BEYOND THE DIGITAL DIVIDE: CONTEXTUALIZING THE INFORMATION SOCIETY

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PETR LUPAČ

Charles University, Czech Republic

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INVESTOR IN PEOPLE

To my wife and my sons.

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Acknowledgements

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Table of Contents

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List of Figures

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List of Tables

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Chapter 1

Introduction

When confronted with the question 'How significantly has the proliferation of the Internet impacted society?', the answer that comes to mind is that the Internet has changed everything, including how we communicate, work, make decisions and even think. If, however, the Internet really has become such a key communication and information infrastructure governing our social lives, then Internet use suddenly becomes a precondition for participation in today's society, that is, a new dividing line between social success and exclusion. This is not a difficult sentiment to corroborate: How many of us would be unable to perform our jobs (well) without the Internet? How much would our social lives suffer and how much less informed would we be about politics, culture and our fields of work and interest? Gaining insight into unequal access to the Internet or any other information and communication technology (ICT) has thus become one of the key challenges of our times. Insight into this new form of inequality, which has been dubbed the digital divide, becomes increasingly valuable the more (proficient) Internet use proliferates into more and more domains of social life as a ubiquitous necessity. In this respect, it would seem counterintuitive to contest the above.

However, the critical overview of digital divide research presented throughout this book furnishes us with sufficient grounds to identify the misleading nature of these claims. The purported necessity of ICT use is called into question by such findings as the sizeable number of non-users who maintain that they do not need the Internet and the number of users with low digital skills claiming that their skillset is sufficient as far as their job performance is concerned. Are such statements merely a testament to the poor judgement of these individuals or are they rationally justifiable? Digital divide research has, with only minor exceptions, favoured the first answer – and for good reason: if (the quality of) Internet use was irrelevant for a certain segment of the population on the basis of their social status, it would compromise the basic premise that non-users or weak users of the Internet are at a disadvantage. Conversely, in certain situations (proficient) Internet use has become an absolute necessity, with no other available alternative. How, then, can we reconcile these disparate experiences, that is, the indispensability of Internet use and the looming possibility of social disadvantage on the one hand and the irrelevance of ICT use or the adequacy of minimal, often 'non-productive' ICT use on the other?

In response to this dilemma, this book proposes a new approach which posits the Internet as one of many possible information and communication channels. The gravity of the digital divide is then assessed as situation-specific, defined by a contextually determined necessity to use the Internet as the only possible tool. The aim of this book is then not to refute the social gravity of the digital divide, but rather to demarcate the limits of its validity, as data reveal that the digital divide is not necessarily a permanent or pervasive condition of every aspect of daily life or society as a whole.

The added value of the following text is not, however, limited to providing a more adequate explication of the digital divide issue or proposing optimized information policies. The prevailing approach employed in digital divide research is problematized in this work in order to pave the way for a new theory of the information society and to investigate the role of the social sciences in the informatization process. How might shifting our approach to the digital divide open the doors to such large issues?

In order to answer this question, we must consider the fact that the correlation between a widespread societal transformation, catalysed by the proliferation of ICT (or the Internet), and the general need to be connected, is intrinsic to prominent scientific theories emphasizing the important role of ICT in contemporary society (the information society theory) as well as digital divide research and information policies designed to ameliorate this purportedly problematic state of affairs. The relatively obvious correlation between the exceptional role of ICT in contemporary society and the digital divide then applies in both ways; this means that limiting the validity of the digital divide to certain contexts would compromise the pervasive, socially ubiquitous nature of the information society construct.

The information society theory has long held a tenuous and thus uncertain position within the social sciences. It has been the subject of harsh criticism pointing to the theory's conceptual and argumentational shortcomings and the techno-deterministic, totalizing, and highly reductionist lines of reasoning observed among its proponents.[1] Nevertheless, the information society construct has been accepted (despite its problematic nature) by an overwhelming number of social scientists as a sufficient framework for explaining the specificity of current social phenomena. This can be explained using three supporting arguments: (i) the viewpoint of those advocating the validity of the information society concept has become an uncontested source of basic knowledge in the most popular sociology textbooks,[2] (ii) later versions of the information society theory are considered

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[1] For example, Garnham (2000); Poster (1990); Roszak (1994); Webster (1995). More details in Chapters 3.5 and 7 of this book.

[2] See, for example, Macionis (2016), who in the 16th edition of one of the most widely used sociology textbooks worldwide claimed that 'Many rich nations, including the United States, have entered a post-industrial phase based on computers and new information technology' (p. 99). Another of the most frequently used textbooks, Giddens and Sutton's (2009) *Sociology*, strongly adheres to Castells' thesis. In the latest edition of *Introduction to sociology* by Thompson and Hickey (2012), ICT is presented as the most influential factor in changing social interactions (p. 137) and proliferates 'every aspect of society' (p. 12).

crucial for postulating a theoretical framework for studies empirically examining the social aspects of information technology[3] and (iii) at least two of the 10 living social scientists most cited during 2000–2010 were among the chief proponents of the thesis asserting a strong connection between the profound transformation of social organization from the 1970s onwards and the proliferation of information technologies (D. Bell and M. Castells).[4]

However, the 1990s saw something far more significant than the normalization of the concept in academic discourse – something that brings the vanishing debate on the validity of the information society construct full circle: the information society theory has, by way of mass media, investment strategies and information policies, become a part of the everyday life and future of societies around the world. Framed by themes of social progress, development and universal participation, the realization of an information society has made its way to the top of government agendas and long-term development strategies.

Unlike other widespread theoretical concepts, such as the knowledge society, post-industrial society and post-modern society, the concept of information society has served as a critical element in transformative practices in the fields of politics, economics, social sciences, and research and development. The information society thus functions both as a theory and a robust set of actions aimed at a specifically targeted transformation of society and thus the *reconstruction* of social institutions and social life *as a whole*. This process is generally understood as a natural phenomenon, extrinsic to human agency, with no rational alternative. However, this realization is not as striking as the absence of scientific analysis aimed at studying this process as an inherently human one, that is, one selected, created and managed by people.

The ultimate aim and purpose of this book is not limited to finding a solution to the insufficient or unequal expansion of one significant innovation. A better understanding of the mechanisms behind the societal proliferation of ICT can serve to provide clearer insight into deeper underlying issues, such as how human societies shape their material infrastructures and how these infrastructures are interconnected with such inherently sociological issues as social inequality, social change and social structures.

This book can thus also be read as part of a broader attempt at unmasking the process of the *social construction of the information society*. The successful completion of such an endeavour would require a comprehensive analysis of the participation and mutual interaction of the types of social actors, who, in the social structure of post-WWII society, occupy positions of power and who wield significant influence over the direction of future development: investors, mass media, politicians, high-ranking officials and scientists. What has already been relatively well mapped out is the constructive contribution of computer scientists from the

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[3]This claim is posited based on the sources used in this book and a study by Raban, Gordon, and Geifman (2011) where the authors mapped out the consolidation of information society research.
[4]Castells (2012) from ISI Web of Science data.

1960s to the first half of the 1990s, whose power over the technological system of computer networks eventually collapsed.[5] There is one group of scientists, in particular, deserving of special attention – social scientists. What was and is their role in the process of informatization? Before we begin to address this question, we must first abandon the notion that information society research is merely a reflection of real-world processes, that is, that it represents a body of knowledge that simply mimics the constant social (re)construction of the social order. How then can the concept of the information society be grasped within its dichotomous role of scientific reflection and co-constructor of social reality?

This book offers a new approach to the information society as a set of socio-technological relationships that are emblematic of certain contexts with limited or very little validity in others. From this perspective, the information society is not a historical fact but rather an artefact constructed by social actors who, through their actions, have promoted the technologically embedded structuring of social and identity-based relationships. This book makes two observations in this regard. The first is the paradox of informatization policies which may inadvertently produce undesirable outcomes: by calling for the creation of an Internet-savvy society, the digital divide may grow wider for those who are either unable or unwilling to meet these expectations. In other words, the argumentation employed in this book suggests that current information policies may be catalysing rather than bridging the digital divide. Secondly, this book reveals that digital divide research and the information society theory have been treating informatization as a general fact, one to which we must conform if we are to maintain our positions in society. These scientific disciplines may have thus contributed to the legitimization of this artefact, that is, the information society, as an inevitable stage of socio-technological development.

The structure of the book investigates the aforementioned issues as follows.

Following the introduction, Chapter 2 presents the key arguments of the information society theory in order to illustrate technology's pivotal role in the theory and defend the book's focus on the theory's most recent and most respected exponent, Manuel Castells.

Chapter 3 introduces the roots and construction of Castells' latest social theory while emphasizing the close relationship between his theory of the information society and the digital divide thesis. This close correlation is not a new discovery in itself, as the digital divide issue has been interconnected with discourse on the burgeoning information society from the outset. The aim is to demonstrate that the dominant approach in digital divide research is interwoven with the argumentative structure of the information society theory and that to question this approach would also be to question certain parts of the information society theory. Readers who are well familiar with the information society theory and Castells' work can skip these two chapters.

Chapter 4 maps out existing digital divide research in order to understand the digital divide as a critical internal inconsistency in the information society theory. The chapter begins by introducing the early stages of digital divide research, its

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[5]Abbate (2000); Castells (2001b); B.-K. Kim (2005).

treatment of the information society, and its relationship to government information policies, and also presents four basic arguments in opposition to the digital divide thesis. The next section addresses the dynamics of physical access both nationally and globally. A special section is dedicated to the diffusion of innovations theory as it bears great relevance to the digital divide. This section reveals that this theory had engaged with the issue of unequal IT diffusion at least a decade before digital divide research had and that it contains a wealth of inspiration that can be effectively applied to digital divide analyses. Nevertheless, this discipline has remained untapped and ignored by digital divide research from the very beginning. This section also presents discussions surrounding 'updated' digital divides spurred by such technologies as broadband Internet and the mobile phone. The fifth and longest section then gradually presents the arguments and current findings on the subjects of motivation, digital skills and online activities. The concepts of the digital generation, knowledge gap, usage gap and stratification model of Internet diffusion are also introduced and confronted with empirical evidence and/or concerns about their logical consistency. This chapter reconstructs the current state of knowledge and in doing so also presents a plethora of research questions which can be utilized by researchers, scholars and advanced students in their future research endeavours.

The identified inadequacies of both the digital divide thesis and its empirical footing are addressed in Chapter 5 with a critical examination of six assumptions prevalent in digital divide research. To assess the validity of these assumptions, the chapter also synthesizes empirical evidence of Internet-induced changes in the domains of social and economic life. Despite the empirical (and in two cases normative) inadequacies of the identified assumptions in digital divide research, there is still a solid pool of data supporting the hypothesis that ICT use can pose as an advantage (or disadvantage in the case of poor digital skills or non-use). Unfortunately, at this point, it becomes clear that the prevailing approach cannot house all of the presented findings without contradicting itself.

Given that any differences in Internet usage may be – and often are – interpreted in connection with social differences, the digital divide issue thus overlaps with the entire Internet studies research tradition, loosely linked by an interest in the relationship between the Internet and society. This broad framework can be fruitfully enlisted as a means of analysing the tenuous assumptions in digital divide research, as presented in Chapter 5.

Chapter 6 lays out a contextual approach to the digital divide. The first section introduces the parameters that (in a given context) determine the social gravity of the digital divide. Here, it becomes clear that employing a contextual approach means having to analyse both the digital divide and the information society not as static parameters of a certain epoch, but rather as a process of growing dependence on a single technological infrastructure. The second section then analyses the rigidity and strong pro-ICT focus of current digital divide research. This is followed by an introduction of findings that form a separate research tradition, one which analyses the digital divide as a discourse and draws attention to the symbiotic manner in which this issue operates alongside political and economic interests.

The seventh, concluding, chapter focuses on the remaining unanswered question: What is the role of the information society theory in the process of informatization? Grounded in his synthesis of available digital divide discourse analyses, the author emphasizes the performative function of the information society theory and analyses the sources of the totalizing aspect of Castells' later theory of society. This allows the author to outline a possible approach for rethinking the information society theory in order to synthesize its dichotomous role of scientific reflection and co-constructor of social reality.