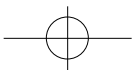
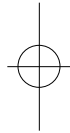
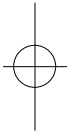


# THE DIGITAL DIVIDE



# THE DIGITAL DIVIDE

---

STANDING AT THE INTERSECTION OF  
RACE & TECHNOLOGY

**Raneta Lawson Mack**

PROFESSOR, CREIGHTON UNIVERSITY  
SCHOOL OF LAW

CAROLINA ACADEMIC PRESS

Durham, North Carolina

Copyright © 2001  
Raneta Lawson Mack  
All Rights Reserved.

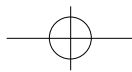
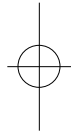
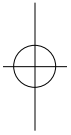
ISBN 0-89089-641-0  
LCCN 2001092053

CAROLINA ACADEMIC PRESS

700 Kent Street  
Durham, North Carolina 27701  
Telephone (919) 489-7486  
Fax (919)493-5668  
[www.cap-press.com](http://www.cap-press.com)

Printed in the United States of America

For my daughter Kandace,  
you have blessed my life



# Contents

---

Preface	xi
Introduction	xiii

## PART I EXPLORING THE REASONS

Chapter 1 Fear of Science and Technology	3
The Legacy of Slavery	6
The Pseudoscience of IQ Testing	8
The Tuskegee “Experiment”	16
Overcoming the Avoidance Factor	25
Price	26
The Risk to Privacy	28
Utility: But What Good Is A Computer?	31
Chapter 2 The Economic Gap	35
The Economics of Slavery	37
Exclusion from Asset Accumulation	42
Who’s Got the Wealth?	48
The Promise of the Internet and E-Commerce:	
Leveling the Playing Field?	50
Finally . . . A Word About Reparations	56
Chapter 3 The Education Gap	59
The Legacy of Slavery. . . Again	60
Seventy Years of Stagnant Inequality	62
“At the Same Place and at the Same Time”	65

viii Contents

---

The Aftermath of Brown	70
Perceptual Inequality	71
Classrooms Without Walls: A Digital Promise of Equality?	75

**PART II THE IMPACT OF THE DIGITAL DIVIDE**

Chapter 4 Communication and Networking	87
E-Mail	89
Web Pages	94
Discussion Groups and Chat Rooms	98
Chapter 5 The E-Commerce Revolution	105
The E-Commerce Revolution	105
Purchasing Power and Convenience	106
The Making of a Dot.com Empire	107
The Informational Advantage	114
The Educational Advantage	117
The Employment Advantage	120
Chapter 6 Entrepreneurship and E-Government	125
Internet Entrepreneurs:	
“There’s Gold in Them There Bytes!”	126
In the Beginning. . .	128
“Show Me the Dot.Com Money”	133
E-Commerce in the Public Sector: E-Government	136
The Digital Divide, E-Government and E-Voting	142

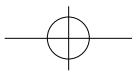
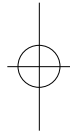
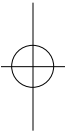
**PART III SOLUTIONS TO CLOSE THE GAP**

Chapter 7 Legal, Practical and Technological Initiatives	147
The Internet as “Big Brother”	147
Privacy Policies	150
Privacy Regulation and Legislation	158
Privacy Software	162
The Cost of Technology	163



---

Chapter 8 Relevance and Access	167
Community-Based Efforts to Bridge the Digital Divide	171
The Future of Community Access Centers	179
Appendix	183
Selected Bibliography	185
Index	189



# Preface

---

Divides and Intersections. At first glance, these concepts seem diametrically opposed and mutually exclusive. Yet, if one carefully examines what is currently described as the “digital divide” or the “technology gap” between the haves and have nots, it will quickly become apparent that this divide is not of recent origin and is, in fact, a proxy for the myriad societal divisions that have resulted from the historical legacy of racism in America. This current “divide” thus represents an intersection of the legacy of racism and the promise of technology. The past and the present are colliding and dividing, and the divisions are palpable. We see it in low-income schools where technology education is not part of the curriculum because school systems cannot afford to purchase updated textbooks, much less computer technology. We see it in the homes of people in underserved communities where computer technology is not valued because it is not considered relevant or because economic circumstances simply do not permit expenditures for such “luxury” items. We will begin to see it in the workplace where the digital economy will compel employers to give preferential hiring treatment to those who have technology skills or training, while eliminating jobs that do not require such competencies.

As we embark upon a new century, how we address the divisions created by the technology gap will rest in large part up on our understanding of how the legacy of racism has set the stage for the current division that threatens to leave behind millions of Americans who are unprepared and, in some cases, unwilling to become part of the digital revolution. At the same time, however, the intersection of race and technology is also a crossroads of opportunity. At this crossroads, the haves can choose to increase the opportunity for partici-

## xii Preface

---

pation of the have nots by ensuring that technology resources and education are widely available and relevant. The have-nots can choose to become active participants in the digital revolution by educating themselves about the ever increasing opportunities for full participation in the new economy.

This book is an exploration of the divisions that beset us and the corresponding choices that confront us as we seek to ensure that no person is left behind. I hope it can serve as an informational resource for those who share the concern of narrowing the divide and expanding opportunities for equal participation in the digital economy.

I would like to thank Dean Patrick Borchers and the Creighton University School of Law for providing me with funding and support for the research and writing of this book. I am also grateful to my husband John and my daughter Kandace for their love, encouragement and support throughout the drafting process.

# Introduction

---

This book is a call to arms. It is a rallying cry for everyone, regardless of race or economic circumstances, to immediately arm themselves with the necessary technological knowledge and skills to compete in the rapidly expanding digital economy. As those who follow technology trends and predictions know, barely a week goes by without mention of the widening “digital divide.” This term has become the political and sociological catch-phrase to describe the growing disparity between the “haves” and the “have-nots” in the current digital revolution. Although the terms “haves” and “have-nots” encompass a variety of racial, ethnic and socioeconomic groups, the largest and most noteworthy differential is developing between blacks and whites, two groups that have been divided on myriad bases throughout the course of history. Thus, in many respects, it is as if this historical divide is simply repeating itself on the technology landscape. However, without underestimating the impact of previous divisions between the races, the digital divide has perhaps the greatest potential to doom the “have-nots” to the status of permanent underclass. Before discussing the disadvantages that will almost certainly flow from being left behind in the technology race, it is important to examine the most recent statistics concerning telephone, computer and Internet access and usage. This information offers insight into how current technology is penetrating target markets and reveals where disparities in access and usage are most pervasive. The statistics are appalling, yet not very surprising.

In *Falling Through the Net II*, the National Telecommunications and Information Administration (NTIA) published the results of its detailed examination of technology access and usage in the United States. At the outset, the report confirmed the importance of com-

## xiv Introduction

---

puters and Internet technology in today's society by observing that, "[t]he Internet is a nascent, rapidly diffusing technology that promises to become the economic underpinning for all the successful countries in the new global economy." The NTIA report further explained that "understanding who is connected to the Net, and how it is being used, is critical to the development of sound policies in this area." The study examined three areas of technology access and usage—telephones, personal computers and the Internet—and determined that, with respect to telephones, approximately 94% of the people in America own a telephone set at home. Yet, even with what amounts to nearly universal access to telephones, there is still a marked disparity when the ownership numbers are broken down by demographics. Specifically, those who are low-income, minority, less-educated or single parents are less likely to have a telephone at home. Although telephones are not new technology, they are the most frequently used means to access the Internet from home. Therefore, an examination of telephone ownership is important because it identifies those households that have established the prerequisite to Internet access.

The study also determined that although household rates of personal computer ownership and Internet access have dramatically increased since 1994 for all demographic groups, some areas of the digital divide have nevertheless widened. For instance, black households are far less likely than white households to own personal computers and have Internet access.<sup>1</sup> Indeed, during the four year period between 1994 and 1998, the computer ownership gap between white and black households grew from a 16.8% difference to a 23.4% difference. In terms of Internet access, the gap widened similarly from 13.5% to 18.6% during that same period. The study summarized all of the findings by stating that while "all Americans are becoming increasingly connected... certain groups are growing far more rapidly [which] means that the "haves" have only become more informa-

---

1. According to the NTIA report, whites are twice as likely to own computers and have access to the Internet than blacks. The percentages for whites owning computers and accessing the Internet are 46.6% and 29.8% respectively, while black ownership and access is 23.2% and 11.2% respectively.

tion-rich in 1998 while the “have-nots” are lagging even further behind.” In terms of policy implications, the NTIA report advised that efforts to resolve the digital divide should continue to focus primarily upon low-income, minority and young populations because these groups “could most use electronic services to find jobs, housing and other services.”

This compelling observation highlights one of the bitter ironies of the digital divide. That is, those groups that could most benefit from the informational resources and convenience afforded by computers and Internet access are precisely the groups that are lagging behind. This is indeed an unfortunate consequence because as technology continues to permeate more and more of our daily existence, knowledge and capabilities in this area may no longer be a matter of curiosity and optional convenience, but may become a necessary tool for survival. For example, consider some of the more recent technological advances.

- By the end of the year 2000, General Motors (GM) plans to offer voice activated Internet access in one of its vehicles. GM predicts that within five years, in-car services such as Internet access could generate revenues of four to six billion dollars annually. GM also plans to make it easier for consumers to purchase automobiles online and equip them with a variety of on-board services via satellite.
- In September 1999, the United Network for Organ Sharing unveiled Transplant Living, an Internet program that provides transplant patients with detailed information on the organ transplant process. Among other things, the program will enable transplant patients to quickly locate health care centers that provide organs. United Network also plans to develop UNET, a secure Internet program to exchange information on patients and potential donors.
- In March 2000, Arizona Democrats held their state presidential primary online. Although there were a number of security and authentication glitches, the major challenge to online voting was a lawsuit filed by an organization known as Voting Integrity Project. The group argued unsuccessfully that voting online would effectively disenfranchise the state’s minor-

## xvi Introduction

---

ity population and, in fact, it almost did. To alleviate this concern, party leaders offered absentee ballot voting to allow users without computers to vote from home. Perhaps not surprisingly, many more minority voters used the absentee ballots, while whites used their personal computers to vote from home.

- Internet “people auctions” now allow job seekers to sell their skills to the highest online bidder. This idea adds a new wrinkle to the online job recruiting process, where employers are projected to spend as much as \$1.7 billion dollars by the year 2003 searching for employees.
- And finally, how would you like to make a back-up copy of your life? Scientists are currently researching ways to join mind and memory chips. If successful, this technology could potentially be used to recreate a person’s life just as he or she experienced it. This extraordinary use of memory chip technology, known as the “Soul Catcher,” is both intriguing and alarming. As everyone has probably felt at one time or another, there are some life events that are best forgotten. How frustrating it might be to have those same memories indelibly imprinted on a memory chip!

These are but a few examples of the numerous ways in which technology is rapidly becoming intertwined in our lives, for better or worse. As statistics clearly demonstrate, most Americans are embracing these changes and many are reveling in the added convenience and efficiency these innovations provide. For some segments of the population, however, adapting to meet the demands of the technology revolution is not even a remote consideration. Indeed, to some of these individuals, computers and the Internet are viewed as an unnecessary luxury at best, and a potential intrusion into personal privacy at worst. This intransigent group of “have-nots” is unlikely to be persuaded to adopt technology no matter how many free or reduced price computers are provided. These individuals actively reject technology in their lives and will be relegated to the perimeter of our information technology driven society .

On the other hand, there is another group of “have-nots” who could be persuaded to explore and eventually embrace technology if



the costs and benefits of adoption are clearly articulated in terms that illustrate the severe long-term personal and professional consequences of ignoring the digital revolution. This is perhaps the most overlooked aspect of current strategies to narrow the digital divide. As with many social issues that disproportionately impact minority groups, there is a constant dialogue between politicians and academics decrying the fact that there is an ever widening technology gap. But there is very little discussion *between* these groups and the affected segments of the population about the real consequences of permitting these divisions to persist.

In other words, why is it important for minority children to attend science and technology summer camps instead of or in addition to the traditional summer sports camps? Why is it important that technology become a required part of inner city school curriculums as early as first or second grade? Why is it equally important for the parents of children in these schools to make a similar commitment to explore technology and make every effort to bring it into the home? Why is it important to not only establish technology centers in urban areas, but to perhaps make the receipt of certain government benefits dependent upon taking basic computer skills courses?

The answer is, in part, because we are rapidly approaching what might be considered a digital fork in the road where the “haves” and “have nots” will be so widely separated in terms of information technology skills that there will be no hope of ever reuniting these divergent paths. Quite simply, to be left behind in the digital age is to be unemployed, information-deprived and subject to a continual “technology tax” on goods and services that are more expensive to consumers who don’t utilize Internet technology. These are significant disadvantages, which are already becoming reality. For example, a number of employers now require potential employees to demonstrate some familiarity with computer technology even though their jobs may not require them to interact with computers on a daily basis. Thus, job applicants are weeded out in the initial phases of the recruitment process if they cannot demonstrate a minimal level of computer competency. Additionally, employment advertisements for all types of occupations are increasingly finding a home on the In-

## xviii Introduction

---

ternet. Job seekers who are adept at the online job search process will undoubtedly have a considerable advantage over those who continue to search by traditional means.

Furthermore, as technology becomes more ingrained in our culture, the means of distributing information will be driven by the electronic and wireless markets. Today, in addition to the traditional media outlets, many people receive news and information through a variety of electronic sources. With the wireless technology revolution upon us, it will not be uncommon for people to regularly carry their news and information sources with them, receiving periodic updates throughout the day. Less expensive means of communicating will also be technology based. We have already witnessed the tremendous effect of e-mail as a modern communication device. E-mail users appreciate and frequently take advantage of the instantaneous and low cost nature of this communication tool as evidenced by the fact that the use of e-mail easily outpaces all other aspects of Internet use. Now, with the possibility of voice over the Internet, long distance voice communications are also making inroads into Internet technology.

Retail establishments, financial institutions and health care providers are also moving toward an Internet model to make their services accessible to customers 24 hours a day. As an extra incentive, some Internet merchants offer reduced rates or additional services to customers who choose to conduct business on the Internet. Because web sites typically aren't as costly to maintain as brick and mortar establishments, some merchants are willing to pass these savings on to Internet consumers.

These examples demonstrate that the momentum is clearly in the direction of more technology, not less. Therefore, an obvious question arises: why *wouldn't* everyone want to be a part of the digital revolution? The answer is multi-faceted.

First, many cite cost as a factor in their decision not to purchase a computer or obtain Internet access. Yet, today, with the price of computers dropping to an all-time low, the question is no longer who *can* afford technology, but who *can't*. Of course, this is not to suggest that there aren't still some segments of the population whose economic circumstances are so severe that the purchase of a computer is com-

pletely outside of their financial reach. However, due to dramatic reductions in the price of computer technology, that group is shrinking to the point that it can hardly be said that cost presents the barrier to entry that it once did. A similar observation may be made with respect to trends in Internet service. Although prices vary, the average cost of an unlimited access plan can range from \$20–\$25 a month. In addition, there are a number of companies now offering free Internet access. In most cases, consumers pay no fee to access the Internet, but must agree to view targeted advertisements as they use the service. For some, this might be considered a minor annoyance when weighed against the access to information gained by using the Internet.

Another argument often advanced as an explanation for not acquiring technology is that, to some, computers and the Internet have very little usefulness in their daily lifestyles. Technology just doesn't fit or seem relevant. Perhaps these individuals prefer to get their news from other formal or informal sources, or they prefer to engage in face-to-face communication, or they would rather shop locally for goods and services. There is just no *perceived* place for computer technology in their lives. In these circumstances, often what is required is exposure and education.

Other arguments against technology adoption relate to misperceptions about the difficulty of learning basic skills. Based upon no experience or a previous negative experience, many perceive computers as complicated to understand and difficult to maintain. They believe it is unlikely that these “gadgets” would make life easier and would only serve to make things more confusing and, thus, inefficient. Finally, the perceived lack of privacy is a significant cause of concern for many as frequent news stories reveal how technology may be manipulated to intrude into the personal privacy of unsuspecting individuals. But can these arguments against technology justify allowing the digital divide to persist? Consider this tale of two towns.

In an article entitled, *A Small Town Reveals America's Digital Divide*, Marcia Stepanek describes how the technology gap is impacting a community on the edge of rural Appalachia.<sup>2</sup> The article is

---

2. Marcia Stepanek, *A Small Town Reveals America's Digital Divide* BusinessWeek Online (October 4, 1999).

## xx Introduction

---

brief, but few have written as poignantly and insightfully about the realities of the digital divide. Stepanek describes the relatively prosperous town of Blacksburg, Virginia, where Virginia Polytechnic Institute and State University sponsored the creation of Blacksburg Electronic Village (BEV) to bring Internet access to homes in the area. Although most of Blacksburg is now wired and, indeed, Blacksburg is the most wired town in the nation, the surrounding areas lag far behind in access to technology. The contrasts are staggering. For instance, Lori Atwater, a thirty-nine year old single mom in Blacksburg, changed her life dramatically by utilizing the resources provided by the BEV Internet access program. After working for 10 years as a meter maid at \$6 an hour, Atwater decided to use her son's computer and the inexpensive BEV.net Internet connection to teach herself how to design web pages. After mastering the technology, Atwater quit her job to become president of Lori Atwater Enterprises, a web design company where she earns three times her previous salary as a meter maid.

In contrast, just outside of Blacksburg in the town of Christiansburg, nearly one-third of the adults do not have high school diplomas and Internet connections are few. Although the town hoped to benefit from the same BEV project that brought low cost Internet access to Blacksburg, that assistance has not materialized. Many of the residents cannot afford computers or Internet access and parents worry that their children are being left behind because the schools do not yet have computer training as part of their curriculum. To make matters worse, even the few technology resources available in Christiansburg sit gathering dust because there is no one to provide training on the equipment and many of the residents simply lack interest in the technology. Stepanek sums up the lesson from this experience in this way: "Making equipment and Net connections available isn't enough. The Internet haves must find a way to introduce folks to the technology and then to make access meaningful to those without. It's the difference between giving people a book and teaching them how to read."<sup>3</sup>

---

3. *Id.*

The harsh realities of the Blacksburg experience raise the fundamental question of whether the technology gap between the haves and have nots can ever be narrowed or closed, or is it an inevitable result of a society in which information is treated as a market commodity? William F. Birdsall, in an article examining the Canadian digital divide, concluded that because of the “ideology of information technology” and the “dual social structure” in both the United States and Canada, the “policy debate in time will not be over how to eliminate the digital divide but only how large or small it should be.”<sup>4</sup> According to Birdsall, the ideology of information technology began to emerge in the United States in the 1970s. The premise of this ideology is that:

information technology is inevitably driving the shift from an industrial society to an information society. The raw material or basic commodity of this society’s knowledge-based economy is information. In the knowledge-based economy only the marketplace should determine which goods and services are produced and how they are generated; there are no public goods.<sup>5</sup>

In this model, government’s role is to promote a competitive market through deregulation and privatization rather than ensuring equality of access to goods and services. Birdsall posits that both the United States and Canada are liberal welfare states, where the work ethic prevails and welfare entitlements are distributed only to those who meet strict criteria. For those who do not meet the criteria, the government allows the market to provide and distribute benefits. This creates a dual social benefit structure where most attain benefits through the market and a few receive them from the government with the expectation that they will eventually attain them from the market as well. The choice to treat information as a market commodity creates a digital divide in the sense that, just as any other good, those who are able to attain information through the market will do so, while those who can’t will simply have to rely upon either

---

4. William F. Birdsall, *The Digital Divide in the Liberal State: A Canadian Perspective* First Monday(5) (2000).

5. *Id.*

## xxii Introduction

---

limited government assistance or the good will of private enterprise. Given these circumstances, Birdsall argues that one possibility for eliminating the digital divide rests upon “recognizing that technology is a social construct and that access in the information society cannot be left to the market alone.”<sup>6</sup>

Although Birdsall offers a persuasive analysis of how the digital divide is an inevitable result of social welfare policy in certain countries, his analysis perhaps underestimates the degree to which the market may act in its self interest to increase consumer access to technology. To the degree that the market relies upon maximizing customer base for profitability, it cannot wait indefinitely for the government bureaucratic engine to generate programs that distribute benefits to the “have-nots.” Thus, private enterprise may act on its own, investing in underserved communities and ultimately investing in its own future. Consider, for example, Fleet Bank’s recent announcement that it is launching one of the “most comprehensive community economic development initiatives in the nation to help close the technology gap and create greater access to financial services and the Internet for individuals and businesses in low-and moderate-income communities.”<sup>7</sup> Fleet’s plan is to introduce a program called CommunityLink, which will provide community based content, in-home training and computers to lower income people. Importantly, Fleet’s plan recognizes that access to technology is not enough and “[has] identified comfort of use and relevancy of content as crucial components to sustained usage and creation of wealth.”<sup>8</sup> Although it is obvious that Fleet hopes to build long-term and profitable customer relationships through this program, it is also “functioning as a catalyst for change in community economic redevelopment.”<sup>9</sup> Fleet’s multi-focused approach to alleviating the hardships imposed by the digital divide in one community is commendable for its recognition that the problem is not merely one of access. Increasing public awareness about the variety of factors that

---

6. *Id.*

7. Beth Cox, *Crossing the Great Digital Divide* ECommerce Guide (December 12, 2000).

8. *Id.*

9. *Id.*

contribute to the digital divide helps turn the focus toward finding creative solutions rather than blaming the “have-nots.”

In furtherance of that goal, this book will discuss three separate although interrelated topics. In the first section, “Exploring the Reasons,” the book will revisit the historical bases for the economic and educational differences that divide racial groups in the United States. The section will discuss how a tragic history of legally enforced divisions along racial lines in the areas of economics and education has contributed to a similar divide in the area of technology. This section will also explore how fears related to technology may also be rooted in earlier practices that manipulated science and technology to the detriment of black Americans.

Part II, “The Impact of the Digital Divide,” will provide a fairly comprehensive overview of how technology has made inroads into everyday life, making it easier to complete commonplace tasks such as shopping and banking more conveniently and efficiently. This section also reveals how computer technology is increasingly becoming the standard way of interacting and doing business and explains why those who are unfamiliar with technology run an extremely high risk of being left behind and becoming part of a permanent virtual underclass.

Finally, Part III, “Solutions to Close the Gap,” will examine some options to reduce or eliminate the digital divide. Ideas ranging from community access centers to corporate partnerships with schools will be explored. This section concludes that while all of these efforts are admirable, in the end, none will be successful unless those promoting them are able to overcome the wall of suspicion and lack of interest that often prevents minority communities from taking full advantage of these opportunities.

