherds, for example. This way, I try to give this orga-*
> *nization another platform to foster the good cause.'*
> (D., female, 39, middle-level civil servant, online communities Berlin)

Comparison of the digital native milieus

There is stratification by SES within the milieus of digital natives. The entertainment-oriented natives mostly belong to the working class. The immersed natives and selective natives, in turn, in turn, belong predominantly to the upper class and middle class.

This has consequences. The participation pattern of *immersed natives*, as their name says, is sovereign, immersed and self-confident. The milieu is characterized by a certain curiosity and innateness when it comes to the online world. Asked about whether they sometimes reach certain boundaries on the Internet, they reveal a relaxed and self-assured stance. Consequently, they are self-confident when it comes to online participation. They participate naturally in different domains as part of their daily routine.

By contrast, the participation pattern of the *selective natives* is more purpose-driven. Since time is money, this milieu restricts its Internet use to "useful" purposes – often non-participatory ones or low-threshold participation that does not take much time. They participate in economic contexts, less so culturally or for political, civic and health-related purposes. They are not very critical towards mainstream social media and tend to stick to them for their online participation. In essence, they show a pragmatic, utilitarian participation approach.

Finally, the participation pattern of *entertainment-oriented natives* is characterized by more hedonistic online participation. Compared to the other milieus, they more often lack the self-confidence, skills or motivation to participate online. At the same time, they are quite engaged for cultural, economic and health-related topics. In contrast to the immersed natives, they do not care as much about current developments in the area of online participation and stick to established applications, such as online communities and SNS. Despite their frequent online participation and skepticism towards excessive social media self-promotion the entertainment-oriented natives are sometimes susceptible to online fraud, which signals a lack of control and knowledge.

3.4.4.2 Digital immigrants

Detached immigrants

Member of this milieu use the Internet intensively for a wide range of purposes (information, communication) and see the web as an essential part of their life. However, they participate online less frequently than other milieus. Similarly to the selective natives, the detached immigrants prefer practical, quick and efficient forms of online participation.

Online participation sometimes emerges because of external pressure. A prominent example is the (online) support of family members. These detached immigrants do not participate out of enthusiasm but because it is brought to their attention via family or institutional pressure. *'I uploaded a video of my son, so that he can take part in a contest. In addition, I uploaded one of our musical performances onto our YouTube account.'* (S., female, 37, house-maker, online communities Berlin)

In this milieu, offline participation is more prevalent than online participation. Detached immigrants often see the online participation of younger generations critically.

> *'I believe we* [the participants of that focus group] *are more of a group that does something in real life. Unfortunately, today there are not too many activists left, also among our kids. No one does sit-ins anymore. Therefore, I believe that this limited Internet behavior applies to us, yes.'*
> (U., female, 49, teacher, focus groups Frankfurt)

If the detached immigrants participate online, they do it in a wide range of contexts – economically, culturally, politically and civically. Often, their occupation builds an important context. Examples are online training, union activism, rating and selling products. These activities mostly serve to support offline engagement.

Some detached immigrants participate for cultural purposes. Like in other milieus, this is mostly driven by special interests or hobbies.

> *'Horse-Gate.com with forum... There are all kinds of questions around the horse.*
> *Interesting discussions are possible and you can watch videos and photos of stal-*
> *lions. Basically, this site covers all questions, also on illnesses, around the horse.'*
> (K., female, 43, commissioner, online communities Berlin)

In contrast to the majority of milieus, members of this milieu occasionally participate in highbrow activities on the Internet – and again the boundaries between online and offline are blurring. Infrequently, detached immigrants participate politically or civically on the Internet. They primarily use low-effort forms, such as petitions, which enjoy high popularity.

> *'Sometimes, I participate in online petitions on topics I'm interested in, for exam-*
> *ple inclusion, crowding out of elderly tenants and so on. [...] Because I get updates*
> *about the petitions I signed, I see whether my signature has been useful. That's*
> *really nice!'*
> (U., female, 47, commercial clerk machine engineering, online communities Frank-
> furt)

Skeptical immigrants
Like the detached immigrants, skeptical immigrants have a positive attitude towards participation in general. However, they see the use of the Internet in this context critically. This leads to a rather limited pattern of online participation. Pure online participation without an offline equivalent is very rare. More frequently, online participation complements offline engagement or the participation takes place offline entirely.

A noticeable difference from the other milieus, especially the digital native ones, is the skeptical stance of skeptical immigrants towards the commercial aspects and implications of the Internet. Therefore, members of the milieu see the large Internet companies and their business models very critically. They often participate on smaller, local, sometimes even subversive platforms. *'Anonymous is one of the sites that I'm interested in and that encour-age me to share and participate.'* (S., female, 49, hospitality business administrator, online communities Berlin)

The skeptical immigrants who participate online often do it for political and civic purposes, especially for ecological and social causes.

> *'Save Fehrman! Over there, a whole area is about to collapse because profit-driven*
> *marketing hipsters sniff a huge profit. [...] Already now, the residents and tourists*
> *are disgusted, as interviews (see Facebook and YouTube) show. They have started*

> *a petition and collected several thousand signatures. I find this state of affairs*
> *insupportable and therefore get involved here.'*
> (H., male, 54, employee in an interim employment society, online communities
> Berlin)

In many cases, their ecological and social engagement carries a strong real life connotation, helping weak, marginalized people in need. The Internet with its participatory affordances serves to facilitate such participation. Online participation is thus employed for operative purposes.

> *'We have built this site together with the IHK* [Chamber of Industry and Com-
> merce] *Hanau to accelerate the construction of a commuter train that has been*
> *put off for years and years now. We organize much around our Facebook group.*
> *In a sense, it's more of an organization of a real world engagement, because you*
> *can address and reach so many people and everyone can see it.'*
> (C., female, 27, employee in a clothes shop, online communities Frankfurt)

Online cultural participation for special interests and hobbies is barely present among the skeptical immigrants, although in few instances social media are used for participatory purposes. The skeptical immigrants are aware of the existence of online communities and forums but use them passively and not actively.

Comparison of the digital immigrant milieus

The different social positions of the digital immigrant milieus result in different participatory patterns. The detached immigrants mostly belong to the upper class, whereas the skeptical immigrants form the middle of society.

The dominance of cultural capital among the *skeptical immigrants* results in a prominence of political and civic online participation. Their participatory habitus is a critical and limited one. Privacy concerns were an overarching motive among the skeptical immigrants. Their principle-driven and self-disciplined lifestyle in general becomes apparent in their online participation. Since they are very critical of Internet companies, their participation is mostly restricted to small, local initiatives and contexts they can stand for.

Like the skeptical immigrants, the *detached immigrants* show little enthusiasm for online participation. They use the Internet frequently and productively but rarely get immersed. In a certain sense, they resemble the selective natives but in contrast to them, they seem less restricted to participation in business affairs, more confronted with online participation via their own environment (especially family and children) and more strongly geared towards highbrow cultural activities.

Although the skeptical immigrants and detached immigrants resemble each other in their participation intensity, there are differences: The skeptical immigrants have incorporated a worldview of self-sufficiency, which limits their online participation. By contrast, the detached immigrants resemble Bourdieu's (1984) depiction of the dominant class in terms of their detachment. They do not really care about online participation. Other things are more important, so that they show a confident indifference in their participatory pattern. Despite these differences, both digital immigrant milieus have a strong grounding in the offline world and participate offline in various contexts - more so than the digital natives.

3.4.4.3 Digital outsiders

Law-and-order outsiders

As digital outsiders, the law-and-order outsiders participate less on the Internet than the other milieus described above. Often a lack time and opportunities is mentioned as the reason for their restraint. Many members of this milieu are not aware about possible forms of online participation.

> *'I have never been actively engaged on the Internet yet. First, because of time reasons. [...] Second, I've never really thought about participating on the Internet. I consider this virtual level of relations with other users on the Internet as the biggest hurdle. For me, it's as if the other user would not be a man of flesh and blood.'*
> (D., female, 55, customer service employee telecommunications industry, online communities Berlin)

The law-and-order outsiders see active online participation as less real and valuable than participation outside of the Internet. The virtual nature of many web activities depreciates it in their eyes.

Online, the members of this milieu consume information from different suppliers, mainly passively. In a few instances, they reveal some active participation, though, predominantly in the areas of culture and health. To follow their personal interests, some law-and-order amateurs are on SNS. They tend to be part of groups and sometimes contribute with comments. Also in forums and online communities, some members of this milieu sometimes engage actively through comments.

> *'I'm only on it* [Facebook] *with my profile and stray around in two groups: dogs and health. Closed, not everyone has access and I'm just in there with my profile. Unfortunately, that can't be changed that you are only visible in the group.'*
> (B., male, 53, EU pensioner, focus group Berlin)

The occasional participation in health-related contexts might be due to the high average age of this milieu. Law-and-order outsiders consume information on health topics but in few instances they also contribute actively.

> *'I'm also in a community for disabled. Two times per month, I'm active there, write articles for others that need help because I know a lot in that domain.'*
> (T., male, 45, former police officer now early-retired, focus group Berlin)

Internet-distanced outsiders

Members of this milieu participate very little to not on the Internet. Already the registration for an online-service can be too high of a barrier for a possible participation. Generally, the Internet is a small part of their lifeworld and they lack a basic understanding and will to approach it more actively.

> M1: *'Well'* [laughs] *'I bought a big computer screen and a friend of mine, he did... what do you call that, if you don't use it for a while, something...?'*
> M2: *'Screen saver.'*
> M1: *'...a screen saver turns on and he put me a beautiful big aquarium on there.'* [laughs] *'and that's on for the whole evening at my place.'* [laughter all over] *'And he showed me that I can change it, so that I have a fireplace on, fire in the fireplace.'* [laughter]. *'That's my computer.'*
> (Conversation in the Frankfurt focus group)

In some cases, there is a desire for participation, which cannot be realized due to the lack of familiarity with the Internet.

> *'As a politically interested person I would like to participate and engage in general and specific topics, in an exchange of opinions, votes and suggestions, for example on questions about housing projects, school policy, traffic, military interventions, health policy, taxes and emergency contribution. [...] I think it is a serious and dangerous deficiency to keep us citizens left outside.'*
> (D., male, 70, pensioner, focus groups Frankfurt)

Especially in the areas of culture, hobbies and health, Internet-distanced outsiders use the Internet passively. Only in exceptional cases, however, they contribute something actively to the used platforms.

Comparison of the digital outsider milieus

Both digital outsider milieus are characterized by careful, anxious and self-conscious uses of the Internet and thus a similar online participation pattern. The social position of the two milieus differs somewhat, though. The *law-and-order outsiders* belong largely to the middle class. Their participatory approach – despite being more restricted – resembles the two digital immigrant milieus in the sense that few participatory uses and exceptions become apparent.

The *Internet-distanced outsiders*, by contrast, form part of the working class. This milieu is largely excluded from the "games" – in terms of distinctions and practices – played by the other milieus in the online sphere. They make a virtue of their necessity and exhibit a functional, resigned, sometimes even cynical, humorous and self-reflective attitude when it comes to the Internet.

3.4.5 Discussion and conclusion

3.4.5.1 Summary and implications

In sum, across all focus groups and online communities, I found a clearly recognizable age effect regarding the participation intensity and scope. The younger milieus of digital natives – around 44 percent of the German population (DIVSI, 2013) – portray themselves as more engaged online than the older milieus.

I did not specifically look at gendered patterns in online participation, as the focus was on other aspects and the milieus are not specifically differentiated in terms of gender. Within certain focus groups, I detected gendered Internet uses, including participatory ones. This was especially apparent among the entertainment-oriented natives, where men revealed strong interests for male-centered topics, especially cars, football and gaming, while females were catering to health-related issues and pets.

The role of SES is more nuanced than a simple translation of SES into distinct habitus and ensuing participatory practices. In this respect, a striking finding is that large parts of the high SES milieus (selective natives and detached immigrants, specifically, which make up around one fourth of the German population (DIVSI, 2013)) opt out of participating online because of a lack of time or interest. For them, it is actually more beneficial and useful not to participate online. This runs counter to the intuition of digital divides research, which would expect these milieus to participate a lot. The findings about the high SES milieus might account for the weak effects of SES on online participation in several studies (Blank, 2013; Correa, 2010; Hoffmann et al., 2015).

The summary of results (Table 1) points to a number of implications for digital divides

Table 14: *Participatory habitus of each Internet milieu*

Internet milieu	Participatory habitus
Immersed natives (16 percent)	Naturalness, implicitness, self-confidence, mastery, innateness
Selective natives (16 percent)	Efficiency, superficiality, self-interest, specificity, work-focus
Entertainment-oriented natives (12 percent)	Clumsiness, hands-on, lowbrow, entertainment-driven, commercial
Detached immigrants (10 percent)	Indifference, functionality, indirectness, detachment, highbrow
Skeptical immigrants (9 percent)	Restraint, criticism, skepticism, subversiveness, abstinence
Law-and-order outsiders (10 percent)	Unawareness, uninformedness, down-to-earth, challenged, outdated
Internet-distanced outsiders (27 percent)	Absence, resigned, incomprehension, virtue of necessity, cynicism

research, leading to testable propositions. For these propositions, I draw on a typology by Blank and Groselj (2014), who trace Internet use along three dimensions: amount, variety and type. Participatory Internet uses can also be analyzed along the lines of intensity, diversity and type/area.

The *intensity* of online participation in the different milieus does not follow a clear pattern in the sense that vertical inequality predicts users' intensity of online participation. Altogether, the entertainment-oriented natives, for example, participate more intensively than the selective natives or the detached immigrants - two upper class milieus. Instead, the horizontal axis of the stratification scheme, which is represented by age and modernity, i.e., opinions or cognitive factors, can better explain the intensity of online participation.

> *Proposition 1*: The intensity of online participation depends more on horizontal parameters of social inequality - especially age and cognitive constructs - than vertical ones.

In Bourdieu's (1984) theory this makes sense if we conceptualize online participation as an act of cultural production.

Similarly to intensity, the *variety* of online participation depends more on the horizontal than the vertical axis of social stratification. Generally, the two digital immigrant milieus reveal a larger variety of online participation than the digital outsider milieus, while the

digital immigrant and native milieus both share a large variety of online participation patterns in different domains. Here, interactions between the horizontal and vertical dimension should be taken into consideration. Thus, the milieu perspective is valuable. Selective natives and skeptical immigrants, for example, can be expected to participate in few contexts, while immersed natives and detached immigrants participate in more domains. Future research could apply the omnivorousness thesis (Peterson & Kern, 1996) and test whether high SES users reveal more diverse online participation patterns than low SES ones.

> *Proposition 2*: The diversity of online participation depends more on horizontal parameters of social inequality than vertical ones. However, the effect of the horizontal parameters of inequality is weaker for diversity than for intensity.

For *type*, the situation is most complex and the differentiation of milieus most meaningful. Accordingly, the application of the concept of habitus makes much sense, since the subtleties of each user's participation habitus influences how and where she will participate.

> *Proposition 3*: The type of online participation depends more on horizontal parameters of social inequality than vertical ones. However, the effect of the horizontal parameters of inequality is weaker for type than for intensity and diversity.

Political participation – the largest domain of inquiry in the literature (Lutz *et al.*, 2014) – featured less prominently in all focus groups than expected (except for the digital immigrant milieus).

As for the *impetus for theory*, the notion of social *milieu* – partly grounded in Bourdieu's social theory – considers horizontal aspects of users' position, especially the cultural dimension of attitudes and tastes. In this sense, it is a holistic concept that adds to digital divides research a much needed contextualization of digital practices. In addition, Bourdieu's notion of *field* is useful in guiding us towards a more holistic understanding of the participation divides (Lutz & Hoffmann, 2014). Research on participation divides should strive to reach a holistic image of the diversities of online participation and apply Bourdieu's concept of field to the online sphere (Levina & Arriaga, 2014).

3.4.5.2 Limitations

Given the explorative nature of the research, a number of limitations have to be mentioned. First, the sampling strategy did not allow an inference on the whole German population. The study might have missed certain users, e.g., the ones at the very top and bottom of society. Second, the focus on patterns and habitus within the milieus left little room for the definitions, antecedents and outcomes of online participation. Third, given the large number

of participants for a qualitative study, I had to strongly synthetize the findings and simplify some tendencies. Fourth, the study only included data about Germany. Thus, not comparisons can be made with other countries.

Appendix

Appendix A: Description of the Internet milieus

The Internet milieus were first established in a large-scale German-wide study on Internet use in Germany (DIVSI, 2012) and subsequently reaffirmed in a follow-up survey one year later (DIVSI, 2013). The focus group participants in this article were recruited along the Internet milieus by the cooperating market and social science research institute. The Internet milieus are largely in line with the older concept of Sinus-Milieus®, developed in the 1980ies (Otte, 2004; Schmid & Bruckner, 2011). The Internet milieu typology was originally developed in two steps: with 60 qualitative interviews in a first step and a large face-to-face (computer-assisted) survey with 2047 respondents in a second step. The survey was representative of the German population aged 14 and older. The Internet milieus were constructed with a cluster analysis from the quantitative data, based on three main factors: Sinus-Milieuŏ membership, Internet use, and data protection/privacy attitudes. For more information on the methodological construction of the original typology see DIVSI (2012, pp. 19-34).

Digital Natives

Immersed natives / Digital Souveräne (16 percent of Internet users in Germany):

- *Age*: below 40 (youngest milieu of all)

- *Education*: highest level of education of all groups

- *Income*: high level of income

- *Occupation*: often in media and creative industries, often self-employed

- Elevated *postmodern* milieu, pronounced performance ethos and elite consciousness

- *High technology enthusiasm*, high Internet use intensity, broad spectrum of online activities, high level of computer and Internet skills

Selective natives / Effizienzorientierte Performer (16 percent of Internet users in Germany):

- *Age*: below 50 (On average: 40 years old)

- *Education*: high level of education

- *Income*: highest level of income of all groups

- *Occupation*: many self-employed, large part of medium/skilled employed and upper public administration professionals

- *Performance-oriented* milieu, success-driven, optimistic performance stance and life stance, let's do it approach, self-confidence as modern top performers

- *High technology enthusiasm*, high Internet use intensity, broad spectrum of online activities, high level of computer and Internet skills

Entertainment-oriented natives / Unbekümmerte Hedonisten (12 percent of Internet users in Germany):

- *Age*: younger and middle-aged group (On average: 42 years old)

- *Education*: predominantly low level of education

- *Income*: intermediate level of income

- *Education*: less skilled to medium-skilled service employees, workers and crafts(wo)men

- *Hedonistic* milieu, orientation towards enjoyment, experience and excitement, underdog mentality

- *Quite high technology enthusiasm*, high Internet use intensity, rather broad spectrum of online activities, average/intermediate level of computer and Internet skills

Digital Immigrants

Detached immigrants / Verantwortungsbedachte Etablierte (10 percent of Internet users in Germany):

- *Age*: broad age spectrum, centering on 30 to 50 years old

- *Education*: high level of education

- *Income*: intermediate to high level of income

- *Occupation*: mostly high-level service employed and upper public administration

- *Conservative and established* milieu, liberal intellectual attitudes, elite consciousness, optimistic performance stance and life stance

- *Intermediate technology enthusiasm*, rather high Internet use intensity, rather broad spectrum of uses, rather high level of computer and Internet skills

Skeptical immigrants / Postmaterielle Skeptiker (9 percent of Internet users in Germany):

- *Age*: very broad spectrum from 20 to 60 (On average: 45 years old)

- *Education*: primarily low level of education

- *Income*: intermediate level of income

- *Occupation*: qualified employees, workers and skilled workers, self-employed

- *Social-ecological* milieu, ecologically ambitious middle of society, sustainable lifestyle, high willingness to refrain from luxury

- *Low technology enthusiasm*, rather high Internet use intensity, rather broad spectrum of online activities, rather high level of computer and Internet skills

Digital Outsiders

Law-and-order outsiders / Ordnungsfordernde Internetlaien (10 percent of Internet users in Germany):

- *Age*: predominantly between 40 and 70 (On average: 51 years old)

- *Education*: lower to intermediate level of education

- *Income*: low to intermediate level of income

- *Occupation*: predominantly part-time employed, housewifes/homemakers, retirees, unemployed, and low/intermediate skilled employees and workers

- *Conservative-established* milieu, civic middle class, harmony orientation, preference for safety and protection

- *Low technology enthusiasm*, intermediate Internet use intensity, intermediate spectrum of online activities, low level of computer and Internet skills

Internet-distanced outsiders / Internetferne Verunsicherte (27 percent of Internet users in Germany):

- *Age*: highest age of all groups (On average: 62 years old)

- *Education*: low level of education

- *Income*: low level of income

- *Occupation*: high proportion of retirees, basic professions, workers and skilled workers

- Traditional and *precarious* milieu, need for straightforwardness, clarity and security, resignation and pessimism towards the future

- *Low technology enthusiasm*, low Internet use intensity, small spectrum of online activities, low level of computer and Internet skills

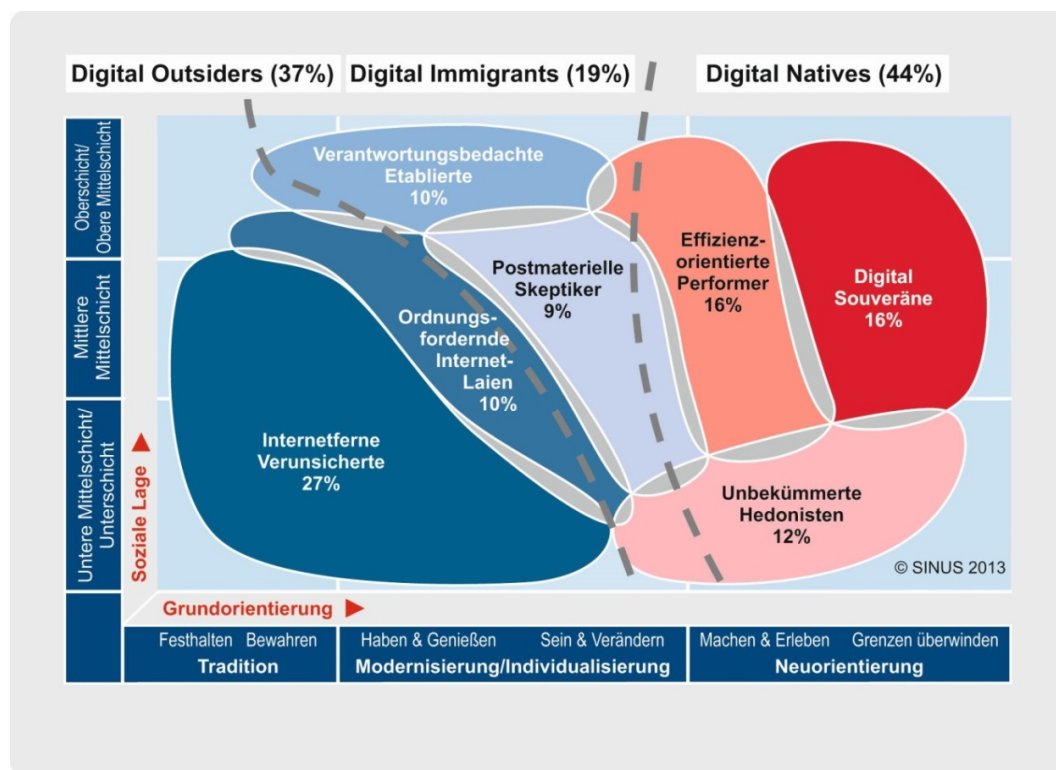Figure 12: *Overview of the seven Internet milieus (DIVSI, 2013)*

Description of Figure 12: The vertical axis describes individuals' SES, ranging from working class to middle class, to upper class. The horizontal axis describes attitudes and orientations, ranging from traditional and conserving on the left, to modernization/individualization in the middle, to re-orientation and realignment on the right.

Appendix B: Focus group guideline

This is a summarized version of the guideline. A more detailed version is available upon request.

Introduction: General attitude towards the Internet

- What does the Internet mean to you?

- What are the major advantages and disadvantages of the Internet?

Internet use

- Since when do you use the Internet?

- How often do you use the Internet?

- How much time per day do you spend using the Internet?

- Which devices do you use to access the Internet?

- What do you do when you are online? Which platforms do you use?

- For which purposes do you use the Internet? (Also: Do you sometimes go online without a concrete purpose in mind?)

- Do you find using the Internet easy? Where are your limits?

- How do people in your social environment use the Internet?

- Do you have friends who use the Internet very actively? How does that show?

 => *Collection on Flipchart: forms of Internet use and activities*

Social Internet use/Exchange

- How important is the exchange with others for your Internet use?

- Are you active in online communities? (If not: why not?)

- How often do you post texts, videos and photos online? What kind of texts, videos and photos?

- Who do you post texts, videos and photos to (which audience)?

- Do you know the people you communicate with online (from the offline world)?

- Are there things you only do on the Internet, and nowhere else?

- What things would you not do on the Internet? / Are there things you would only do offline?

=> *Collection on Flipchart: social forms and activities of Internet use*

Participation on the Internet (Definition and Meaning)

- What does "Participation" (German: "Beteiligung"), "Participation" (German: "Partizipation") and "Engagement" (German: "Engagement") mean to you?

- What does "Participation on the Internet" mean to you?

- Assocation spaces / Semantic fields of online participation

=> *Sorting online/Internet activities into (n)one of the three categories ("Beteiligung", "Partizipation" and "Engagement")*
=> *Addition: What else belongs to "online participation"? (Own experience and observation of others)*

Areas/Domains of online participation
=> *Carefully support the areas emerging from the addition to be able to assess not mentioned but existing aspects (education, business, sports, cultural participation...)*

- Which other areas/domains/fields of participation can you think of?

- Where do you participate online?

- Who is the public/recipient of your online participation activities?

- Where are your friends and colleagues participating?

- Which are the most important areas of participation on the Internet? (ca. 3)

=> Sorting forms of participation on a continuum according to the depth/quality of participation

Chances and risks of online participation

- What are advantages, positive aspects and chances of online participation?

- What are the disadvantages, negative aspects and risks of online participation?

- What's the concrete benefit of online participation: for you personally? For others? For society?

=> Laddering to assess and understand the "higher end states" (motivation and expectations)

Offline Participation

- Where are you actively engaged in the offline world?

- Do you know people that are especially participatory and engaged? How does that show?

=> Collection of offline participation activities and domains

Online/Offline participation link

- What role does the Internet play for these forms of participation and engagement? How would the participation/engagement work without the Internet?

- Which forms of participation are only taking place on the Internet?

- For which form of participation is the Internet a useful instrument?

- Has the Internet brought about new ways of participation/engagement that wouldn't exist without it?

4 Conclusion

4.1 Summary

This dissertation consists of three contributions in the form of journal articles and a theory chapter which gives background information for the theories applied in the articles as well as for the broader context of the work. With Bourdieu's *habitus and distinction* and Bandura's *social cognitive theory* (SCT), I used two of the most prominent theories in the social sciences. I summarized each theory and then showed how it can be applied to the digital sphere.

Bourdieu's social theory offers a set of useful concepts that point to the social structuration of online activities. In particular, the notion of habitus, as incorporated structuring structures, explains how and why people from different social backgrounds employ the Internet differently to meet their purposes. This finding of differentiated Internet uses among social lines has been consistent in many studies on the digital divide but in few cases only, Bourdieu's theory has been thoroughly applied.

SCT, by contrast, is an agentic theory rather than a structural one. It stresses individuals' confidence and agency to carry out complex tasks – a thought which becomes apparent in the theory's core concept of self-efficacy. However, self-efficacy does not develop in a social vacuum but evolves from positive experiences and through vicarious learning. In this sense, SCT also includes structural elements and is a holistic theory. With the idea of triadic reciprocity, it allows for considering cognitions, environmental factors and behavior in a relationship of mutual shaping. In the digital sphere, Bandura's theory has been successfully applied in the context of technology adoption (Compeau & Higgins, 1995; Compeau *et al.*, 1999) and the digital divide (Hoffmann *et al.*, 2015; Wei *et al.*, 2011). However, SCT seems to be more common in information systems research whereas Bourdieu's theory is more prominent in (sociologically oriented) new media research. The application of both theories to the digital divide shows that broader social phenomena, such as the digital divide, profit from a multitude of theoretical perspectives. The same is true for online participation and the participation divide.

The third part of the theory and framing chapter consisted of both a conceptual and methodological framing of the dissertation. The *conceptual framing* brought forward arguments for the sociological perspective applied in the thesis, for example, that online participation is an inherently social activity and that questions about the social structuration of online participation have been under-represented in previous research. I then proceeded to give an overview of the affordances framework as a line of thinking that considers the in-

terplay of technology and design considerations on the one hand and individuals' (non)use of technology on the other. I elaborated how this theory is both useful and valuable in the domain of online participation and social media but how and why the thesis applies a different lens which largely leaves aside the affordances of certain application types, such as SNS or blogs. Before a short section on the question of digital dualism, i.e., the blurring of online and offline, I presented the theory of *networked individualism* as an appropriate approach for contextualizing the findings and the thesis in general (Rainie & Wellman, 2012). This theory describes how three macro-developments – the network revolution, the Internet revolution and the mobile revolution – have led to the new social social operating system of networked individualism. In contrast to the previous operating system, networked individualism is characterized by far-flung sparsely-knit networks and a more fluid, technology-saturated and connected *modus operandi*. The phenomenon of online participation is an important activity for many networked individuals and has become part of their daily routines (DIVSI, 2015). The *methodological framing* included a description and justification for the methodology of the three individual contributions. It explained how during the writing of the dissertation, my focus moved away from a single-method and quantitative idea of investigating the research object to a more comprehensive mixed-methods perspective.

Article 1 discussed the current state-of-research on the topic of online participation, focusing on findings and prominent discourses rather than theories. It detected a heavy emphasis in previous research on political participation and civic engagement on the Internet. At the same time, it shed light on the diversity of online participation. Studies in educational, business, health-related, and cultural participation show that online participation reaches "beyond just politics" (Lutz *et al.*, 2014). Four core areas of investigation and research discourses were distinguished: empowerment through online participation, especially for marginalized and less represented groups, participation divides or the fact that online participation is unevenly distributed[21], new business models, and the online-offline link, i.e., the question whether participation on the Internet leads to real life outcomes, such as offline participation or social capital. Although online participation research is a booming area of inquiry, certain problems inhibit a cumulative agenda: a lack of a clear definition of the central concept, a lack of theoretical grounding, a methodological uniformity, using mostly cross-sectional, quantitative and explanatory approaches or, in fewer cases, qualitative case studies, but not so much observational and mixed-methods data. Moreover, we noticed a lack of recognition of findings in other areas and a lack of cross-cultural evidence. Each of these problems leads to propositions for future research (Lutz *et al.*, 2014, section 9.3).

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[21]This is the discourse which the two empirical articles of my dissertation mostly tap into.

Article 2 demonstrated the usefulness of SCT in the context of digital divides and, more specifically, the participation divide. Self-efficacy turned out to be the best explanatory variable for three variations of online participation in Germany, much better than privacy concerns. Self-efficacy, in turn, is heavily shaped by socio-demographic characteristics, such as gender, age and education. The article showed that exploring "cognitive pathways" (Bimber, 2001) as mediating factors between socio-demographic user characteristics and participatory practices is important in understanding participation divides. What users do on the Internet is not only shaped by their demographic profile but also by what they think and by their capabilities. The study was partly in line with previous research on the participation divide in English-speaking countries (Blank, 2013a; Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011) in the sense that, except for political participation, age is an important predictor of online participation. It also found that the the production of social and entertainment content is negatively related to social position, as measured with education in this case. This finding is in line with recent data in the UK (Blank, 2013a) and the Netherlands (Van Deursen & Van Dijk, 2014). It shows that we need a differentiated and fine-grained understanding of social status when it comes to Internet practices in general and online participation in particular. In this sense, the second article leads to the third one, which uses such a nuanced understanding of social position by considering users' social milieu.

Accordingly, *Article 3* showed the usefulness of Bourdieu's theory in explaining participatory inequalities in Germany. The segmentation of social milieus along more than economic characteristics is in line with Bourdieu's (1984) concept of multitudes of capital. Especially, by including the cultural dimension as a complement to the economic, more fine-grained participation practices and distinctions become apparent. In Germany, this was the case when looking at distinct participation habitus (pl.) within the larger groups of digital natives, digital immigrants and digital outsiders. While the milieus of careless hedonists and digital sovereigns, for example, might not differ much in their economic resources [22], their practices and attitudes differ substantially. The article showed how each milieu revealed a distinct participatory habitus that could not be explained by SES alone. It documented how higher SES milieus – like the efficient performers and responsible established – show a less immersed and more pragmatic approach to online participation than other milieus with lower SES. In this sense, the study indicates that participation divides in Germany are more complex than one might think following the logic of digital divide and digital inequalities research.

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[22]Given that a substantial number of digital sovereigns are still studying or work in creative, badly paid occupations, their income may even be lower than that of many careless hedonists.

Table 15: *Summary and conclusion of the theory/framing chapter and the articles*

Theory and Framing Chapter	Online participation is an action shaped by both social structure and individual agency. Both SCT and Bourdieu's habitus theory are holistic social theories and combine aspects of macro and micro, of structure and agency. However, *SCT,* with its central concept of self-efficacy, stresses individuals' agency and cognitive mindset more strongly, whereas *Bourdieu's habitus theory* concentrates more on the social structuration of practices. The theory of *networked individualism* can serve as descriptive framework to embed online participation in current developments in Western societies. The triple revolution – social networks, the Internet and mobile connectivity – provides the technological and ideological baseline for citizens to participate in a broad range of contexts. *Affordances* of specific applications and platforms drive or inhibit online participation.
Article 1	Existing research on online participation has a *political bias.* It overrepresents online political participation and underrepresents other domains, namely cultural, educational, health-related and business participation on the Internet. Four large *discourses in previous research* can be distinguished: empowerment through online participation; new business models; the online-offline link; and the participation divides. The last area is relatively underrepresented.
Article 2	Cognitive constructs, especially online self-efficacy, mediate the influence of demographic characteristics on different forms of online participation in Germany. *Self-efficacy* is itself strongly shaped by demographic characteristics. Political content, skilled content and social and entertainment content reveal different patterns of social structuration. *Age* is the most important demographic predictor and online political participation depends least on the explanatory variables in the model.
Article 3	Online participation in Germany is a diverse but *heavily socially structured* activity. Different social milieus reveal different digital practices in the form of online participation patterns. Digital natives milieus tend to be more engaged on the Internet than digital immigrants, who in turn are more engaged than digital outsiders. *Horizontal, cultural and attitudinal factors* are more important in explaining online participation across the milieus than vertical factors of SES. Moreover, each milieu produces content and participates most in specific domains close to their immediate lifeworlds, showing the *importance of differentiating forms or types of online participation.*

4.2 Implications

4.2.1 Theoretical implications

The *first theoretical implication* encompasses the urge for a strong(er) grounding of the notion of online participation. Obviously, defining one's central research object and narrowing its scope are important parts of every dissertation. However, the thesis goes beyond a discussion or repetition of previous definitions. Instead, it comes up with its own working definition which has been grounded in previous research. As Article 1 elaborated, most studies in the research area either do not define the core concept of online participation properly or understand it in a narrow political sense. The thesis is thus an attempt to provide a broader yet more concise and, in a sense, also more pragmatic definition of online participation which acts as a call for more care when constructing empirical studies on online participation

The *second implication* partly follows from the first. The thesis strived to use a descriptive and (largely) non-normative approach to online participation. Instead of seeing online participation as something inherently useful, desirable and positive, it catered to a balanced perspective. This entailed thinking about the biases, problems and "dark sides" of online participation (DIVSI, 2015). Article 3 pointed to some of these issues but there is certainly more research needed on that aspect. In this sense, the dissertation shows the usefulness of such a descriptive perspective, based on online content creation as the central element of online participation.

The *third implication*, connected to the question of biases, problems and "darks sides", concerns the emerging research area of participation divides. This research strand has its roots in digital divides and digital inequalities, a field with a vivid and rich empirical grounding. At the same time, all three articles – but especially the second and third one – demonstrated how not all people are equally eager to participate on the Internet and that the field, area or domain of participation matters a lot. In fact, the multi-dimensional understanding of online participation of this dissertation is one of the main contributions and implications for future studies on participation divides. As proposition 2 of the first article (Lutz *et al.*, 2014, section 9.3) states, this is also a call to break up disciplinary boundaries and be aware of what is happening in other research domains: "Research on online participation should be aware of its diversity and consider various forms or areas of participation". Thus, future research on online participation is well advised to devote more attention to the social structuration of online participation and to the nuances and multitudes of participatory inequality.

The *fourth implication* covers the methodological approach. The thesis has shown that a

combination of different methods, based on a clear and substantiated conceptual approach, can be fruitful. It thus approached proposition 3 of the first article (Lutz *et al.*, 2014, section 9.3) and tried to address it productively, at least in one aspect: "Research on online participation should apply more mixed methods, relational and longitudinal approaches". The qualitative focus groups and online communities complemented the quantitative studies and the conceptual piece. Clear synergies between the single contributions emerged. While Article 2 allowed to quantify and generalize the profiles of online participants in three areas in Germany, Article 3 included deeper narratives and justifications for why people choose to participate or not participate in different online contexts. Both Article 2 and Article 3 used and applied a major social theory, thus addressing proposition 4 of the first article (Lutz *et al.*, 2014, section 9.3): "Research on online participation should be more theory-based and cumulative".

Finally, the studies assembled here all aim at valuing participation as a diverse and meaningful social act (this can also be in a negative sense). Participatory activities are as diverse as people's interests, ideas and values. A one-sided focus on high-brow, elite or established forms of participation, especially political ones, is very inappropriate. Instead, we need to look at the more "mundane" forms of participation – posting in an online-community about pets, sharing a video on vintage motorbikes, contributing in a community for e-cigarettes – because these are the activities that people in Germany actually carry out (DIVSI, 2015). In this vein, the thesis can be helpful in constructively situating online participation within broader social developments, as described by the theory of networked individualism (Rainie & Wellman, 2012) and briefly outlined in the framing chapter.

4.2.2 Practical implications and recommendations

In addition to the theoretical implications, this thesis also has a number of practical implications. Although it is not an applied dissertation and clearly a contribution to ongoing research efforts in the academic realm, certain implications can be derived for different stakeholders[23]. Overall, participation is a social activity and thus different actors can contribute so that citizens can profit of the opportunities of new media without being victims of their downsides.

Users themselves are at the core when it comes to a responsible approach to online participation. They should strive to develop the necessary self-efficacy to deal productively with the possibilities which new and participatory media afford. A proactive, positive attitude – with-

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[23]This part draws heavily from the project report written by the research team in the end of 2014 (DIVSI, 2015). Christian Hoffmann wrote this part of the report but I adapted and complemented it with my own thoughts here.

out neglecting the dangers and problems of online participation – appears to be a sensible approach. In terms of technostress and information overload (Bucher, Fieseler, & Suphan, 2013) this is easier said than done. Setting reasonable boundaries and regularly discussing one's participation behavior with friends, family or peers can be good means to develop a meaningful approach to online participation. Online, users should refrain from certain participatory behaviors that they would also refrain from in "real life": mobbing, flaming, and insults should also be avoided if the online participation provider does not have any sanctioning mechanisms or netiquette. At the same time, active engagement for weaker actors should be rewarded. When a member in an online community defends a victim of flaming, trolling or bullying, other members should acknowledge this. Thus, users will develop a sense of online civil courage, similarly to civil courage in offline engagement.

Schools can contribute to a constructive participation landscape on the Internet. So far, many users who participate online are autodidacts. Schools could do much more to foster a critical literacy and the necessary skills so that students can participate online without being exposed to the detrimental sides (Livingstone, Kirwil, Ponte, & Staksrud 2014). Curricula are notoriously slow in taking up new topics and schools have scant resources. Moreover, teachers often lack the digital skills their students are supposed to develop. Thus, the political agenda is required to invest more resources in that area. However, this should be done with evidence-based foresight and with cultural underpinnings, biases and problems in mind (North *et al.*, 2008; Sims, 2014), so that eventual participation divide(s) can be addressed.

Associations, unions and other actors of the *civil society* can profit from online participation, e.g., via crowdsourcing or by developing clever participation campaigns that reach a large number of users. Therefore, they should be interested in lowering the barriers to online participation and especially for the population segments which are less inclined to participate in the first place. Sound measures include not only introducing and supporting educational and training programs but also putting topics related to online participation on the agenda, such as privacy, security, mobbing and Internet addiction. Well funded studies help to boost users' familiarity with the Internet. Recognition, awards and prizes for positive forms of online participation and engagement can help make the advantages of online participation visible and tangible.

Providers of online services and participation platforms play a vital role in fostering productive online engagement. As the section on affordances has shown, certain platforms afford certain modes of communication and are thus value-laden. They can discriminate against specific population groups and thus widen the participation divide or they can contribute to narrowing the gap by inclusive design and a careful consideration of various user

needs (Newell & Gregor, 2000). A participation platform, for example, which addresses broad population segments could target their services to the respective audience by catering to their specific communication needs in order to build trust (Hoffmann *et al.*, 2014). More playful and entertaining interfaces might be used for younger and less educated users whereas transparency and clear information provision might be used more prominently for older and more educated population groups. Together with civil society actors, the providers of online participation services could strive to establish guidelines and standards, such as seals, awards or events. They could decrease cynicism among users who believe that the provision of data and the loss of privacy is the price to pay to use such services.

Political actors also have their role in furthering proactive and healthy online participation. However, political and regulatory initiatives on the Internet are sometimes hard to implement, as the current controversy around the right to be forgotten shows (Tamò & George, 2014). Moreover, online participation is in most cases a bottom-up process, driven by users' personal interests or organizational motivations (Majchrzak *et al.*, 2013). In this vein, as recent evidence suggests (Nabi, 2014), discouraging, strongly regulating or even banning a broad range of Internet uses and platforms, especially participatory ones, seems ill-advised and might even be counterproductive. Instead, politics should design opportunities and feasible mechanisms to help victims of online participation find quick assistance. It might also assign more capacities to encourage and strengthen participatory literacy for groups who are not profiting from the Internet's participatory benefits and are left behind in the participation divide. The empirical contributions of the dissertation allow for some careful practical implications in that regard. As we have seen in Article 2 and, in particular, Article 3, a large number of German citizens refrain from political participation on the Internet. Other forms of online participation which have a direct link to people's daily lives are more prevalent. If politicians do not want to lose large population segments on the Internet, they need to cater to their everyday needs and find a language to reach these population segments. In terms of the participation divide, this means thinking about the concerns, needs and lifeworlds of digital outsiders and other less Internet-savvy milieus.

Finally, classical or mass *media* also share a non-trivial share in creating a sustainable and positive online participation landscape. Since the traditional business models of mass media and cultural industries have been challenged by the Internet and its participatory affordances, actors of the mass media system often display a skeptical stance towards such recent developments. This – coupled with the fact that traditional mass media tend to criticize and report scandals rather than positive news – can lead to an exaggerating, even alarming, style of reporting, which might irritate or even frighten the less Internet-affine milieus (DIVSI, 2015). A balanced agenda-setting encourages moderate politics and a more informed

and mature attitude among the users. Next to the downsides and critical aspects of new and participatory media, the mass media should also leave enough room for the countless advantages and chances of new media. A more balanced and positive stance such as this might be productive in fostering the adaptation of the own business models to a changing, digital environment.

4.3 Limitations and avenues for future research

Although this dissertation has contributed in several ways to ongoing research on online participation, it suffers from a range of limitations that point to avenues for future research. Some of these limitations correspond with the limitations of previous research on online participation in general and are summarized in the Conclusion of Article 1 (Lutz *et al.*, 2014, section 9.3).

Some major limitations cover the methodological approach. Although I used a mixed-methods approach and thus tried to overcome certain problems of previous research, other issues remain: Except for the literature review, my research only covered one country and *lacked a cross-cultural perspective*. Future research should use comparative designs to account for the cultural specificity of online participation. Moreover, my thesis *did not use longitudinal elements* to observe participation on the Internet over time. Certain parts of the focus groups and online communities touched on the temporal and developmental aspects of online participation. However, this was not the main element of the qualitative phase and thus the temporal or process-perspective is underrepresented – a problem that applies to most of the studies in the research area (Lutz *et al.*, 2014, section 9.3). Future research should thus use panel designs or carry out repeated cross-sections. The OxIS, which is conducted biennally and allows the observation of changes over time, is an example for this longe-range, longitudinal perspective. A last limitation in the methodological approach of the dissertation covers the *strong reliance on self-reported data* in contrast to observational data. Online participation is a domain where big data and computational social science can make strong contributions (Leetaru, Wang, Cao, Padmanabhan, & Shook, 2013). My dissertation contains some observational data in the online communities but they were moderated and the data was not collected "in the field", i.e., in people's everyday settings. With self-reported data come issues like memory bias, social desirability and acquiesence, all of which can severely undermine the validity of the research results (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). On the other hand, such data allows for a much broader contextualization and tailoring to the research questions. Future research should combine self-reported and behavioral data by using mixed-methods designs. Ethnographic studies that combine

user-generated and self-reported data present a promising methodology in that sense (e.g., Croeser & Highfield, 2014). Some of the studies discussed in the theory part of Article 2 could serve as role models to studying online participation and participation divides (Robinson, 2009; Sims, 2014).

Next to the methodological limitations described, some conceptual points of criticism can be raised. First, the dissertation is broad and inclusive. It does not go into the details of very fine-grained questions (such as, for example, "Why do members of the University of Sankt Gallen Facebook group "Sharing is Caring" comment on each other's posts?"). Instead it asks and tries to answer overarching questions. This limits the depth and specificity of its conclusions. I discussed this problem at certain points in the dissertation but also through-out the process of presenting parts of my dissertation in doctoral seminars, colloquia and conferences. I could not come up with a clear solution or excuse except for stressing that this breadth and inclusiveness can also be an advantage and that it "makes sense" looking at the history of online participation research. Thus, in terms of my field of research the conceptual approach of the dissertation might be appropriate and fit in well[24]. It might be recommendable for future research to take some of the findings as a starting point for future, more fine-grained research, e.g., the result of Article 2 that education affects the production of social and entertainment content negatively.

Moreover, the dissertation has a certain *theoretical eclectisim*. In other words, it lacks an overarching big theory that guides the whole work from the very first to the last sentence. Instead, it uses the vastly differing theories quite pragmatically. In a sense, this is a personal concession that no single big social theory is able to best explain human behavior through-out a large variety of contexts. Some social theories function better for high cost situations and some others for low cost situations (Rössel, 2006). Some apply more to the cultural sphere, others more to the health domain and others even more to the economic realm. Ar-ticle 1 has indicated a field-specific (Bourdieu, 1993) understanding of online participation, stressing its context-sensitivity. The choice of vastly differing theories showed how online participation, as a multi-faceted and complex "construct", actually requires a diversity of perspectives. Indeed, online participation is socially structured and depends on users' po-sitions in the social hierarchy, as stipulated by Bourdieu's (1984) habitus theory and found in Article 3. Certainly, online participation is a strongly agentic activity in the sense that it requires self-efficacy and an individual, personal "drive" which is partly contingent of one's social environment. And clearly, online participation is both socially structured and indi-vidually predisposed at the same time. In this sense, the questionability of using several,

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[24]This subjective assumption was somehow confirmed by the relative ease of how the pieces of the dissertation were published.

partly contradicting, theories for the same phenomenon can also be interpreted as theoretical openness and strength, which is productive rather than restricting. Future research on online participation is thus advised to use a multitude of theoretical perspectives. Especially valuable are theory comparisons to test which theory works best for which intensity, domain or valence of online participation.

A final conceptual limitation, partly overlapping with the first methodological limitation addressed, is the *focus on the individual*. I could not do enough justice to the organizational, institutional and cultural aspects of online participation. The organizational aspects of online participation, especially, were dealt with only peripherally, if at all. Consequently, the findings mainly apply to the voluntary and private online participation of individuals rather than to their obligations at work[25]. This work is thus better suited to the contexts of new media research, Internet studies and sociology rather than of management, human computer interaction, computer-supported collaborative work or even organizational communication and information systems. Indeed, the focus groups contained some notions of work aspects but this was not the core topic. Future research could use a multi-level approach to online participation, including individual, organizational and societal/cultural information.

Despite the conceptual and methodological limitations of this dissertation, it will be useful not only for other researchers on the topic of online participation but also for students, certain stakeholder groups and interested lay audiences. Since the dissertation will be online and publicly available, the download statistics, shares and mentions on social media platforms will reveal whether the dissertation not only described and explained online participation but even encouraged and created it.

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[25]Especially in creative professions, such as journalism, art, marketing and public relations, online participation is often part of the job, embedded into organizational structures and routines (DiStaso, Corkindale, & Wright, 2011; Hedman, & Djerf-Pierre, 2013).

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Curriculum Vitae

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Professional Experience

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