CHAPTER 1

Introducing the Digital Margins
1.1 Towards a digital society – but what about the margins?

The increasing importance of the Internet as a means of communication has reshaped economies and societies. At first, the Internet was considered to be an ‘equalizer’, expected to diminish socioeconomic and geographical disparities, but it soon began to be regarded as a stratification-inducing phenomenon (Castells, 2000; Malecki, 2003; Van Dijk and Hacker, 2003; Mariën and Prodnik, 2014). For the Internet to become an enabling technology, people need to have adequate material access to a network, and they need to have knowledge and skills – or capabilities – in order to make effective use of Internet applications. Both the material access and the capabilities, however, are unequally distributed over space and among people, hence the ongoing academic interest in the digital divide: the divide between those who have and use the Internet, and those who do not (Crang et al., 2007; Gilbert, 2010; Townsend et al., 2013).

This unequal distribution of Internet access and usage over space and among people is the core problem studied in this book. This study focuses on digitally excluded communities, i.e. the digital margins. It aims at a better understanding of how digital exclusion works in advanced Western societies, using concrete cases from the Netherlands to link theory and concepts to everyday practicalities. Subsequently, it goes on to discuss how spatially and socially marginalized communities try to overcome digital exclusion. This discussion centers on what these communities do, i.e. the approaches they have in common, and how they try to meet their goals. Furthermore, it includes a reflection on the extent to which communities prove capable of solving their material and social inequalities. This reflection is linked to the broader debate around the potentials and pitfalls of community-led development and ‘the big society’, or ‘the participation society’ (participatiesamenleving) as it is called in Dutch (Uitermark, 2015; Bosworth et al., 2015; Bock, 2016).

In the remainder of this chapter, I will provide a more detailed introduction to the framework of digital margins, more specifically, spatial digital margins and social digital margins (1.2). After this introduction to the academic context of the study, I will explain this research’s strong relation with policy and practice, since various applied research projects and policy evaluations have helped shape this thesis. Finally, I will introduce the research questions behind this thesis and the outline of the book (1.4).

1.2 Spatial and social margins in advanced societies

1.2.1 Spatial margins: rural areas
Adequate broadband access is a key condition for social and economic development, and yet, nevertheless, it is often lacking in many rural regions in advanced societies (Townsend et al., 2013; Lemstra and Melody, 2015). Politically, the free market is the leading rationale behind the provision of telecommunications networks, yet telecommunication companies regard
rural areas as market areas with too little potential for profit. Due to low population densities, the deployment costs are relatively high, and usually there are not enough potential subscribers to make a profitable business case (Malecki, 2003; Cambini and Jiang, 2009). In this respect, the lack of broadband provision in rural areas corresponds with Malecki's notion of 'the rural penalty', meaning a general lack of rural service provision by market players (2003: 201). With the increasing influence of neoliberal thinking on governmental policies, this rural penalty is expected to be a persistent problem for many rural communities (Skerratt and Steiner, 2013; Bock, 2016). In fact, a lack of service provision, coupled with lagging socioeconomic development, has already resulted in the marginalization of certain rural regions in Europe (Bock, 2016).

As stated previously, it was initially thought that the digital revolution would lead to the 'death of distance' and could compensate for rural challenges such as remoteness, a lack of services, and a declining workforce (Cairncross, 2001). The Internet could therefore serve as a substitute for the decline in physical services in the rural (LaRose et al., 2007). However, with the organization of advanced economies becoming evermore reliant on digital connectivity, the current lack of adequate broadband provision has distanced these regions even further from the core (Malecki, 2010; Townsend et al., 2015). The high hopes of the early years of the Internet have been replaced by critiques and concerns about the digital future of marginal regions. Classical regional development topics such as connectivity and inclusion are on policy agendas (again), but now they are also explicitly linked to digital developments (European Commission, 2014).

Neo-endogenous development is used in this thesis as a conceptual lens to look at digital exclusion in rural areas. The premise underlying this concept is that in order to meet the communities' goals, these communities usually cannot rely solely on their endogenous resources, and so they need to be able to build and maintain network relations with exogenous resources too (Ward et al., 2005). The endogenously set goals and capacities are the starting point, but the capacities and resources lacking have to be brought into the region through links with exogenous actors and powers (Bosworth et al., 2015: 5). In light of this concept, it can be stated that a region's ability to connect to other resource-rich regions, either physically or digitally, is essential for social and economic development, yet this remains an underdeveloped feature in many rural regions (Bosworth et al., 2015; Bock, 2016). It is because of this that the digital developments in these rural regions, that is, in the spatial margins, are a central part of this thesis.

1.2.2 Social margins: vulnerable and excluded groups

Logically, in order to be included in digital society, it is crucial for people to live in market areas that are properly served by telecommunications companies. Moving beyond material access, though, the aspects of adoption and usage become important. If one cannot afford a subscription to the Internet, or if one lacks the knowledge and skills to make effective use of Internet applications, then one is still digitally excluded. This more socially based form of digital exclusion is most prominent among
vulnerable and socially excluded groups (Gilbert, 2010; Helsper, 2012). The literature on these excluded groups originally evolved around ‘haves and have-nots’ dichotomies (DiMaggio et al., 2001), but more recently the debate has developed towards a more contextualized and nuanced approach to understanding non-use (Van Deursen and Van Dijk, 2013; Mariën and Prodnik, 2014). Most of this research has been largely user-centered, that is, looking at individual characteristics that could explain someone’s non-use.

However, now there is also growing attention to particular groups of excluded people and their use or non-use of digital applications, such as older people (Park, 2008; Hardill and Olphert, 2012; Hage et al., 2013) and indigenous communities (Linberg and Úden, 2010; Rennie et al., 2013). These studies have shown that there is more to using ICTs than merely individually attributable characteristics. Social, cultural, and spatial contexts play a role in usage patterns, and they seem to be part of the explanation for what Helsper calls “the unexpectedly included”, i.e. people who are digitally engaged and included, even though their individual characteristics would predict exclusion (Helsper, 2012: 428). The spatial context is still an especially under-researched and inadequately operationalized factor in digital inequalities literature, making it a ‘black box’ in the debate (Gilbert, 2010; Mariën and Prodnik, 2014).

Accordingly, there is a gap in the digital inequalities literature regarding these unexpectedly included people: people who are in fact the ‘black swans’ of digital inequalities research. They need to be studied more thoroughly in order to unravel usage patterns. Furthermore, the role of the spatial context in digital exclusion should receive more attention. In other words, and to summarize the premise behind this research approach, one can learn the most about a society by studying its margins. Therefore, an in-depth study of a vulnerable and socially excluded ethnic group in the Netherlands, Gypsy-Travelers, is the other central part of this thesis. By focusing on the spatial context of Gypsy-Travelers in particular (residential Gypsy-Traveler sites), this study contributes to filling this gap in the digital inequalities literature.

1.3 Digital limitations in the margins: examples from policy and practice

This thesis is explicitly connected with various digital inclusion policies and projects. Throughout this PhD trajectory (2012-2016), I was part of several applied research projects and policy evaluations focused around rural development and social exclusion (see Table 1.1 for an overview of the projects). In some cases, the project itself provided valuable data for academic papers, for example, ‘Next Generation Access for entire Groningen’ (Provincie Groningen) and ‘Research on rural broadband initiatives’ (Ministry of Economic Affairs) on matters around rural broadband initiatives and governmental policies. In other cases, the project provided valuable contacts for further research, for example, ‘ITRACT’ (EU Interreg North Sea Region) and ‘Consulting on Gypsy-Travelers in the Integral Approach to Welfare’.

What these projects had in common was
that, in order to comprehend the full scope of the issues and developments, they required me to be close to the everyday practice of professionals and members of the community. This meant, for example, that I had to participate in and observe meetings of rural broadband initiatives, meetings between civil servants at various levels of government, and meetings of the municipal Gypsy-Traveler affairs team (Woonwagenzaken). This allowed for a detailed understanding of how communities deal with digital exclusion, and how policy-makers approach these communities. During these projects I was also incorporated in e-mail conversations, since the subjects of study insisted that I should not miss out on any developments. In the chapters that are based on insights from the applied projects (Chapters 4-7), I specify how these projects played a role in the data collection.

The contacts for further research proved to be invaluable in gathering detailed knowledge of the complicated or even hidden

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<tr>
<th>Project title</th>
<th>Commissioning authority</th>
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<tr>
<td>ITRACT: Improving Transport and Accessibility through Communication Technologies</td>
<td>EU Interreg North Sea Region</td>
<td>Pilot testing of novel ICT applications for rural mobility, empowerment of users, and transnational learning</td>
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<td>Superfast Internet East-Groningen</td>
<td>Provincie Groningen – Woon en Leefbaarheidsbasisplan Oost-Groningen</td>
<td>Exploratory research on the market situation and regulation around rural broadband</td>
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<tr>
<td>Next Generation Access for entire Groningen</td>
<td>Provincie Groningen</td>
<td>Assessment of developments around rural broadband in Groningen up to that point in time, and a recommendation for stimulating rural broadband provision in the province</td>
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<td>Research on rural broadband initiatives</td>
<td>Ministry of Economic Affairs</td>
<td>Discerning the success and failure factors of rural broadband initiatives, comparing the impact of various regional policies</td>
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<tr>
<td>Evaluation of provincial funding scheme and policy</td>
<td>Provincie Overijssel</td>
<td>Evaluation of the efficacy of the funding scheme, i.e. the subsidy for the initiatives involved, the extent to which Overijssel functions as a ‘learning organization’</td>
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<tr>
<td>The potential of rural broadband initiatives for connecting schools</td>
<td>Kennisnet – Ministry of Education</td>
<td>Position paper including an assessment of the strengths and weaknesses of broadband initiatives for connecting schools to a future-proof Internet network</td>
</tr>
<tr>
<td>Consulting on Gypsy-Travelers in the Integral Approach to Welfare</td>
<td>Ministry of Interior</td>
<td>Various activities, including policy evaluations, lectures for professionals, and organizing visits to Gypsy-Traveler sites</td>
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aspects of digital exclusion. Data collection for both concrete examples in this thesis, that is, rural broadband initiatives and Gypsy-Traveler communities, required a great deal of trust. Rural broadband initiative-participants were initially reluctant to share information on their progress and business cases, because they were afraid that certain sensitive information might be used against them by market players or that governments would assess their project as unachievable. However, the members of the initiatives in this study later stated in interviews that they decided to entrust me with their information, based on earlier experiences with me in project research for the Province of Groningen and the Ministry of Economic Affairs. Hence, based on this trust, I obtained access to information that otherwise would have remained undisclosed.

For the fieldwork with Gypsy-Travelers, it was crucial to have existing relations of trust with members of the community, or at least with professionals who were trusted by the community. Gypsy-Travelers commonly distrust outsiders who belong to settled society, who they refer to as ‘citizens’ (burgers), thereby explicitly contrasting themselves with members of the settled society, such as the researcher in this case (Lucassen et al., 1998; Khonraad and Veldhuijsen, 2009). In order to bridge these differences, a certain degree of trust had to be built, which was done mainly through advisory work for the Ministry of Interior and previous work for social housing associations. Practically speaking, these existing trust relations also saved a great deal of time, which could then be spent on actual data collection.

It is important to note, though, that the interpretations and conclusions in this book have been made independently from the commissioning parties and project partners, and I take full responsibility for the statements in this book.

1.4 Research design and thesis outline

Sections 1.2 and 1.3 explained the motivation and rationale behind this thesis. The main goal of the thesis is to generate a better understanding of how digital exclusion works and how it can be tackled. I will first provide an overview and a critical discussion of the existing literature on digital exclusion. The fields of digital connectivity and digital inclusion are broad and somewhat disconnected, meaning that first they will need to be brought together. Once this is accomplished, the research will focus on the concrete cases of exclusion found in the Netherlands: rural broadband initiatives and Gypsy-Traveler communities. These cases enabled me to gather information about how digitally excluded communities try to overcome their exclusion. In this way, I contribute to the contemporary debates on rural development and digital inequalities.

Based on the gaps in the academic literature (section 1.2) and input from the applied research projects (section 1.3), I designed the following research questions (RQ) and thesis outline:
RQ1
What can we learn from previous developments in digitalization so as to better understand the potential impacts of the Next Generation Access revolution on marginal communities?
Chapter 2 provides a systematic literature review of the literature on digital developments and rural development. It distills the general conclusions and lessons learnt from the vast body of literature on this topic. In addition to this, this chapter draws on these conclusions in order to build a future research agenda aimed at better understanding the impacts of rapid technological developments, concentrating on the regional level.

Chapter 3 also relates to Research Question 1 and contains a critical review of existing theories and models used to explain digital exclusion by Van Dijk (2003), Gilbert (2010), and Helsper (2012). It moves beyond the existing models by providing a more comprehensive and less user-centered model to explain digital exclusion. It specifically discusses the role of ‘free choice’ in becoming digitally engaged, and it reflects on whether ICTs should become entitlements.

RQ2
How do digitally excluded communities try to bridge their broadband gap?
This research question shifts the focus from the literature to an empirical analysis of practical problems in the Netherlands. Chapter 4 deals with this research question and presents an overview study of rural broadband initiatives in the Netherlands. This study is based on a database – designed and managed by the researcher – containing over 140 rural broadband initiatives (situation of April 2016). After observing that governments and market players have not initiated programs to solve the rural broadband gap, this chapter will then focus on the general picture of how digitally excluded rural communities try to overcome their broadband gap, i.e. the developments of these rural broadband initiatives.

RQ 3
To what extent are local and regional actors, such as rural broadband initiatives, able to deal with the complicated issues of broadband deployment?
Chapter 5 then discusses Research Question 3, presenting an in-depth study of four rural broadband initiatives in the Netherlands. Using long-term qualitative data, it provides detailed information about the everyday practices of running rural broadband initiatives, and it extensively provides evidence that community-led broadband deployment comes with many social, technical, financial, and intellectual challenges. A neo-endogenous development lens is used in order to analyze how exogenous powers and endogenous capacities influence the process and the result.

RQ4
To what extent are socially excluded communities able to participate in the digital society?
Chapter 6 deals with Research Question 4, concerning the social margins, and presents a study of the impact of digitalization on a marginal group, that is, Gypsy-Travelers in the Netherlands. Based on fieldwork with Gypsy-Travelers, conducted at various sites, the relation between social and digital exclusion is discussed. Furthermore, and in line
with the recent literature on digital inequalities, it places digital exclusion in a broader and more nuanced sociospatial context.

Chapter 7 builds, among other things, on the insights from Chapter 6. It combines knowledge gained from the literature and practice (the latter as a consultant on Gypsy-Travelers and social inclusion) in order to conceptualize how a marginal group like Gypsy-Travelers can capitalize on community-specific assets and build community resilience in times of rapid socioeconomic change and digitalization.

Chapter 8 then brings together the various insights from the previous chapters to draw general conclusions around the main question as to how the margins are coping in the digital age. Furthermore, it discusses problems that policy-makers are now facing in their efforts to improve digital inclusion. Based on the empirical insights from this thesis and the related policy work, I will provide recommendations on how to improve digital inclusion policies. In addition to this, this chapter contains a reflection on the reciprocal relation between research, and policy and practice, which shaped this thesis.
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