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## Introduction

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### ❖ A DIGITAL DIVIDE: THE AGENDA

At the end of the 1990s, the issue of the so-called digital divide was suddenly put on the agenda of public, political, and scholarly debate, starting in the United States and spreading to Europe and the rest of the world. Previously, the ancient problem of information inequality was framed in more abstract terms, such as *knowledge gap*, *computer literacy*, and *participation in the information society*. See Gunkel (2003) and Mossberger, Tolbert, and Stansbury (2003) for the exact American origins of the term *digital divide* in the mid-1990s. Around the turn of the century, hundreds of conferences of computer professionals, social scientists, and government policy experts worldwide were dedicated to the issue. It was also put on the agenda of public opinion, political discussion, and mass media attention. Commonly, the digital divide was defined as the gap between those who do and those who do not have access to computers and the Internet. *Access* first of all meant physical access: having a personal computer and Internet connection.

It is rather peculiar that this critical issue of the rise of information and communication technology appeared on the scene at the climax of the Internet hype. It seemed as if the last shadows hanging over the digital revolution had to be removed before everyone could benefit

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from its limitless opportunities. The statistics of computer and Internet access revealed such unequal distributions that they could not be ignored. In the 1980s, unequal access to the new digital media was only acknowledged as a problem of the future. At that time, only a small part of the Western populations, consisting of young academics and technicians, was using these expensive and complicated media. With the arrival of the World Wide Web and multimedia computers, the technology reached mass diffusion, and the problem of particular parts of the population not having access was put on the agenda of societies worldwide.

It is even more curious that, after the Internet bubble was dissolved in the year 2001 and the boundless opportunities of the digital era swiftly grew dim, the optimistic message was pronounced that the digital divide was over, that it had been a myth or a hugely overrated problem. In the developed countries, computer and Internet diffusion rapidly reached the majority. These media were getting cheaper and simpler by the day. Thus many observers reached the conclusion that, apparently, the diffusion of the new media was another instance of the so-called trickle-down principle. This principle holds that some parts of the population always get access to new media first, buying the new technology when it is expensive and forcing the prices to drop. These segments of the population thus pay for the access of others who only get the new media a little later. The observers argued that the market was doing its work and would finally solve access problems. Those who did not gain access did not really want it or need it. In the United States, the Bush administration canceled many federal funds that had been dedicated to new media infrastructure and skills development in the Clinton years.

The first purpose of this book is to show that the digital divide is far from closed. In most parts of the world, it is still widening. The gap between developed and developing countries is extremely wide, and it is growing. Even in the most developed high-tech societies, where the division in physical access has stopped broadening, about one quarter, or even one third, of the population has no access to computers and the Internet. However, the main message of this book is that *the digital divide is deepening where it has stopped widening*. In places where most people are motivated to gain access and physical access is spreading, differences in skill and usage come forward. The more information and communication technology is immersed in society and pervades everyday life, the more it becomes attached to all existing social divisions.

It tends to strengthen them, as it offers powerful tools for everyone engaged. This occurs in the context of the evolving information society and network society. This type of society makes both digital and social divisions even more critical issues, as it is characterized by differential information and communication skills and might lead to an increase of unequal (network) positions in society.

In the past 5 years, I have often considered dropping the concept of the digital divide altogether and replacing it with the general concept of information inequality and a number of more specific terms. It has caused so many misunderstandings (see the next section of this chapter). Particularly, it has led to the misconception of the digital divide as a primarily technological problem. It spurred the narrow interpretation of the digital divide as a physical access problem: of having computers and networks and being able to handle them. As a reaction, dozens of authors on this topic have urged passage beyond access or beyond the digital divide and redefinition or rethinking of the concept. In this book, the digital divide is conceived of as a social and political problem, not a technological one. Physical access is portrayed as only one kind of (material) access among at least four: motivational, material, skills, and usage.

Nevertheless, I have chosen to maintain the concept of the digital divide for strategic reasons. It has managed to be put on the public and political agenda. It should not be moved from the table and smashed to pieces by scientific hairsplitting and political opportunism. It is a long-term problem that will mark all future information societies. However, to reach a better understanding of this problem, the concept of the digital divide has to be reframed.

#### ❖ THE PITFALLS OF A METAPHOR

The strength of a metaphor is that it offers a vivid expression by a clear image or model that is similar to something we know from more familiar circumstances. In English, a *divide* is both a point or line of division or disagreement and a specific term indicating a geographical dividing line, such as a watershed. In other languages, *digital divide* is translated in more figurative terms, such as gap or gorge. The comparison made is to the well-known social division between people or a two-tiered society. This image appeared to be very successful in putting the issue on the agenda of social, political, and scholarly discussions.

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Apparently, such a simplification is required to bring a complex and abstract issue to our attention. However, it does so at the risk of several misunderstandings.

First, the metaphor suggests a simple division between two clearly divided groups with a yawning gap between them. However, in contemporary society, we may observe an increasingly complex social, economic, and cultural differentiation. The image of an extended spectrum of positions stretching across populations might be more appropriate. If any demarcation were required, a tripartite distribution might be a better distinction than a two-tiered society. On one side we would find an information elite and, on the other, the digitally illiterate or truly excluded, but in between would be the majority of the population, which has access in one way or another and uses digital technology to a certain extent (see van Dijk, 1999, 2000).

The second wrong connotation of the term *digital divide* is that the divide is unbridgeable. This does not seem to be the case at this early stage of diffusion of digital technology. There appears to be a scope for policy making by governments, corporations, and civil societies; that is, policy making with the intent to prevent inequalities becoming unbridgeable structural divides. In this book, I want to contribute to this policy.

A third misunderstanding might be the impression that the divide is about absolute inequalities, such as between those included and those excluded. In reality, most inequalities of access to digital technology are of a more relative kind. This means that some people are earlier or faster than others in accessing new technologies; that some people possess more hardware, software, and skills than others; or that one group uses the technology more or in different ways than another. It should be granted that this does not make these relative inequalities of a lesser importance, certainly not in an information or network society, as I show in this book.

A fourth wrong impression is that there is only a single digital divide; the actual picture is much more complex. There are several divides running in parallel to the four successive kinds of access distinguished in this book: motivational, physical or material, skills, and usage divides. This relates to the next wrong connotation: the suggestion that the divide is a static condition. In fact, all kinds of access are continually moving. In this book, I demonstrate that motivational and physical access divides may diminish, while skills and usage access divides may grow. In doing this, particular inequalities are coming forward as others disappear (van Dijk & Hacker, 2003).

Three other remarks should be added to put the discussion about the digital divide into perspective. The term *digital* suggests that the digital divide is a technical issue. Most people emphasizing the digital divide as a problem are driven by a kind of technological determinism (Gunkel, 2003; Warschauer, 2002, 2003b). Some suppose that people not using digital technology are missing many opportunities and are excluded from society. Others blame digital technologies, such as the computer and the Internet, for inequalities that are in fact much older than these technologies. In fact, it still has to be demonstrated that people cannot live as normal citizens in contemporary society without using digital technology. Numerous old technologies and media still seem to be able to serve the same purposes they always did. Presently, many jobs, studies, domestic lives, and leisure activities can be managed without the use of computers, the Internet, or any other digital media. It must also be proven that digital technologies really are improving these activities.

The ensuing remark is that people framing the digital divide as a technological problem suggest that access to the technology concerned is able to fix existing social problems, among them problems of social inequality, democracy, freedom, social relationships, and community building. This is a remnant of the Internet hype of the 1990s. Giving someone a computer and an Internet connection does not solve any of these problems. It might be more correct to say that that is when they begin! "Just as the ubiquitous presence of other media, such as television and radio, has done nothing to overcome information inequality in the United States, there is little reason to believe that the mere presence of the Internet will have a better result" (Warschauer, 2003a, p. 297).

A last remark: Most observers emphasizing the importance of the digital divide insufficiently distinguish this supposed new kind of inequality from old inequalities. In examining the background variables of the digital divide, they always turn up the same old demographical inequalities of income, education, employment, age, gender, and ethnicity. What is new about them, if it is not the inequality of technical command of the digital media? To quote the famous Indian moral economist Amartya Sen (1992): "Equality of *what?*" (p. ix). Is it (in)equality of opportunities, life chances, freedoms, capital, resources, positions, capabilities, skills, or what? The answer is largely absent in almost every book, article, and investigation about the digital divide.

The result is that the causes and effects of the observed digital divides are not sufficiently articulated and clarified. Are the observed divides simply a byproduct of old social inequalities? Is digital

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technology intensifying these inequalities in some way or another? Or are new inequalities appearing in the context of the information and network society? Unfortunately, analyses and empirical investigations of these kinds of potential new inequalities are very scarce. Still, the answer to these questions will decide the policy lines to be adopted if the attempt is made to close particular digital divides. Is it just a matter of policy in the fields of income, education, gender, age, and ethnicity, or should special policies be invented to confront apparently new problems of computer anxiety, lack of digital skills, and unequal computer use? In this book, I give a positive answer to all three questions posed here: Divides *are* byproducts of old inequalities, digital technology *is* intensifying inequalities, and new inequalities *are* appearing. Both old and new inequalities are shown to be working, and it becomes clear that digital technology has its own enabling and defining role to play.

### ❖ REFRAMING THE DIGITAL DIVIDE

In this book, I want to make both a theoretical and a practical contribution to the digital divide discussion and research. It offers a framework for understanding this phenomenon that is based on an explicit theory of inequality in the information and network society. This framework is applied in a comprehensive overview of current problems of access to the new digital media—first of all, computers and the Internet. The framework and the empirical analysis of access problems lead to a number of policy options that may help in solving the digital divide problem. The book ends with a list of 26 policy instruments that may be specified by others in an action plan appropriate for a particular country, situation, or field of action.

To accomplish this ambitious task, the current discussion and problematic of the digital divide have to be reframed substantially. They simply are too superficial. More in-depth analysis is required. This appears in the five clusters of basic questions I attempt to answer in this book.

1. As nothing is taken for granted here, the first question entails whether unequal access to information and communication technologies is actually a problem. Are these technologies really necessary for life in modern society? Are the old mass media and face-to-face

communication no longer appropriate for work, study, communication, and recreation in this society? This is the first cluster of questions. If unequal access is shown to be a problem, how should it be defined? Is it mainly a technological problem, of development and diffusion of a particular technology that is too slow? Is it primarily an economic problem, of a new market of hardware, software, and services that is too small and of a part of the population that has no stake in innovation? Or is it, first and foremost, an educational problem of inadequately skilled workers, citizens, and consumers? Finally, it might principally be a societal problem of unequal participation in particular fields of society.

2. An important part of the conceptual framework elaborated in this book is a distinction between four successive kinds of access that indicate the full appropriation of the new technology: motivational, material (physical), skills, and usage. What are the main stimuli and barriers to gaining these kinds of access? This is the question about the causes of the digital divide. In this book, these stimuli and barriers are understood as the presence or absence of particular resources. What are the main resources determining every kind of access? The following question is how the distribution of these resources can be explained. In this book, I look for explanations in a large number of personal and positional inequalities that define relations between categorical pairs such as old and young, male and female, manager and employee, employed and unemployed, high and low levels of education, teacher and student, and ethnic majority and minority.

3. A third cluster of questions asks about the consequences of the digital divide. What are the stakes in unequal access? Are those without access missing the opportunities of the new technology in all its applications? Does unequal access mean a narrower base for economic growth, innovation, and competition in a particular country? Or is the main risk unequal participation in a number of fields of society, such as politics, education, culture, social relationships, and communities?

4. A fourth cluster of questions relates to the context of the digital divide issue. Is this a new phenomenon? Doesn't information inequality apply to all ages? Isn't the digital divide simply a matter of old inequalities reproduced in the appropriation of a new technology? Aren't different wealth and education, or the divisions of gender, generation, and ethnicity, again to blame for this type of inequality? Or are new inequalities appearing that are related to a new type of society? For

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example, what does information inequality mean in the context of the evolving information society? What does unequal access to new communication networks, such as the Internet, mean for another indication of advanced contemporary societies: the network society?

5. The final cluster of questions addresses the policy issues. First of all, are there policy issues? Will the digital divide not close all by itself, as so many people have assumed lately? If something has to be done, what should be the strategy: to provide hardware, software, and services to deprived groups; to motivate people in using them, improving the technology and making it more safe, simple, and attractive, or to wage information campaigns; to educate ourselves out of the digital divide; or to design and produce better applications that really offer a surplus value to different groups of users? If policies are needed, what concrete instruments can be deployed? Who should bring them into action, and who will be responsible for the issue: governments; computer designers, producers, and service providers; information technology professionals; organizations of civil society; or individual citizens and consumers? Should a digital divide policy be the same in all parts of the world, or should it be different in, for instance, developed and developing societies?