

City University of New York (CUNY)

CUNY Academic Works

All Dissertations, Theses, and Capstone
Projects

Dissertations, Theses, and Capstone Projects

5-2015

The Impact of Technology on Consumerism

David Naranjo

Graduate Center, City University of New York

[How does access to this work benefit you? Let us know!](#)

More information about this work at: https://academicworks.cuny.edu/gc_etds/1067

Discover additional works at: <https://academicworks.cuny.edu>

This work is made publicly available by the City University of New York (CUNY).

Contact: AcademicWorks@cuny.edu

The Impact of Technology on Consumerism

By David Naranjo

A master's thesis submitted to the Graduate Faculty in Liberal Studies in partial fulfillment
of the requirements for the degree for Master of Arts, The City University of New York
2015

This manuscript has been read and accepted for the Graduate Faculty in Liberal Studies in satisfaction of the requirement for the degree of Master of Arts.

04/22/2015

Professor Joseph W. Dauben

Date

Thesis Advisor

04/24/2015

Professor Matthew K. Gold

Date

Executive Officer

The City University of New York

Abstract

The Impact of Technology on Consumerism

By David Naranjo

Advisor: Professor Joseph W. Dauben

E-commerce is shifting the way people purchase their goods and services and affecting the relationship between technology and society. Consequently, traditional retailers, aware of the inevitable change, have developed strategies to keep up with the continuously evolving marketplace. These strategies vary from creating virtual stores (i.e., websites) and developing digital social networks to data mining and spamming.

Therefore, from a historical point of view, this thesis will analyze the impact of technology on commerce and how the creation of new virtual marketplaces had affected consumers' behavior. This thesis will explore the origins of *e-commerce*, the technologies that made possible its development, and who are some of the most influential entrepreneurs in the online retail business. Further, I will analyze how data mining has affected society's notion of personal information and privacy.

Acknowledgements

I take this opportunity to express my sincere gratitude to Prof. Joseph W. Dauben, my thesis advisor. I gratefully acknowledge his continuous support that made this Thesis possible.

I also thank all my professors who contributed to my personal and professional growth.

I am especially grateful to my loving wife for her relentless support that gave me the strength and confidence to fulfill this project.

Thank you.

Table of Contents

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| The Impact of Technology on Consumerism | i |
| Abstract..... | iii |
| Acknowledgements | iv |
| List of Figures..... | vi |
| Introduction..... | 1 |
| Chapter I..... | 4 |
| Mobile Technology: a brief history of its early and most recent developments..... | 4 |
| The first EDI and EFT systems | 6 |
| Proliferation of credit cards | 9 |
| Chapter 2 | 15 |
| The Internet and the Dot.com Collapse | 15 |
| Chapter 3 | 25 |
| The Demise of the Shopping Mall: eBay, Amazon, Dell.com, and how electronic technology has affected retailers | 25 |
| eBay.com..... | 25 |
| Amazon.com..... | 30 |
| Dell.com..... | 33 |
| Chapter 4 | 38 |
| Mobile Technology: its wider impact on consumers and advertisers..... | 38 |
| Chapter 5 The Future of Mobile Technology and Electronic Marketplaces: ERP, data warehousing, and data mining; privacy and other legal issues..... | 48 |
| Privacy and Technology..... | 52 |
| Conclusions | 59 |
| Bibliography | 61 |

List of Figures

| | |
|---------------------------------------------------------------------------------------------------------|----|
| Figure 1. Total Consumer Debt from 1950 to 2010. US Federal Reserve..... | 12 |
| Figure 2. Revenue spent on marketing sales. International Journal of Information Management..... | 21 |
| Figure 3. Number of Websites between 2000 and 2014. Internet Live Stats..... | 23 |
| Figure 4. Total Sites Across All Domains August 1995 - March 2012. Netcraft.com..... | 41 |
| Figure 5. SPAM Rate between 2001 and 2012. Emailtray.com..... | 48 |

Introduction

Electronic commerce, more popularly known as *e-commerce*, is the process of using electronic devices and interconnected technologies (e.g., the Internet) to sell, purchase, transfer, or exchange products, services, and/or information between businesses and/or people [Manzoor 2010: 2-3]. For instance, the first practices of *e-commerce* can be traced back to 1965 when consumers were able to withdraw money from automatic teller machines (ATMs) and make purchases using point-of-sale terminals and credit cards [Molla and Licker 2001]. Currently, *e-commerce* has evolved from a business model of a few to a commercial industry of the masses.

In 2013, the private advisory firm Forrester Research predicted that in 2015, U.S. customers would spend an average of \$1.738/year online, an increase of 44% from what was spent in 2012. This will help *e-commerce* sales to reach a staggering amount of \$370 billion by 2017, making *e-commerce* sales responsible for a full tenth of all retail sales in the United States [Lauren 2013]. Not only do these numbers represent consumers' view of *e-commerce* as a valid and efficient means of acquiring goods, they also express how traditional shopping spaces such as street shops and malls could be adversely affected by the development of digital stores.

In Chapter 1 I will discuss how public and private initiatives shape what is known today as *e-commerce*. I will explore the influences of the Electronic Data Interchange (EDI)

system, the 1987 Electronic Fund Transfer Act, and the proliferation of credit cards in the development of electronic commerce.

The discussion will continue in Chapter 2 with an overview of the beginnings of the Internet and how public and private initiatives contributed to the development of technologies and principles that accelerated the implementation of *e-commerce*. The chapter will also discuss the impact of the National Science Foundation Network (NSFNET) on establishing the Internet as commerce technology. Finally I will make a historical analysis of the dot-com collapse and its influence on *e-commerce*.

In Chapter 3, I will examine the history of Amazon.com, eBay.com, and Dell.com as examples of pioneers of the *e-commerce* world. The chapter will explain the commercial strategies that turned these companies into successful business initiatives and how these companies changed the ways people buy goods and services nowadays.

Consequently, in Chapter 4, I will discuss how traditional retailers responded to the commercial threat of online retailers such as Amazon and eBay and how they adapted their businesses and marketing strategies in order to participate in the expanding world of mobile technology and *e-commerce*. This chapter will also explore theories that explain how technology has modified consumer behavior.

Finally, in Chapter 5, I will explore the social risks of *e-commerce*. This chapter will discuss technologies such as data mining and data warehousing as mediums to transform

private information into profitable businesses. Further, the chapter will examine the importance of social movements in preventing unscrupulous *e-commerce* practices.

In summary, by using a historical approach, this thesis aims to contribute to the discussion of how technology affects commerce and therefore society. Furthermore, it will examine the Internet as one of the most recognizable tools of consumerism and its impact on consumer behavior.

Chapter I

Mobile Technology: a brief history of its early and most recent developments

Human beings have developed a close relationship with tools, time, and commerce since the beginning of mankind. Two examples of how technology has molded the economy throughout history are how railroads shaped entire cities in America or the significant impact of Henry Ford's assembly line system in car manufacturing worldwide. MacKenzie and Wajcman (1985) argued the importance of technology in society, claiming that technological changes are the cause of changes in society. For instance, we can think about the importance of railroads across America, carrying merchandise from coast to coast, helping to create booming metropolitan areas, or the successful sales of Ford's Model T in 1908 [Collins 2007: 106].

There is no single landmark event that signaled the beginning of the consumer revolution. However, the rise of a conscious consumer society began in the sixteenth century with the proliferation of trade between Europe and the New World. Later, the beginning of industrialization instigated further consumer growth with increased purchasing power among the swelling working class [Miles 1998: 6]. We can suggest therefore that consumer society was not only shaped by the relationship between buyers and sellers, but also by technology itself. Therefore, the consumption of technology appears to play a crucial role in the implementation of cultural transformations, enabling consumers to avail themselves of new and exciting ways of consumption [Miles 1998: 75].

The obligation to go to a store, meet the seller and pay for the desired product with a minimum of social interaction was inevitable in order to obtain goods. Besides, time and place were essential factors in the consumption equation. In this situation, it is probable that distance dissuaded buyers from going in search of products beyond their local borders. One of the factors that discouraged long distance shopping was the inability to create a common payment method since people needed a social relationship with the seller in order to obtain credit. This limited consumers to shopping within their common space. In his book *Consumerism as a Way of Life*, Steven Miles argues that “Not only does consumerism structure our everyday lives, but it does so by offering us the illusion of consumer freedom when, at least to a certain extent, such freedoms are inevitably constructed and constrained” [Miles 1998: 5]. We can argue that Miles’ statement identifies the dependent nature of consumerism and how consumers’ behavior is molded by the interactions between buyers and sellers and consequently, time and payment. The proliferation of new technologies has expanded the scope of consumers, enhancing their ability to obtain goods and services without concern for the inconvenience of distance or availability.

E-commerce has not been an overnight development. It has been a long process that, even though it cannot be attributed to a unique creator or inventor, has impacted the social and economic order of the household [Silverstone 1992: 16]. Moreover, there are many components that have shaped how technology is understood today. The impact of technology in commerce can be traced back to the invention of the personal computer in the 1970s, or even earlier to the invention of Morse code in the late nineteenth century. In this manner, we can consider mobile technology as a group of electronic devices and machines

that operate as a closed system and are not dependent on a large physical structure such as a building or a store. Although the first mail order was created in 1861 in Wales [Boorstin 1973: 142-143] and the boom in the purchase of goods by phone (thanks to TV shopping channels) distanced consumers from brick and mortar stores in the 70s, the real dissemination of mobile technology began with the necessity to operate in a virtual network: the creation of the World Wide Web.

Mobile technology is important to consumerism because it allows buyers to obtain products without the need to visit a physical store. Consumers are encouraged to buy things from across the globe with moderate and comprehensible waiting times and prices. A sense of immediacy has led inventors and entrepreneurs around the world to develop ideas to close the gap between time, space and the economy. Over the past 20 years, the term “mobile” has become a synonym for portability, a technology that is not limited by physical boundaries [Kaufman-Scarborough 2006: 63]. Nevertheless, technological innovation can only move forward if society positively validates it. In many cases, the first validation process began with a governmental institution.

The first EDI and EFT systems

In 1987 mobile technology received important validation with the implementation of the *Vendor Express Program* (VEP). The VEP was a law enforced system established by the Financial Management Service (FMS), a bureau of the U.S Department of the Treasury. The necessity of standardizing product information, codes and shipping notices between

companies forced the FMS to create a regulated virtual space where vendors could process orders without the need for physical business documents [Chaudhury and Kuilboer 2002: 26]. This program was named the Electronic Data Interchange (EDI).

EDI is the computer-to-computer transmission of business information in a standardized format. The formats used are in the form of transaction sets, with one transaction set equating to one business document and identified by a unique three-digit code; e.g., the 820 Payment Order/Remittance Advice. These transaction sets are developed and maintained by the Accredited Standards Committee (ASC) X12, chartered by the American National Standards Institute (ANSI) in 1979 to develop EDI transaction sets. The 820 Transaction Set, Payment Order/Remittance Advice, is used to electronically order payments to be issued and remittance information to be sent.¹

The EDI program triggered a number of business opportunities that were reflected in the high rate of acceptance of this transaction system. The EDI system avoided human contact and was based entirely on computer-based interactions, creating a direct connection between sellers and suppliers [Chaudhury and Kuilboer 202: 27]. The advantage of the EDI's computer-to-computer transmission system was the speed by which information could be exchanged between sellers and suppliers, which also accelerated the approval or rejection of the transaction. Sellers and suppliers were able to verify a merchandiser's stock in a matter of seconds. The EDI created a standardized virtual environment that avoided human error and promoted a fast-paced process of consumption [Chaudhury and Kuilboer 202: 28].

If the EDI system gave sellers a convenient way to interact with suppliers, then the Electronic Funds Transfer (EFT) system was the tool that created a safe and standardized

¹ "Vendor Express EFT/ EDI Regulations and Guidance." Vendor Express. Bureau of the Fiscal Service, 1997. Web. 25 Feb. 2015. See more: <http://fms.treas.gov/vendor.html>.

virtual scenario for purchasing goods and services. Decades before the first EDI system was implemented; consumers were using credit cards as a valid method of payment. Lewis Mandell in his book, *The Credit Card Industry A History*, argues that prior to World War I, credit cards were issued by small numbers of hotels, oil companies, and department stores. They served the dual purpose of identifying a customer with a charge account and providing a mechanism for keeping records of customers' purchases [Mandel 1990: 17]. It took more than 50 years after the first credit card was issued for the Federal Reserve Board to establish the 1987 Electronic Fund Transfer Act, a system to regulate and protect credit card holders.

The Electronic Fund Transfer Act (EFTA) (15 USC 1693 et seq.) of 1978 is intended to protect individual consumers engaging in electronic fund transfers (EFTs). EFT services include transfers through automated teller machines, point-of-sale terminals, automated clearinghouse systems, telephone bill-payment plans in which periodic or recurring transfers are contemplated, and remote banking programs. The Federal Reserve Board (Board) implements EFTA through Regulation E, which includes an official staff commentary (The Electronic Fund Transfer Act of 1987).²

The EFTA was important because it ensured a law enforced payment system that regulated electronic monetary disbursements no matter who was the buyer, the card issuer, or the seller. Furthermore, the ease of government-regulated electronic transactions promoted the development of other technologies, besides credit cards, which supported virtual payments such as ATMs, debit cards, and telephone transfers. Mobile technology started to shift the structure of cities. Banks needed fewer resources to expand into small towns; a simple Automated Teller Machine was an efficient solution that allowed expansion into less profitable markets without the expense of building a branch. Telephone transfers

² Electronic Fund Transfer Act (15 USC 1693 et seq.).

increased the importance of having a personal telephone line, and this was a hint of how household communication devices were going to be used for more than calling close relatives. The interaction between man, money and machine became an ordinary event intended to give consumers extra time to spend on leisure activities.

Although the EDI and the EFT systems did not entirely replace the human interaction between sellers and buyers, it was a first step towards the virtualization of malls and stores. A fully virtual store needs a digital currency, and it all began with the appearance of credit cards.

Proliferation of credit cards

The ETS and the EFT systems created a well-regulated scenario that allowed an expansion in the use of mobile technology in financial transactions. Sellers gained the confidence to accept credit cards, as they realized that payments were managed by an electronic system that could easily determine if a client had sufficient funds or not.

The first bank card was named "Charg-It." John Biggins, a banker in Brooklyn, New York, introduced it in 1946. Whenever a customer made a purchase the bill was forwarded to Biggins' bank, and later the bank reimbursed the merchant and obtained payment from the customer [Woolsey and Starbuck 2009]. Later in 1950, Frank McNamara, Ralph Snyder, and Alfred Bloomingdale developed Diner's Club, the first credit card not associated with a bank. Diner's Club was envisioned as a multipurpose charge card that would mainly be

used in restaurants and hotels [Mandell 1990: 3]. For more than eight years, Diner's Club was the predominant credit card in the US. However, on October 1, 1958 American Express issued its first credit card, challenging Diner's Club position. American Express' first year of operation in the credit card industry ended with almost 32,000 establishments accepting the cards and more than 475,000 cardholders signed up [Mandell 1990: 28]. In the beginning, American Express' credit cards were made of paper, and it was not until 1959 that American Express began issuing printed plastic cards, an innovation for this industry [Roebuck 2012: 95]. Subsequently (supported by the United California Bank, Wells Fargo, Crocker National Bank and the Bank of California), MasterCard was founded in 1966. One of MasterCard's features was the unique opportunity to have a revolving balance. MasterCard's cardholders were no longer required to pay the full balance of their credit at the end of each month, on condition that they pay an interest rate [Woolsey and Starbuck 2009].

With the increasing use of credit cards and the continual proliferation of credit card companies, in 1960 the US government saw the necessity of protecting buyers from excessive interest rates. The New Jersey Legislature passed the Consumer Fraud Act, a bill to combat the widespread practice of defrauding the consumer [Trembly 2004: 193]. Later, in 1968, the US Congress passed the Truth in Lending Act in order to protect costumers against inaccurate and unfair credit billing and credit card practices. The TILA required lenders to provide the customer with loan cost information so that the consumer was able to compare the various credit terms available to him or her and avoid the uninformed use of credit [Rohner and Landers 1979: 713]. Additionally, The Consumer

Credit Protection Act (CCPA) was created to help guarantee American consumers fair and honest credit practices. Currently, the CCPA is an overarching law that contains several acts with more precise scopes. Among these specific laws are the Truth in Lending Act, the Fair Credit Reporting Act, the Equal Credit Opportunity Act, the Fair Debt Collection Practices Act, and the Electronic Fund Transfer Act.³ The TILA was first amended in 1970 to prohibit unsolicited credit cards. Likewise, the Fair Credit Billing Act of 1974, the Consumer Leasing Act of 1976, the Truth in Lending Simplification and Reform Act of 1980, the Fair Credit and Charge Card Disclosure Act of 1988, and the Home Equity Loan Consumer Protection Act of 1988 made additional amendments to the TILA and Regulation Z.⁴

In 1987, the Credit Card Interest Rate Limitation Act was created to establish a national ceiling on credit card interest rates. During the 1990s, the average American family experienced a 53 percent increase in credit card debt, from \$2,697 to \$4,126 per household. Likewise, low-income families saw the largest increases in debt: an 184 percent rise [Draut and Silva 2003: 9]. It is undeniable that the ability to obtain credit and the development of new technologies impacted the local economy, and Americans became comfortable living beyond their real spending abilities. In its last Consumer Credit Report, presented on March 6, 2015, the Federal Reserve showed how Americans have created billions of dollars worth of debt over the past 45 years. Moreover, according to a survey performed by the National Foundation for Credit Counseling, only 39 per cent of American

³ Consumer Credit Protection Act– Laws Protecting Your Rights." *Debtorg News*. N.p., n.d. Web. 19 Apr. 2015. See more: <https://www.debt.org/credit/your-consumer-rights/protection-act>.

⁴ *Regulation Z Truth in Lending Introduction Background and Summary* (n.d.): n. pag. The Federal Reserve System. Web. 19 Apr. 2015. See more: <http://www.federalreserve.gov/boarddocs/supmanual/cch/til.pdf>.

households were able to pay their credit card debt in full. As of January of this year, consumer debt in American households reached \$3.33 trillion dollars.⁵

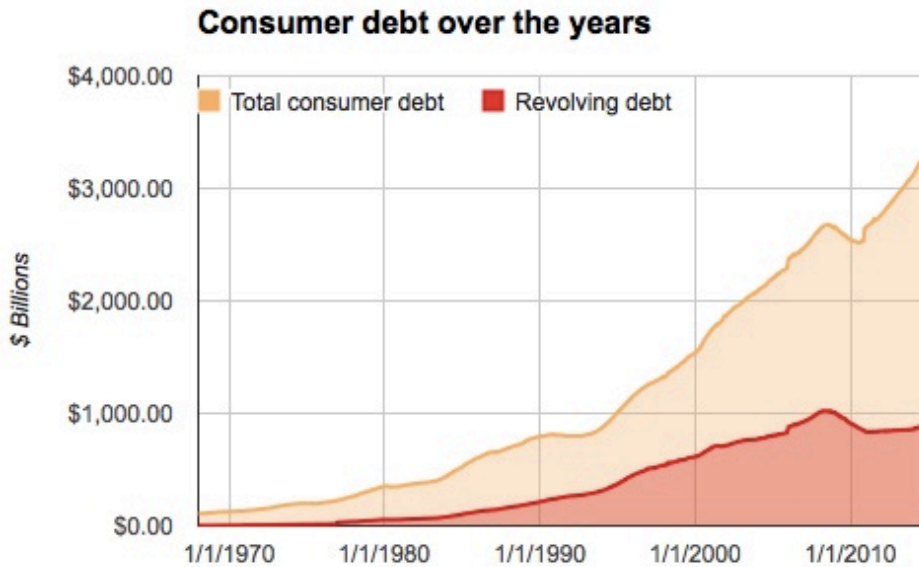


Figure . Total Consumer Debt from 1950 to 2010
Source: US Federal Reserve

With the arrival of fast electronic transactions, credit cards became a very profitable business. Credit-card issuers felt more confident in approaching more users and facilitating their access to goods and services. In 1987, the same year as the implementation of the EDI system, consumers were enjoying a second year of low bank interest rates thanks to cheaper oil prices, better manufacturing infrastructure, and better industrial production [Cacy and Roberts 1987: 4].

⁵ The Federal Reserve's G.19 report on consumer credit, released on March 6, 2015. See more at: <http://federalreserve.gov/releases/g19/current/default.htm>.

With a stronger economy citizens can expand their primary needs, those beyond mortgage payments, transportation or food. If the EDI gave confidence to suppliers, then credits cards became the counterpart of the buying process. They offered an opportunity to stretch household income with the support of monetary credit in the shape of a plastic card. This gave a boost of confidence and even social distinction to those who were entitled to have either an American Express, a *MasterCard*, or a *Diners Club* card in contrast to those who still needed to use coins and bills.

As time and space were shrinking in the shopping world, it seems that Americans enjoyed the possibility of expanding their purchasing power to foreign transactions. Diners Club started to change the mobile technology landscape in 1958 by allowing their clients to make transactions in foreign countries [Mandell 1990: 10]. Five years later, American Express began introducing local currency cards in markets outside the United States. These programs made it possible for card members to extend payment on large travel expenditures.⁶ This development meant that national borders were no longer a limit for consumers; they could travel without the burden of using travelers checks. Credit and debt became symbols of upscale social-class; cardholders were not limited to traditional full payments, and they were entitled to purchase lavish goods and services on credit. George Ritzer argues in his book, *Explorations in the Sociology of Consumption: Fast Food, Credit Cards and Casinos*, that the credit card industry plays a role by encouraging consumers to spend more money, even far beyond their available cash. Therefore, more people were

⁶ "Becoming American Express." AMERICAN EXPRESS OUR STORY Becoming American Express: (n.d.): n. pag. Web. 19 Apr. 2015. See more: https://secure.cmax.americanexpress.com/Internet/GlobalCareers/Staffing/Shared/Files/our_story_3.pdf

interested in having a credit card. Even though America suffered from continuous economic recessions in the years after the creation of credit cards, by the 1980s, after a 10-year consecutive increase in the employment rate, more people were relying on credit cards to pay for their expenses. [Ritzer 2001: 3]

Seven decades after the appearance of the first credit card, it is almost impossible to think of a developed society without such financial credit. Further, the evolution of the credit card is ongoing, changing its initial shape from a rectangular plastic card to an immaterial tool embedded in a cellular phone or personal computer account. In the past, credit cards were not bound to a specific period of time but remained valid with the only limitation being their credit line. Debt and consumers have become two linked terms, both of which have steadily increased over the last 20 years.

Consequently, the use of credit cards has increased considerably in the last decades due to the creation of new technologies such as the Internet, and therefore, *e-commerce*. In the next chapter, I will discuss the evolution of the Internet from a governmental tool to its transition as a significant element of the economy. Additionally, I will present an overview of the dot-com collapse in order to understand the fragility of the market and how a few entrepreneurs have taken advantage of *e-commerce*.

Chapter 2

The Internet and the Dot.com Collapse

In 1962, J. C. R. Licklider, an American psychologist and computer scientist, wrote a series of memos describing the possibility of social interactions enabled through networking. Licklider's discussion is considered as one of the first recorded documentation of the early stages of the Internet [Leiner *et al.* 1997: 103].

The Internet, as we know it today, can be traced back to the early 1960s when the Defense Advanced Research Projects Agency (DARPA) of the Department of Defense of the United States developed a system of networked computers (ARPA Network) that allowed workstations on a private network to communicate with one another. This process was known as packet switching [Leiner *et al.* 1997: 103]. Leonard Kleinrock, Joseph Licklider, Paul Baran, Lawrence Rogers, and many other scientists of DARPA visualized an interconnected world where everyone could access data regardless of their location. These scientists came to the conclusion that shared computers could work well together, run programs, and retrieve data [Leiner *et al.* 2009: 2].

The theory of packet switching created the possibility of using DARPA's network beyond computational goals. It established the first steps to turn the Internet into a communications tool that would allow institutions and individuals to connect with one another [Leiner *et al.* 1997: 104]. Therefore, the relevance of Licklider, Baran, and Rogers'

work in the development of *e-commerce* was their vision of a global network of interconnected computers that could be used by any member of society [Coffman and Odlyzko 2001: 13]. If the network created by DARPA had remained for military purposes, it was likely that the world of *e-commerce* as we know it today would be completely different.

For more than 30 years, universities and government agencies continued developing technologies and communication protocols that eventually became the current definition of the Internet: a simultaneously general use tool, communication medium, set of material objects, ideas, and a factor in economic production [Consalvo and Charles 2011: 137]. The late 80s and early 90s were particularly important for establishing the Internet as a tool for commerce. In 1988, the National Research Council (NRC) sponsored a series of public conferences to explore the idea of an open and commercialized Internet. For example, in a conference at the Harvard Kennedy School of Government on the Commercialization and Privatization of the Internet, the main discussion included the costs and funding options for an interconnected network. Moreover, the report *Towards a National Research Network* published by the NCR observed the importance of a widely accessible network service and the sponsorship of the U.S. government of high-speed computer networks [Laurie and Fundukian 2012].

Therefore, the National Science Foundation Network (NSFN) is another crucial pioneer of the development of *e-commerce*. In 1991, the NFSN, a U.S. government agency, allowed the use of the Internet for commercial purposes and consequently let private companies provide Internet to regular users [Tian and Concetta 2006: 560]. When the

NSFN decided to lift commercial restrictions on the use of the network, it opened up opportunities for *e-commerce*. Users were no longer restricted by government regulations to embark in business opportunities and use the Internet as an open space for trading goods and services. Furthermore, after the restrictions were lifted, the NSFN stated that the number of Internet-connected computers grew from 2,000 in 1985 to more than two million in 1993. Later, the NSFN created one of the most important components of the Internet: domain names. Domain names refer to the association of a human-readable character string (such as website.com) with Internet Protocol (IP) addresses to help computers to locate one another [National Science Foundation]. By 1995, 97% of the registered Internet domains were commercial, and in just three years, the number of registered domain names had surpassed two million.

Therefore, the interaction between users and the Internet is another factor that promoted the Internet as a valid trade system. Having a graphical user interface (GUI) allowed ordinary users to explore the Internet without the need for deep computational knowledge. Also, the creation of the hypertext markup language (HTML) in 1991, with specifications for uniform resource locators (URLs), enabled the Web to evolve into the interconnected environment that we know today [Tian and Concetta 2006: 560]. The pioneers of electronic commerce can be either individuals who saw the potential of existing technologies or even private and public organizations that opened the field to a liberal and widespread use of the Internet. Furthermore, electronic commerce has driven marketing strategies based on the use of websites in order to allow ordinary users to connect to the Internet and consequently be part of the evolution of technology. According to NetCraft's

October 2014 Web Server Survey, in 2014, there were one billion active websites, an impressive number considering that all began with one website created in 1991 by World Wide Web's inventor, Tim Berners-Lee.⁷

The Pew Research Center stated that by 1994, 11 million American households were already equipped to connect their computers to the Internet. Moreover, in the same year, the White House came online, and the first online pizza order was made through Pizza Hut's website. Thus, the Internet and the electronic marketplace have grown and evolved together. Moreover, societies are aware of the commercial benefits of a well-structured business network. However, the Internet can also carry economic risks that perhaps could be the result of techno-ignorance or a reaction to the economic benefits of mobile technologies. It is imperative that users and entrepreneurs address these risks in order to maximize the impact of the Internet on economic growth and prosperity [Manyika and Roxburgh 2011: 1].

One clear example of the over appreciation of technology is the 2000 dot-com collapse. The dot-com collapse or dot-com bubble was a series of economical events that ended in 2000 with the crash of the U.S. stock market and the elimination of thousands of jobs across America [Kraay and Ventura 2007: 38]. The beginning of the dot-com collapse can be traced back to 1990, the same period as the development of e-businesses such as Amazon and eBay. Since the early 1990s to mid-2000s, the U.S. economy was experiencing an era of wealth as the growth rate of equity prices accelerated from 10.4% per year to

⁷ Tim Berners-Lee is an English computer scientist and MIT professor accredited as the inventor of the World Wide Web. See more: <http://internethalloffame.org/inductees/tim-berners-lee>.

21.2% [Kraay and Ventura 2007: 2]. Many investors had noticed the attractiveness of technology since it seemed that any average man with an interesting idea could become a genuine businessman with the help of the Internet. By the end of 1999, numerous new kinds of products and services were booming in the World Wide Web. Moreover, Americans recognized that technological developments had been essential in the nation's transition from a manufacturing-based country to a service-based economy [Laurie and Fundukian 2015]. From pet services to gardening supplements, it appeared that the Internet was an open place for any economic adventure. Amazon's vast catalog of books at affordable prices and eBay's open market for buying and trading goods showed the world that technology has given America's middle class the opportunity to expand their commerce horizons. These success stories of big technological companies (e-companies) born in suburban garages could have also encouraged investors to believe that *e-commerce* stocks were reliable and easy to resell in order to obtain significant profit. For instance, Aol.com's stocks went public at a price of \$11.50. By the end of 1999, the price had raised to \$90 [The Washington Post 2010].

However, by the mid-2000s, the real value of e-companies was about to impact the U.S. economy. From March 10 to April 14, 2000, NASDAQ, the high-tech stock exchange, fell 34.2%, and the Dow Jones Composite Internet Index dropped 53.6%. The stock price for all the 20 leading Internet stocks dropped, including Amazon.com by 29.9% and eBay by 27.9%, among many others [Becker 2008: 561]. What seemed a good investment turned into a business of speculation. Numerous Internet-based companies sold their products without any profit or even losing money. The primary objective of those entrepreneurs was to build brand awareness and, therefore, increase the company's market value [Becker

2008: 58]. According to a report by CNN Money, many e-business owners did not realize they had similar needs as traditional retailers in order to work in the digital world, from infrastructure to warehousing. Garage-entrepreneurs did not plan ahead the quick expansion of their businesses. They also overpassed costs of customer acquisition and started to realize that they were not unique when traditional retailers such as Walmart started creating their websites and became a better-prepared competition [Kleinbard 2000]. However, not all traditional retailers were prepared to compete in the electronic marketplace. The pet food supplier Petco tried to replicate the business model of their brick-and-mortar stores in the virtual world (Pets.com), but unaware of how online consumers behaved, their *e-commerce* adventure ended with profit loss and even bankruptcy. Pets.com wanted to shift customers into higher-margin purchases, but the customers' behavior did not change, and it continued to sell merchandise for approximately 27% less than the original cost [Cheyfitz 2003: 31]. This strategy is an example of how these administrative problems may be the result of inexperienced managers who lacked financial training or had no business-related experience.

Furthermore, young people who had just completed their undergraduate studies ran 50% of the dot-com businesses in the 2000s. Also, these managers were spending their revenues in advertisement and high profile marketing activities (i.e. Super Bowl ads) rather than investing in their company. For example, in 2000, Pet.com had a \$27 million budget for advertisement, but its Q3 revenue reached only \$5.2 million [Thornton and Marche 2003: 128]. Also, after nine months of its \$82.5 million January IPO, Pet.com closed its doors with a stock value that had fallen from \$11 to \$0.19.

| Percentage of Revenue Spent on Marketing and Sales | | | | |
|----------------------------------------------------|------|------|------|------|
| | 2000 | 1999 | 1998 | 1997 |
| Pets.com | 235% | 734% | n/a | n/a |
| Streamline.com | 40% | 32% | 22% | 54% |
| Garden.com | 172% | 247% | 180% | 293% |
| eToys.com | 70% | 80% | 70% | n/a |

Figure 2. Revenue spent on marketing sales⁸
Source: International Journal of Information Management

On the one hand, the collapse of the e-market was the fault of unprepared business managers who hide the real cost of their products in exchange of global recognition and promotion. On the other hand, investors were also responsible of this “bubble” by not measuring the true risks of their investments and by just focusing on grabbing a piece of what appeared as an easy lucrative business [Laurie and Fundukian 2012: 173]. Consumers increased the attractiveness of the Internet as a place with the appealing potential to develop economic ventures. In 1999, people around the world were embracing the use of the World Wide Web with more than 280,866,670 Internet users. By 2000, the number of users increased to 413,425,190. Ultimately, by 2001, the bubble wiped out \$5 trillion in market value.⁹ Very few Internet companies survived the dot-com bubble, with some of the notable exceptions being Amazon.com and eBay.

However, the dot-com collapse of 2000 has not stopped the development of the Internet as a place of commerce and is again considered as a worthy investment. For

⁸ Thornton, Jennifer, and Sunny Marche. “Sorting through the Dot Bomb Rubble: How Did the High-profile E-tailers Fail?” *International Journal of Information Management* 23.2 (2003): 121–138.

⁹ Gray, Matthew. “Total Number of Websites.” Internet Live Stats. *NetCraft and Internet Live Stats*, 2014. Web. 2 Apr. 2015.

instance, Don Moskowitz argues that, even though, there is a tacit fear of a second tech bubble, there are quality companies in which investors can trust and, therefore, obtain profit.¹⁰ The growth of websites has increased since 1999, with a couple of fluctuations in 2010 and 2013; there are no indications that it will stop growing. It should be noted that not all existing pages are focused on business, but it is an indicator that this mobile technology is vastly accepted worldwide.

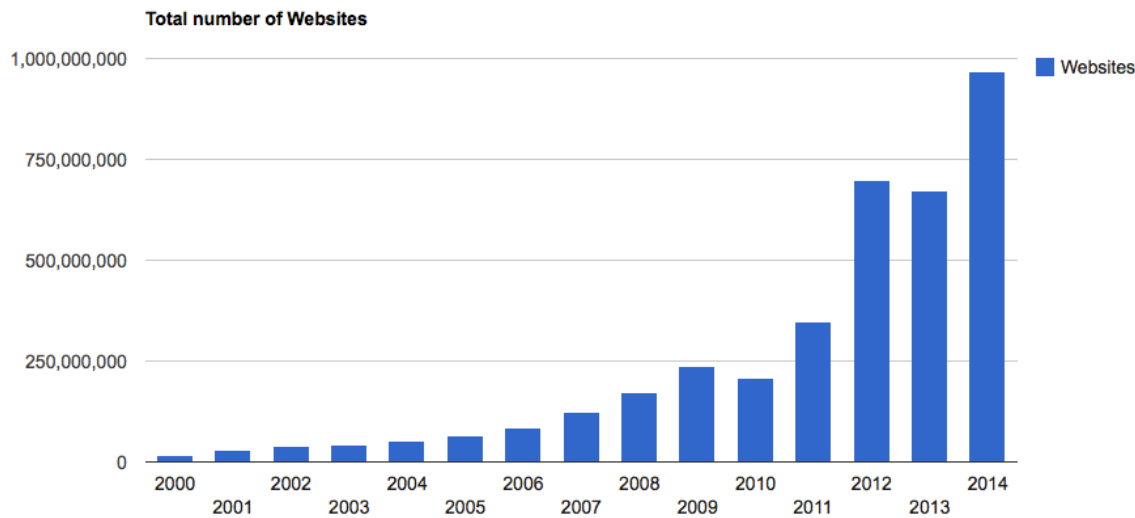


Figure 3. Number of websites between 2000 and 2014¹¹
 Source: Internet Live Stats

The idea of technology as a good investment has not decreased either. For example, in 2012, Facebook, an online social network service, drew the attention of U.S. investors and the media. The *Wall Street Journal* declared that Facebook’s market value could rich

¹⁰ The ten most reliable companies to invest in in 2015 are Apple, Amazon.com, Wix.com, Facebook, Fireeye, Nice Systems, Cogent Communications, Netflix, Veeva Systems, and Baidu. See more: <http://www.investopedia.com/articles/active-trading/031315/top-10-internet-stocks-2015.asp>.

¹¹ Gray, Matthew. “Total Number of Websites.” Internet Live Stats. *NetCraft and Internet Live Stats*, 2014. See more: <http://www.internetlivestats.com/total-number-of-websites/>.

\$100 billion, making the company one of the biggest U.S. stock-market debuts of all time [Raice 2011]. However, in May 2012, after much media speculation and some technical glitches, Facebook's stock value fell from \$38 to below \$18.¹² It appeared that Facebook was living a similar panorama as those overvalued dot-coms of 2000. However, after its almost-failed IPO, Facebook had the opportunity to prove its market value. Most of the investors doubted Facebook's business model since it was based on desktop advertisement when most of its one billion users were accessing the social network through their mobile devices.¹³ It took nearly two years for Facebook to overcome those initial problems and develop a business model oriented for mobile technology. According to NASDAQ, by the end of March 2015, Facebook had a stock value of \$82, more than double of its initial value.

Like any other business model, *e-commerce* has had a long history of success and failures. Although it was not born as a tool to expand consumerism, for more than 30 years, it has adapted to society's needs, and it has evolved to the point that it became an emblematic symbol of the free market. The dynamism of *e-commerce* has its complications, as it can create false expectations of its real capacities. As seen in this chapter, many businesses owners were not prepared for the challenges of the electronic marketplace. Some of them adapted their business strategies with almost no complications, but many others failed to survive. Nonetheless, businesses owners are not the only ones to blame when there is a market failure. Consumers have a pivotal role in the electronic

¹² Luckerson, Victor. "Here's How Facebook Doubled Its IPO Price." *Time*. *Time*, 24 July 2014. See more: <http://time.com/3030510/facebook-stock-doubles-ipo-price/>.

¹³ According to CNN Money report by Aaron Smith, Laurie Segal and Stacy Cowley, on October 2012, Facebook exceeded 1 billion users worldwide. See more: <http://money.cnn.com/2012/10/04/technology/facebook-billion-users/>.

marketplace; they must approach online ventures with the same caution they do in brick-and-mortar stores.

Furthermore, mobile technology is giving the opportunity to ordinary men and women to develop ideas beyond physical borderlines. It can change the way society buys books or even how music is distributed.¹⁴ It can even connect a wine producer living in Italy with an American chef living in New York without the need to take a plane.

Consequently, many entrepreneurs have seen the potential of mobile technology as a tool to improve consumerism and produce wealth. In the following chapter, I will discuss how Amazon and eBay, two companies born in the digital world, have changed the way people buy goods and services around the world and how mobile technology is changing the way we envision traditional commerce.

¹⁴ In March 2015, the Recording Industry Association of America (RIAA) reported that music streaming sales surpassed CD sales. Digital downloads and streaming reached \$1.87 billion in 2014 while CD revenues reached \$1.85 billion. See more: <http://www.engadget.com/2015/03/19/streaming-music-beats-cds/>

Chapter 3

The Demise of the Shopping Mall: eBay, Amazon, Dell.com, and how electronic technology has affected retailers

From its beginnings, mobile technology improved the relationship between consumers and sellers. As discussed in chapter 1, the proliferation of credit cards developed a series of business and opportunities that expanded consumerism (e.g. flex payments and international shopping) worldwide. However, today, several entrepreneurs use technology to approach consumerism with a different lens, reducing the distance between buyer and producer and creating pseudo-democratic spaces where social class does not limit consumerism [Miles 2010: 171].

eBay.com

In 1995, when 42% of U.S. adults had never heard of the Internet¹⁵, a French-born computer programmer, Pierre Omidyar, became one of the first entrepreneurs who used the power of the Internet to shift the way society dealt with demand and supply. Omidyar, who had studied at Tufts University, developed an online auction site named AuctionWeb, which allowed ordinary people to trade goods without the need of an intermediary [Bunel and Luecke 2001: 22]. Initially, AuctionWeb was not meant to be a commercial success or to compete with big retailers, it was Omidyar's personal project to test how reliable the

¹⁵ Fox, Susanna, and Lee Raine. "Part 1: How the Internet Has Woven Itself into American Life." *Pew Research Centers Internet American Life Project RSS*. N.p., 26 Feb. 2014. Web. 09 Apr. 2015.

Internet was as a medium of commerce [Clark 2000: 1]. The first ever item sold at AuctionWeb was a broken laser pointer that once belonged to Omidyar. The item was sold in less than a week for \$14, a good price considering that it was useless. Even though Omidyar's idea seemed to have potential, there wasn't a big audience for AuctionWeb's business model. According to a study made by the Pew Research Center¹⁶ in 1995, only 18 million Americans had online access and just 3% of them were actively using the Internet.¹⁷ However, he had the support of Jeff Skoll, a Stanford MBA who worked with Omidyar to develop a profitable business model and Meg Whitman, a Harvard Business School graduated who had worked at Hasbro [Bunel and Luecke 2001: 26].

The success of AuctionWeb can be attributed to how Omidyar interacted with AuctionWeb's users. In his book, *The Perfect Store: Inside eBay*, Adam Cohen argues that Pierre Omidyar made AuctionWeb a trustworthy marketplace by personally taking over any dispute between buyers and sellers. Moreover, Cohen describes eBay as a community website where unsatisfied users could contact Omidyar by sending a message to his e-mail account (pierre@ebay.com). Omidyar's community model proved the importance of consumer service. As told by economist George Akerlof, markets in which sellers can reliably signal a product's quality have a greater chance of success [Melnik and Alm 2002: 337]. Further, Omidyar pushed Akerlof's theory when he developed a feedback forum for his website. The feedback forum was created to evaluate buyers' and sellers' performances

¹⁶ Pew Research Center is a nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping America and the world. See more at pewresearch.org

¹⁷ "World Wide Web Timeline." Pew Research Centers Internet American Life Project RSS. Pew Research Center, 11 Mar. 2014. See more: <http://www.pewinternet.org/2014/03/11/world-wide-web-timeline/>

and to give future users the opportunity to explore how reputable a seller was [Cohen 2002: 28].

After the success of its first sale in 1996, Omidyar's website hosted more than 250,000 auctions in 60 categories. By the end of the year, it was managing almost 15,000 simultaneous auctions daily. The site received over two million hits a week, and the amount of money exchanged for goods sold exceeded \$6 million for the year [Pederson 2005: 158]. In 1997, growth was phenomenal. In just the month of January, the number of auctions reached 2,000,000 [Lewis 2008: 36]. Later that year, Omidyar opted for a simpler domain and changed AuctionWeb.com to eBay.com. His first intention was to use echobay.com, inspired by his company Echo Bay Technology Group. Unfortunately, a Canadian company had already taken the domain, so he opted for the second best option [Cohen 2002: 22].

eBay showed that the auction business model was effective. However, eBay had grown so much that it became almost impossible to cover operational expenses on its own. The company went public in 1998 with an initial value of \$18 per share and more than 340,000 active users. For the first two-quarters of 1998, eBay managed to show a positive net income of \$348,000. Further, analysts noted that the valuation reflected consumer excitement over online auctions and investor awareness of the potential for profit.¹⁸ In 2001, eBay's expansion and acceptance grew steadily. eBay had 423 million items listed in

¹⁸ "Ebay - Became Public Company In 1998", *Free Encyclopedia of E-commerce*, 2001.

18,000 unique categories [Bajari and Hortacsu 2003: 329]. More recently, in the fourth quarter of 2014, the site reached 155.2 million active users.¹⁹

While traditional brick and mortar stores depended on merchandise stocks and trends, eBay was a technology that changed how business was being done. It had the capacity to turn anyone's online computer into a virtual store. eBay became an emblematic actor of the "digital economy;" eliminating the middlemen and reducing products' expenditure. The electronic market had a new twist with the expansion of eBay. The auction-style site generated individual sales from any product, from comic books to high-end cars.²⁰ eBay created a space for individual tastes, for those buyers who have not seen their needs met in traditional shops.

The global success of eBay can also be attributed to its 2002 acquisition of PayPal. PayPal was a small company that developed an online payment system and created a neutral space for customers and buyers to manage payments.²¹ Erick Jackson, in his book *The PayPal Wars: Battles with eBay, the Media, the Mafia, and the Rest of Planet Earth*, explains that before the acquisition of PayPal most eBay sellers had too few sales, preventing them from qualifying for a merchant's processing credit system; therefore they were unable to accept credit cards. Thus, many eBay buyers could not use their credit

¹⁹ "eBay: Number of Active Buyers 2010-2014 | Statistic." Statista. See more: <http://www.statista.com/statistics/242235/number-of-ebays-total-active-users/>

²⁰ In July 2014 eBay sold the first edition of Superman Comic in a record value of \$3.2 millions. See more: Businessinsider.com.

²¹ PayPal is an electronic payment system founded in 1998 that allows customers to send money without sharing financial information by using their PayPal account balances, bank accounts, PayPal Credit and credit cards. See more: <https://www.paypal-media.com/about>.

cards; the majority of them were limited to paying with money orders or mailing checks [Jackson 2004: 31].

The importance of PayPal for eBay's success did not go unnoticed. In 2005 Peter Kang (*Forbes*), reported that in the last quarter of 2004 eBay presented earnings below Wall Street's expectations but managed to survive thanks to PayPal because it accounted for 21% of revenue and was the vehicle for 74% of auction payments [Kang 2005]. Ten years later, PayPal continued to be a valuable asset for eBay, representing 44% of eBay's revenue.²² In September 2014, eBay Inc. announced the planned separation of eBay and PayPal into independent publicly traded companies. The move followed a strategic review conducted by eBay, Inc. and its Board of Directors. It was intended to help both businesses grow faster in their respective markets, giving them the opportunity to create new commercial alliances.²³ However, eBay's relationship with PayPal will not be discontinued, its founder Pierre Omidyar will serve at PayPal and on eBay's board in a non-chair capacity and the current eBay Inc. President and CEO John Donahoe will serve as the Chair of PayPal's board.²⁴ Since eBay's sales were dependent on ordinary people who did not necessarily run stock management systems, did not have the benefit of advertising in big media outlets and did not have sponsorships or trade agreements, the online business's threat to traditional vendors was hidden. Nevertheless, retailers started to offer their products online, not as a response to eBay's threat, but as an additional option for their traditional consumers [Rowley 1996: 85].

²² "2014 Full-Year Financial Metrics." PayPal. PayPal, 2014. Web. 10 Apr. 2015.

²³ Etherington, Darrell. "EBay And PayPal To Split Into Two Separate Companies." TechCrunch. N.p., 30 Sept. 2014. Web. 10 Apr. 2015.

²⁴ "Summary of the Operating Agreement between EBay and PayPal." Separation.ebayinc.com. EbayInc, 9 Apr. 2015. Web. 10 Apr. 2015.

Amazon.com

If eBay revolutionized *e-commerce* in 1995, Jeff Bezos, a computer scientist who became a Wall Street analyst, initiated a revolution in shipping products and dealing with middlemen in 1994. A graduate from Princeton University, Bezos created Amazon.com: a virtual mega mall that began as an online bookstore. Bezos' idea did not come overnight. Before he created Amazon, he had developed a career that gave him the experience in business and international communications that enriched his new venture. Since 1986 he had worked in several positions related to network solutions and telecommunications; even managing customer support groups [Spector 2009: 13]. Bezos' idea to create an online bookstore was not original. In 1990, Charles M. Stack, a Cleveland-born computer engineer, funded Book Stacks Unlimited (books.com), an online bookstore that offered over 500,000 titles.²⁵ Unlike Amazon, Books Stacks Unlimited was eventually sold to book retailer Barnes and Noble.²⁶

Bezos's inspiration to create an online business store came after a former supervisor, David Shaw, sent him to find business opportunities that could be handled with Internet technologies [Spector 2009: 16]. Michael Martin, in his article *The Next Big Thing: A Book Store*, comments that Bezos was aware of the value of bookstores, but he was not interested in maintaining a continuous stock of books in a unique warehouse, but in making deals with book distributors. Martin also explains that Bezos conceived a model of business where Amazon's users could have access to an unlimited catalog of books online.

²⁵ Soeder, John. "CyberScene: Book Sale," Inside Business, March 1, 1998.

²⁶ Erwin, G. J., and Craig Neville. Blewett. Computing for a Small Business. Kenwyn: Juta, 1998. 256. Print.

The advantage of browsing countless titles without having to leave the comfort of home was Amazon's main goal as a bookstore [Stone 2013: 2875]. In the first two months of business Amazon sold to all 50 states and over 45 countries with sales of up to \$20,000/week [Spiro 2011]. Nonetheless, by the end of 1995, Bezos was facing bankruptcy. He was so focused on the business plan that he was convinced that he was going to lose money for at least five years [Spector 2009: 110]. Gradually, after exhausting negotiations, Bezos obtained the necessary funding to keep Amazon.com up and running [Spector 2009: 112]. Further, Amazon implemented a business model based on managing a fast-turning inventory from a centralized, low-overhead operation. The advantage of managing a website was that the external infrastructure already existed—computers and Internet connections—helping Amazon to reach a worldwide audience with a unique central location [Spector 2009: 52]. In 1997, a letter written by Bezos to Amazon's first shareholders stated that by the end of the year more than 1.5 million customers has been served and sales had grown from \$15.7 million in 1996 to \$147.8 million. In 2014, Amazon's net sales revenue reached almost \$90 billion. While initially its vast catalog of books was Amazon's stellar merchandise, Bezos expanded his emporium by selling CDs, computer software and even children's toys.

Consequently, Amazon could be considered one of the first digital mega malls. The business model is similar in the sense that it provides a space where buyers can navigate an unlimited product catalog that has the convenience of being sold by a single company. However, the difference between traditional retailers and Amazon.com is that Amazon is not only a place where brands and producers can offer their products, it is a large-scale

intermediary that has removed from buyers the overwhelming process of negotiating with suppliers and distributors. Moreover, Amazon produces an experience that traditional brick and mortar retailers cannot replicate, by allowing users to explore goods at any time of the day, regardless of their income or social class. It also gives them the opportunity to purchase goods at affordable prices. In their article, *The Commitment–Trust Theory of Relationship Marketing* (1994), Robert Morgan, and Shelby Hunt commented that brand trust leads to brand loyalty or commitment. Bezos and his team encouraged users to post reviews of the products they bought at Amazon.com. Therefore, an important part of the success of Amazon.com was that every item sold had a star rating, which showed how valued it was by costumers.

The success of the Amazon model was reflected when the price of its stock market shares reached \$245. The dichotomy between a high stock value and the absence of profit can be resolved by considering that Amazon.com is a mobile technology that is constantly forced to financial outlays and capital investments that allow the company to maintain its market leadership but reduce its ability to obtain long-term economic success. In addition, Amazon is not free of financial missteps. In its desire to compete in various market niches, Amazon has developed products that have not been widely accepted by consumers. The Amazon Fire phone is an excellent illustration of an ambitious project that sought to compete with Apple's iconic iPhone but was not successful in the market. However, such economic ventures are fine examples of how *e-commerce* has shaped consumer behavior by creating stores that offer new experiences instead of only being a showcase to buy and sell products.

Amazon is a critical example of a commercial venture that breaks physical barriers by creating a digital space where nationality or geographical locations are not an impediment to acquiring a product. While there are restrictions related to local taxes, Amazon has become a worldwide digital retailer. Unlike a traditional mall retailer, Amazon can offer its products globally without having to build a physical space to display its products. Even more, the threat to traditional shopping centers grew when Amazon presented a system that delivered products in just two days (and in barely an hour in certain cities in North America). The continuous growth of Amazon has made this company a phenomenal success in North America and worldwide.²⁷

Dell.com

eBay and Amazon are models of mobile technology that have excelled at finding new market niches in leisure activities. In 1985 a 19-year-old computer seller from Houston Texas, Michael Dell, created his own niche focusing on assembling personal computers at low cost and eliminating intermediaries.²⁸ In his article *The Power of Virtual Integration: an interview with Dell's computer Michael Dell*, Joan Magretta relates that when Michael Dell established PCs Limited, a subsidiary of the Dell Computer Corporation, most computer companies (such as IBM and Compaq) had a vision of developing every component of a computer. Those companies had higher production costs because they had to build massive

²⁷Campbell, Neill. "What are the reasons for Amazon's successful international expansion?" *Quora*. 2012 See more: <http://www.quora.com/What-are-the-reasons-for-Amazons-successful-international-expansion>.

²⁸"Michael Dell Biography." -- Academy of Achievement. N.p., 5 Feb. 2013. Web. 10 Apr. 2015.

structures and hire more workers. Michael Dell had a different approach; he saw an opportunity to break the market by reducing production costs. Those savings came from having several suppliers, eliminating the requirement of having a large production plant of their own [Dell and Fredman 2010: 60]. Thus, in 1985 PCs Limited built their first computer, the Turbo PC, and sold it to the public with an interesting differentiator: risk-free returns and at home product assistance.²⁹ The customer-oriented motto of Dell's company is a pivotal element of its success. As told in his autobiography *Direct from Dell*, Michael Dell understood that his company needed to differentiate itself from its competitors beyond its capacity to offer less expensive products:

Even though what we were doing was unprecedented, we had the reassurance of customers telling us exactly what products and features they wanted. Our approach worked, not because we were the only company doing it, but because we were the only company obsessed with serving the needs of our customers—in terms of quality, speed, and service [Dell and Fredman 2010: 47].

In 1988, Dell Computer Corporation went public, raising \$30 million in its initial public offering. Soon the business went global, with manufacturing facilities in Europe and Asia, and partnerships and subsidiaries in Europe, Asia, Australia and Latin America.³⁰ Dell's business ambition became more evident when in 1990 Dell became the first computer company to sell computers through retail stores such as CompUSA and Best Buy. However, after determining that the retail store model did not meet Dell's financial objectives, they opted to exit this segment [Dell and Fredman 2010: 60]. Dell's failed venture into the retail market did not stop its expansion. In 1992, Dell Computers achieved

²⁹ "The Birth of a Company." Dell. N.p., n.d. Web. 10 Apr. 2015.

<http://www.dell.com/learn/us/en/uscorp1/birth-of-company?c=us&l=en&s=corp&cs=uscorp1>.

³⁰ Ibid.

more than \$2 billion in sales and became the world sixth-largest PC desktop maker. Just four years later, in 1996, Dell had \$12 billion in revenue as a result of its diversification into the server market.³¹

The expansion of Dell continued in 1998 when Michael Dell presented Dell.com, an online shop that allowed users to choose different components and build their own computer. Dell.com became an instant success reaching sales of \$12 million per day.³² Dell.com allowed anyone with an Internet connection to be part of the assembly line. With a remarkable interface, the user had an opportunity to choose which components were more suitable for their perfect machine. The options included how much storage the hard drive could handle to the size of the RAM. It created the illusion that the user's imagination was the only limit. Once again, the success of Michael Dell's company was due to attending to his customer's needs with quality products, competitive prices, and outstanding customer service.

The impact of e-shops such as Amazon, Dell, and eBay had a direct impact on the economy of North America. In 1999, *e-commerce* generated \$15 billion of U.S. retail sales³³ in comparison to the last quarter of 2014 that tripled to \$76 billion. While sales of traditional retailers had positive balances, *e-commerce* sales have never passed unnoticed.

³¹ "Dell, Michael." Gale Encyclopedia of *E-commerce*. Ed. Laurie J. Fundukian. 2nd ed. Vol. 1. Detroit: Gale, 2012. 182-184. Gale Virtual Reference Library. Web. 10 Apr. 2015.

³² Dell, Michael; Fredman, Catherine; (2010-09-21). Direct From Dell: Strategies that Revolutionized an Industry (Collins Business Essentials) (p. 2). HarperCollins. Kindle Edition.

³³ "*E-commerce* 1999." United States Department of Commerce, 7 Mar. 2001. Web. 10 Apr. 2015.

In 1998 the NY Times published an editorial predicting a radical change in the way people will acquire products and services in the future. The editorial was emphatic in explaining how online retailers were a response to a market in need of products tailored to consumers' particular experiences:

In the future, of course, Internet selling is expected to claim a much bigger share of the shopping dollar. Virtually nonexistent four years ago, shopping on line is now the fastest-growing form of retailing. This year's Christmas sales are expected to be two and a half times last year's, with hundreds of thousands of people buying on line for the first time. Consumers have been lured by the shop-at-home convenience and the ability to pick from a huge selection of products [Hansell 1998].

On the other hand, retailers were battling a different war, where products were not enough to draw the attention of a potential consumer. Even though malls still had sales agents and attractive store designs, they were limited by time and space. In the digital mall, Amazons' users compared prices from limitless suppliers without the need to move from their sofa; eBay bidders were finding unique pieces of art or memorabilia, and Dell customers had the opportunity to build their perfect laptop. Apart from tax and commerce regulations, e-sellers like Amazon, eBay, and Dell were not restricted from offering their products in any part of the world. Moreover, this business model has proven to be so successful that it has permitted these companies to acquire smaller ones in order to become proficient on every side of the business. eBay's most remarkable acquisition was Skype. However, the desire to diversify the company's portfolio has shown that these

business ventures do not always last, and they are not always profitable.³⁴ Negotiations and expansions are important factors in staying on top of the market and maintaining consumer satisfaction.

The following chapter will develop the idea of mobile technology and how the creation of websites has influenced traditional retailers to change their approach to consumers. It will illustrate the interaction between technology and shoppers.

³⁴ According to Wired Magazine, eBay bought Skype for \$3.1 billion in 2005. In 2009, eBay sold the majority of its stake to a private investment group, Silver Lake, for \$1.2 billion less than it paid. See more: <http://www.wired.com/2011/05/microsoft-buys-skype-2/>

Chapter 4

Mobile Technology: its wider impact on consumers and advertisers

In the past few decades, *e-commerce* and globalization have created a free, open space for commercial goods and services. On the one hand, *e-commerce* has the potential to connect two important factors: all things related to business and commercial activities and use of the Internet [Chaudhury and Kuilboer 2002: 6]. Secondly, globalization (characterized by growth in the international trade of goods and services) links political and social relations to enable economic growth and integration [Aydin and Savrul 2014: 1268]. For instance, the case studies of eBay, Amazon and Dell developed in Chapter 3 give a fine example of how entrepreneurs have taken advantage of globalization while exploring the relatively new environment of *e-commerce*. In an effort to keep companies afloat, producers and consumers have adopted this business model in order to explore the changing world of mobile technology.

In her article *How the Web Drags on Some Retailers*, Suzanne Kapter argued that online sales are growing much faster than brick-and-mortar sales. According to a study developed by Forrester Research, these sales are expected to hit \$414 billion, or 11% of all U.S. retail sales, by 2018 [Kapner 2014]. Consequently, traditional retailers (e.g. Gap or Levi's) have decided to extend their brick and mortar stores to the World Wide Web in order to compete with online stores such as Amazon and eBay.

Mobile technology is understood as a wide range of interactive business processes that occur before and after sales transactions. It is the electronic exchange of information, goods, services and payments over telecommunications networks [Tarasewich *et al.* 2002: 41]. Thanks to the Internet, retailers are taking advantage of this process in order to enlarge their business capacities and to expand their revenues. An article, “Trends in producer prices between e-commerce and brick-and-mortar retail trade establishments” by Lana Borgie of the Bureau of Labor and Statistics, explains the impact of electronic retailing:

In the first quarter of 2004, the incidence of retailers conducting electronic retailing was considered minor, making up only 2 percent of total U.S. retail sales. But from 2003 to 2006, electronic retail sales increased an average of 28 percent annually. Then, by the first quarter of 2014, *e-commerce* grew to about 6 percent of total retail sales in the United States. Between 2009 and 2014, *e-commerce* sales increased at an average annual rate of 16 percent, compared with a 5-percent growth rate in total retail sales.

In contrast, traditional retailers have been obligated to give away more money to cover rising rent prices and marketing expenses [Borgie 2014]. Many companies have been forced to dedicate part of their budget to creating websites in an effort to develop a digital presence rather than increasing their market share. According to the England-based Internet security company Netbase, since 2001 there has been a steady growth in commercial websites around the globe, to the point that in 2012 there were almost 2 billion active commercial websites [Netcraft.com 2012].

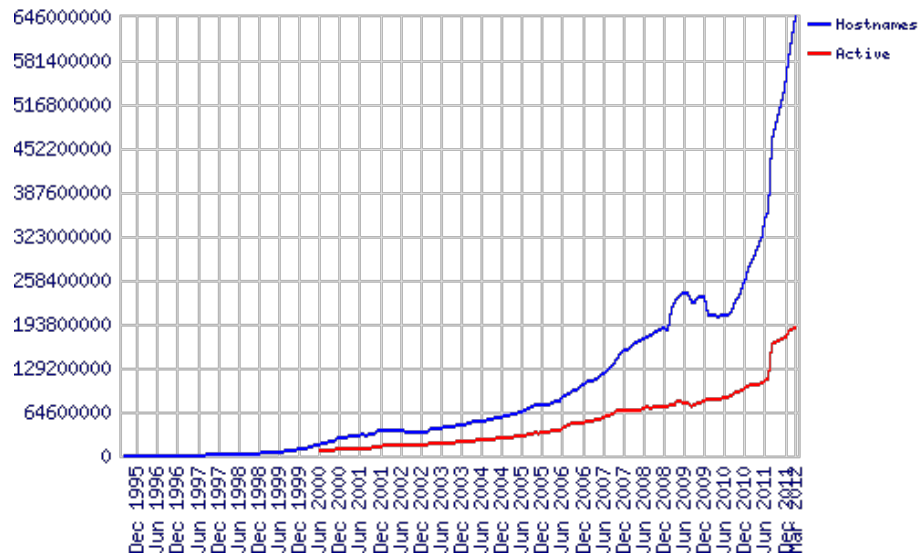


Figure 4. Total Sites Across All Domains August 1995 - March 2012
Source: Netcraft.com

The increasing number of commercial websites shows that business owners are looking at mobile technology as a valid channel to increase sales and customer contact. For example, high-end fashion stores have more opportunities to retain new customers with their physical stores rather than their virtual sites [Bogaisky 2014]. Mobile technology has allowed high-end stores to create an online experience while browsing the website. This new interaction is appealing to new audiences and creates an opportunity to reach younger consumers by promoting their websites through social media sites like Facebook, Twitter or Instagram; significantly changing the acceptance of online shopping. For example, according to a report from Sociable Labs,³⁵ 62 percent of online shoppers have read product-related comments from their Facebook friends. 75 percent of them have clicked on the product link to visit the retailer's site, and 53 percent of those who clicked go even further and buy the product. Kimberlee Morrison, in her article *Social Media Has Changed*

³⁵ Sociable Labs is startup company founded in 2009, focused on integrating social actions and social sharing into *e-commerce* websites. See more: <http://www.sociablelabs.com>.

How Consumers Shop Online, states that the use of mobile devices while shopping in-store has also increased significantly to 67 percent, 24 per cent more than in 2013.

Before the boom of mobile technology, high-end fashion retailers devoted their efforts to creating lifestyle experiences for those who visited a physical store. From exotic window decorations to enthusiastic hostesses helping customers to find the perfect apparel. William L. McComb's article for *Forbes Magazine*, "Clicks And Mortar: Why In-Store Experience Matters (Now More Than Ever)," states that a successful in-store brand experience depends on three factors: the need to see, to feel and do so with others. Moreover, with the proliferation of mobile technology, marketers realized that physical experiences needed to be transferred to the virtual world. For brick-and-mortar stores, the process of becoming online retailers turned out to be complex. McComb discusses the five essential elements for creating a welcoming experience in a physical store: a) community: retailers should be engaged in social media; b) mobile experience: the company should create a mobile website as a teaser; c) ambiance: give the store a real vibe; d) knowledge: have trained people to help costumers in their shopping experience, and e) design: use the colors of the brand in as many ways as possible. These factors acknowledge the importance of the customer's visual experience and how useful these elements can be for a website. For example, online retailers make use of innovative graphical elements such as high definition photographs of models in perfect locations, calming melodies and the ability to show the company's name on every page. They are not only replicating the in-store experience, but also enhancing it. Therefore, mobile technology works to increase sales, while creating a life-like experience [Holl 2013].

On the other side, consumers have benefited from mobile technology by having a broader field of comparison for products and their shopping is not limited to a particular city or country. Wisely, private and public mail carriers have increased their services to meet online shoppers' needs for faster and safer deliveries. In November 2014 the United State Post Service (USPS) announced that postal agents would deliver items even on Sundays during the December holiday season, as a response to online shopping's increasing demand on mailing systems. In a similar move, Amazon announced Amazon Now in December 2014, a one-hour delivery system for online shoppers who use Amazon's select service Amazon Prime. Although there are restrictions for USPS' and Amazon's services, there is a clear panorama that suggests mobile technology has created the ability to shop for products as quickly and simply as buying in a local shop or trendy mega-mall.

Additionally, we can infer that mobile technology has created a new approach to consumer behavior. Although online shopping does not provide hints about lifestyle, it appears to influence attitudes toward compatibility with existing shopping habits [Dholakia 1999: 157]. Mobile technology has also devalued the importance of physical money by making it impossible to pay for a product with cash. Mobile consumers need some form of digital currency to be part of the online commercial world. In fact, many online stores have exclusive partnerships with credit card companies that allow them to reject any other form of payment.

Customers are also giving up privacy and personal data in exchange for deals or discounts. Many stores have detailed forms that a shopper needs to fill out in order to

obtain a product. From simple information such as names, addresses and age, to specific data such as personal interests, hobbies and racial identification, user's data has a purpose – to feed the store's database [Keiser 2003: 79]. Mobile technology allows companies to have a detailed customer profile that goes beyond previous purchases. It can go into as much detail like how many times a customer clicks over an item, his or her location and even how much time a customer spent looking for a particular item. When a user clicks on a website, a tracking session begins. A session tracks the user from the first page he or she clicks on until he or she exits the site. The session can be monitored in several ways. The IP address, the binary digits assigned to the computer by the Internet provider, can provide website owners with an approximate location of the users, including city, state, as well as the computer's hardware.³⁶

For example, this is the sort of data collected by Amazon.com:

Examples of the information we collect and analyze include the Internet protocol (IP) address used to connect your computer to the Internet; login; e-mail address; password; computer and connection information such as browser type, version, and time zone setting, browser plug-in types and versions, operating system, and platform; purchase history, which we sometimes aggregate with similar information from other customers to create features like Top Sellers; the full Uniform Resource Locator (URL) clickstream to, through, and from our Web site, including date and time; cookie number; products you viewed or searched for; and the phone number you used to call our 800 number. We may also use browser data such as cookies, Flash cookies (also known as Flash Local Shared Objects), or similar data on certain parts of our Web site for fraud prevention and other purposes. During some visits we may use software tools such as JavaScript to measure and collect session information, including page response times, download errors, length of visits to certain pages,

³⁶ "How Companies Collect Your Private Information When You Browse Online." *Reputation.com*. N.p., 28 Sept. 2011. Web. 01 Apr. 2015. See more: <http://www.reputation.com/reputationwatch/articles/how-companies-collect-manage-and-use-your-private-information-when-you-browse-online>.

page interaction information (such as scrolling, clicks, and mouse-overs), and methods used to browse away from the page. We may also collect technical information to help us identify your device for fraud prevention and diagnostic purposes [Amazon.com].

From a commercial point of view, customers could benefit from providing detailed information by having offers tailored according to their personal interests, income capacities or location. For product developers, this gives opportunities to shape personalized products, providing better customer communities, and enabling developers to fulfill customers' desires by monitoring their online activity [Seybold *et al.* 2008: 12].

Mobile technology expands the scope of customers, advertiser, and retailers. In traditional shops, vendors are limited to promoting their products at times that are not necessarily the most optimal to capture the customer's attention. To extend their chances of sales, they must buy commercial space on popular television programs or national radio stations. According to Peter Van Allen from the *Philadelphia Business Journal*, some companies are having difficulty justifying expensive Super Bowl ads. Moreover, in his interview with Joe Glennon, Assistant Professor of Advertising at Temple University's School of Media and Communication, Allen stated, "it has been a long time since television could be used to convince people to buy your product. Today, the medium is best used to remind current users of brand attributes and reinforce the positive feelings of choosing a brand."

Therefore, traditional advertising media are not as effective as promoting a product online. Digital advertisers can promote without schedules; drawing consumers' attention in any time of the day. Several studies show that the early morning hours are most optimal for sending commercial e-mails, because mobile users are more likely to catch up on news, events and promotions early. Alex Moore, CEO of Baydin, an email management service,

states that emails sent between 6 a.m. and 7 a.m. are about three times more likely to be opened than emails sent at 4 p.m.³⁷

Mobile technology has also quietly changed the concept of privacy. Advertisers have an open canvas to promote their products, and therefore permanently capture the attention of consumers, through either direct interaction or by forcing users' to read an advertisement before they can navigate a website. In this sense, public and private organizations have developed actions to prevent the indiscriminate use of web advertisements. An example is the Controlling the Assault of Non-Solicited Pornography and Marketing (CAN-SPAM) Act. In 2003, a government initiative prohibited the distribution of unsolicited emails after the US technological industry. Politicians and Internet users were unsettled by the escalating problem of electronic junk mail (SPAM).³⁸ The legislation requires advertisers to remove from their distribution lists users who have expressed their desire not to receive any information [Frieden and Roche 2006: 2]. While this legislation seeks to protect consumers' privacy, it has not stopped undesired commercial emails. Tim Shine, CTO of SpamTitan, an antispam vendor, argues:

With the nature of the Internet, it's too easy to move your point of operations away from anywhere you could be in trouble legally. With the advances in network technology and the speeds available today, there's really no disadvantage of doing spam from the Ukraine and targeting the U.S.

³⁷ Vanderkam, Laura. "The best time to send email so it will get read." *CBS Moneywatch*. 2012. See more: <http://www.cbsnews.com/news/the-best-time-to-send-email-so-it-will-get-read/>

³⁸ Marsan, Carolyn. "CAN-SPAM: What Went Wrong?" *Network World*. N.p., 06 Oct. 2008. Web. 02 Apr. 2015.

According to the security software company Symantec, SPAM has grown steadily since 2001. In recent years, there have been declines in the use of SPAM due to improvements in today's anti-spam tools, catching anywhere from 95% to 98% of unwanted e-mail. Currently, SPAM represents 68% of global email traffic [Pimanova 2012].

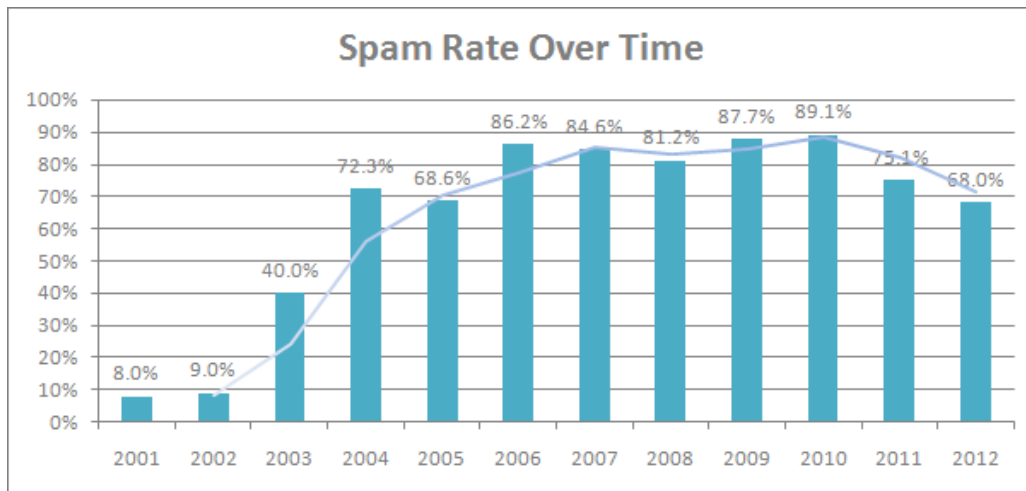


Figure 5. SPAM Rate between 2001 and 2012
Source: EmailTray.com

Consequently, people are becoming increasingly unlikely to pay attention to or even open messages they have not agreed to receive. Help Net Security, a security portal offering information on security issues states that the most common form of spam-related disruption is malware infection. It also explains that due to a disturbance in an organization – linked to SPAM – companies lost up to three hours of productivity.³⁹ Margaret Rouse from TechTarget explains that a legitimate marketer should be at the forefront of the anti-spam movement and behave in a manner that differentiates real businesses from spammers [Rouse 2015]

³⁹ "How Does Spam Affect Your Business?" *Help Net Security*, n.d. Web. 06 Apr. 2015. See More: <http://www.net-security.org/secworld.php?id=17461>

Mobile technology has had a great impact on how consumers and advertisers interact with each other. That relationship depends on regularly monitored data acquired through the use of mobile technologies such as personal computers, mobile phones, and credit cards, among many others. Thus, there are advocacy groups fighting for privacy and fair commerce, such as the Electronic Frontier Foundation and TechFreedom.

In fact, many members of society are unaware of how mobile technology puts their privacy at risk. With the possibility of obtaining demographical and sociological data, mobile technology gives advertisers the opportunity to develop specific products to satisfy consumers' needs according to their race, gender or location. However, the data could also enforce social distinctions and create a false sense of freedom of choice. For this matter, the next chapter will take a close look to privacy and legal issues of the use of the Internet as a means of commerce.

Chapter 5

The Future of Mobile Technology and Electronic Marketplaces: ERP, data warehousing, and data mining; privacy and other legal issues

E-commerce and mobile technology have worked together to provide users with access to a vast catalog of products and services around the world without the need of an intermediary (Disintermediation). Disintermediation has enabled new forms of commerce that do not require a physical space (involving a large investment), allowing consumers to buy directly from producers [Graham 2008: 2].

Since the beginning of the 20th century, mobile technology has created a new marketplace for goods and services. From e-readers to cell phones, mobile technology is changing the way people talk with each other, buy groceries and access news, among many others. For example, in March 2014 the American Press Institute published a study of how Americans read their news. The study observed that among American adults, 56 percent reported using a cell phone and 29 percent reported using a tablet to access news.⁴⁰ For advertisers and vendors, the proliferation of mobile devices with an Internet connection has given them the opportunity to develop strategies to obtain consumers' data. From tracking someone's position to exploring someone's browsing history, there are numerous

⁴⁰ "How Americans Get Their News - American Press Institute." American Press Institute RSS. N.p., 17 Mar. 2014. Web. 11 Apr. 2015. See more: <http://www.americanpressinstitute.org/publications/reports/survey-research/how-americans-get-news/>

ways to obtain data from a connected device.⁴¹ However, even before the proliferation of mobile devices, companies understood the importance of technology as a medium for obtaining detailed consumer data. Since 1947, Nielsen Ratings Reports have given information to TV networks and advertisers on who is watching their TV programs, and when. Moreover, Nielsen proved that analyzing consumer behavior could be a profitable business. For example, in 2014 Nielsen reported \$1.633 million in revenues.⁴² Nielsen is one example of how companies have developed different ways to obtain data. Since 2014, the French National Institute for Informatics Research (INRIA), in conjunction with the National Commission on Computing and Liberty (CNIL), presented a study that showed a user's geographical location was one of the most frequently accessed items of data. The study explained that during a three-month period, Facebook's app recorded one volunteer's location 150,000 times, which is more than once per minute.⁴³

Mobile applications (apps) are current examples of consumer-oriented technologies that deliver massive information to producers and advertisers. An app is a mobile program that works under an operating system focused on providing access to a specific task

⁴¹ Dwoskin, Elizabeth. "What Secrets Your Phone Is Sharing About You." WSJ. The Wall Street Journal, 13 Jan. 2014. Web. 12 Apr. 2015. See more:

<http://www.wsj.com/articles/SB10001424052702303453004579290632128929194>

⁴² "Nielsen Reports Fourth Quarter And Full Year 2014 Results; 34th Consecutive Quarter Of Revenue Growth." Nielsen Reports Fourth Quarter And Full Year 2014 Results. The Nielsen Company, 2 Feb. 2015. Web. 11 Apr. 2015. See more: <http://ir.nielsen.com/investor-relations/investor-news-and-media/press-releases/Press-Release-Details/2015/Nielsen-Reports-Fourth-Quarter-and-Full-Year-2014-Results-34TH-Consecutive-Quarter-of-Revenue-Growth/default.aspx>

⁴³ Sayer, Peter. "French Researchers Find That Android Apps Exploit Permissions." Pcworld. N.P., 15 Dec. 2014. Web. 11 Apr. 2015. See more:

<http://www.pcworld.com/article/2859752/android-apps-exploit-permissions-granted-french-researchers-find.html>

downloaded to a smartphone or mobile device.⁴⁴ The history of apps can be traced back to 1997 when Nokia presented their cell phone model 6110. This mobile telephone, in addition to its capacity to make calls or send short messages, featured the first time-waster app: Snake, a 1970 arcade game. Paul Lin comments, in his article “The History Of App Development And What It Means For Companies In The Future”, that at first mobile users only had access to simple, though sometimes difficult to use, apps such as calculators, ringtone creators, basic arcade games and calendars. With the development of more sophisticated technologies, mobile phones have evolved to what we nowadays know as smartphones.

The early development of mobile applications for ordinary users can be traced back to 2007, when the computer developer Apple launched its new smartphone called the iPhone. It was device that was characterized by a set of specialized software dedicated to solving specific tasks related to productivity, leisure, office, and entertainment [Mangalindan 2013]. These programs, called apps, were scheduled to work under Apple’s iOS operating system. Lin also notes that while the options were still limited in 1998, the future was suddenly clear for app development companies to give customers variety and ease.

Apple’s App Store was intended to develop an electronic market where software developers could create programs that worked under the same operating system. Initially, the Apple App Store started with 500 Apps, but in just six years it grew to 900,000 Apps

⁴⁴ “App” Def. 1. Dictionary.Com Online. Dictionary, N.D. Web. 05 Mar. 2015.

and by June 2014 it included 1.2 million apps [Perez 2014]. As expected, other mobile phone companies saw the commercial success of the App Store and developed their versions. Among Apple's major competitors, Blackberry, Google (Android Store) and Microsoft (Windows Phone Store) are the most successful in taking a piece of the mobile software business. According to the American business magazine *Forbes*, the value of mobile payment transactions will reach \$721 billion in 2017, achieving a compound annual growth rate (CAGR) of 35% for the period 2012 to 2017 [Columbus 2001].

Although a small percentage of mobile applications charge for downloading, most of these apps are freely available. By 2017, it is estimated that 93% of app downloads will be free [Columbus 2001]. Moreover, a study made by Flurry Analytics reports that, between 2010 and 2012, Apple's App Store increased the number of free Apps. The study explains that one of the main differences between paid and free apps is the presence of ads. The study suggests that, for consumers, getting free content is more important than avoiding ads.⁴⁵ Additionally, Flurry's study showed that App developers are not giving away money; they changed the way they do business. That business model is similar to what most U.S TV networks do: provide free programming with lots of ads.⁴⁶

⁴⁵ Gordon, Mary Ellen. "The History of APP Pricing, and why most Apps are free," *Flurry* (July 18, 2013) See more: http://www.flurry.com/bid/99013/The-History-of-App-Pricing-And-Why-Most-Apps-Are-Free#.VSbUQ09_nxY

⁴⁶ According to a report of the Los Angeles Times in 2013 the broadcast networks averaged 14 minutes and 15 seconds of commercial time per hour. See more: [http://www.latimes.com/entertainment/envelope/cotown/la-et-ct-nielsen-advertising-study-20140510-story.html`](http://www.latimes.com/entertainment/envelope/cotown/la-et-ct-nielsen-advertising-study-20140510-story.html)

Therefore, inside the electronic marketplace, money is just one of numerous means of payment and information has become the most valuable asset. The Acxiom Corporation is a clear example of how information (i.e. data mining) can become a profitable commodity. Acxiom is a US company with more than 23,000 servers that collect, analyze and process consumer data. In 2011, Acxiom reported profits of \$77.26 million as a result of business generated by its database, which contains information on 500 million active costumers.

Privacy and Technology

Data mining is not a recently coined term. Frans Coenen, in his article *Data mining: past, present, and future*, defines data mining as a set of mechanisms and techniques, realized in software, to extract hidden information from data. Coenen explained that data mining is a term that was mostly used by the research community during the 80s. Nonetheless, for the consumer community, data mining became noticeable in the 1990s when large supermarket chains introduced customer loyalty cards which allowed them to track customers' consumption patterns by recording data from previous purchases [Coenen 2011: 26]. Currently, data mining uses several analysis techniques such as sampling, estimation and hypothesis testing from statistics, searches of algorithms, modeling techniques and learning theories from artificial intelligence, as well as pattern recognition and machine learning [Hänninen 2010: 1].

However, data mining success stories have also raised concerns regarding privacy and how consumers are giving away private information in exchange for commercial benefits. In 1999, the AT&T Research Lab presented a study focused on online privacy. The study showed that 53% of participants were willing to provide online personal information

such as income, race and gender in exchange for financial guidance, as long as they did not have to provide their name or any form of identification [Cranor *et al.* 1999]. However, consumers are not the only ones to blame when privacy is used as a commodity. The School of Law at the University of California claimed that Americans are aware of how sensitive the information contained in their mobile devices is and disagree that this can be accessed for commercial purposes. A study suggested that vendors are always pushing consumers to deliver personal information in exchange for better services [Urban *et al.* 2012: 24]. Examples of those techniques can be seen in mobile apps such as Yelp or Shazam that use technology similar to the one presented in the AT&T study. These kinds of apps ask for users' permission to access their location in order to give a better experience or to provide better results, but in exchange those applications can use users' personal data for other commercial purposes (e.g. fraud insurance claims, patterns of telephone use, use of credit cards).

For example, this is the abstract of Yelp's Terms and Conditions:

We may use Your Content in a number of different ways, including publicly displaying it, reformatting it, incorporating it into advertisements and other works, creating derivative works from it, promoting it, distributing it, and allowing others to do the same in connection with their own websites and media platforms ("Other Media"). As such, you hereby irrevocably grant us world-wide, perpetual, non-exclusive, royalty-free, assignable, sublicensable, transferable rights to use Your Content for any purpose. Please note that you also irrevocably grant the users of the Site and any Other Media the right to access Your Content in connection with their use of the Site and any Other Media. Finally, you irrevocably waive, and cause to be waived, against Yelp and its users any claims and assertions of moral rights or attribution with respect to Your Content. By "use" we mean use, copy, publicly perform and display, reproduce, distribute, modify, translate, remove, analyze, commercialize, and prepare derivative works of Your Content. [Yelp.com, 2015]

It seems that these terms have not discouraged users from downloading such apps. By January 2015, Yelp counted over 50 million downloads worldwide, and Shazam had 100 million downloads in Google's App Store alone.⁴⁷ The success of data mining can be also attributed to the development of data management and analysis systems such as Electronic Resources Planning and Data Warehousing. These systems enable the structuring of large-scale information in an automatic process that avoids human inaccuracy. The Electronic Resource Planning system (ERP) is an example of an automated system for working with big databases. The ERP is customizable standard application software that includes integrated business solutions for core processes such as production planning and control, warehouse management, and the main administrative functions (e.g., accounting, human resource management) of any given enterprise [Majed *et al.* 2003: 353]. By allowing a real-time overview of the information collected from a company (i.e. data mining) the ERP facilitates administrative decisions based on large-scale models rather than simple and small study groups. The ERP offers a dynamic system that promises seamless integration of all the information flowing through a company—financial, human resources, supply chain, and customer information [Ng *et al.* 2003: 1].

On the other hand, Data Warehousing (DW) is a collection of decision support technologies, aimed at enabling the knowledge worker (executive, manager or analyst) to make better and faster decisions.⁴⁸ DW systems enable enterprise managers to acquire and

⁴⁷ Google Play Store. "Android." *Yelp*. Google, n.d. Web. 01 Apr. 2015.

⁴⁸ Chaudhuri, Surajit and Umeshwar Dayal. "An Overview of Data Warehousing and OLAP Technology." *ACM SIGMOD Record* 26.1 (1997): 65-74. Web.

integrate information from heterogeneous sources and to manage large databases efficiently [Golfarelli *et al.* 1998: 2].

The connections between ERP, DW and data mining offer a glimpse of the future of electronic marketplaces, where companies' advertisement strategies do not depend on human interaction or the relationship between sellers and consumers. However, companies are dependent on how and where big data is managed and stored. The access to large amounts of private information has raised concerns in government and private entities. In 2013, experts from the Stanford Law Review Symposium weighed in on questions regarding big data and privacy. Legal and Policy Fellow Joseph Jerome highlighted the importance of knowing data collectors' motives and the future use of data. Jerome explained the risks of turning ordinary people's private information into a commodity that could increase social differentiation:

If the practical challenges facing average people are not considered, big data will push against efforts to promote social equality. Instead, we will be categorized and classified every which way, and only the highest high value of those categories will experience the best benefits that data can provide.⁴⁹

Participants in the 2013 Stanford Law Review Symposium Ian Herr and Jessica Earle emphasized the risks of big data's predictive algorithms, which can limit a consumer's options as a consequence of attempting to predict their possible future needs while reducing commercial risks.

⁴⁹ Jerome, Joseph W. "Buying and Selling Privacy Big Data's Different Burdens and Benefits." *Stanford Law Review*. N.p., 3 Sept. 2013. Web. 12 Apr. 2015. See more: <http://www.stanfordlawreview.org/online/privacy-and-big-data/buying-and-selling-privacy>

When you permit iTunes Genius to anticipate which songs you will like or Amazon's recommendation system to predict what books you will find interesting, these systems are not generating predictions about your conduct or its likely consequences. Rather, they are trying to stroke your preferences in order to sell goods and services.⁵⁰

These kinds of privacy concerns have encouraged governments around the world to implement laws to protect consumers from abusive commercial practices. In 1980, the Organization for Economic Cooperation and Development (OECD) issued Guidelines on the Protection of Privacy and Transborder Flows of Personal Data. Commonly known as the OECD Guidelines, they established eight data protection principles of balancing data protection and the free flow of information. Although the OECD Guidelines are recognized by all OECD member nations, including the EU and the U.S., they are not legally binding and are thus implemented differently in different nations [Baumer *et al.* 2002: 3]. The 1980 Guidelines, and their successor, the 2007 Recommendation Report, do not explicitly call for the establishment of privacy enforcement authorities, but assume their existence and recommend their guidelines be effectively enforced [Kuner 2011: 17]. Furthermore, in the U.S., most websites and online service providers are not required by law to have adequate security to protect data provided voluntarily by their users, although there are three exceptions: for websites that store medical records, financial data, or those that acquire information from children. For websites and services (i.e. apps) that do not fall into any of these three categories, there is no statutory requirement under US law to maintain adequate security for the confidentiality of personal information that is acquired or stored,

⁵⁰ Kerr, Ian, and Jessica Earle. "Prediction, Preemption, Presumption." *Stanford Law Review*. N.p., 3 Sept. 2013. Web. 12 Apr. 2015. See more: <http://www.stanfordlawreview.org/online/privacy-and-big-data/prediction-preemption-presumption>

but there could be legal sanctions in the form of common lawsuits based on negligence [Baumer *et al.* 2002: 11]. For instance, at the beginning of this April, President Obama signed the first-ever sanctions program to penalize overseas hackers who engage in cyber spying and those companies that knowingly benefit from the fruits of that espionage.⁵¹ This program is aimed to protect people from malicious cyber activities and the damage of computer systems and infrastructure.

Consequently, the future of *e-commerce* may be one in which consumers will have more access to offers and services but only in exchange for personal data that affects their privacy. The lack of clear laws that define what personal data can be collected and what cannot, could jeopardize the trustworthiness of *e-commerce*. Since 1970, social movements such as the Australian Privacy Foundation, the Electronic Privacy Information Center (USA), and Infophilia (Hungary), aware of the ambiguity of the limits of data collection, have raised their voices to protect consumers from unscrupulous commercial practices [Lyon 2002: 132-133]. More recently, in 2003, Tim Wu, Professor at Columbia University, coined the term Network Neutrality as part of an article that discussed the importance of considering the Internet as a neutral space that ensured meritocratic commercial competition.⁵² Wu's article developed into a series of private and public discussions that ended in March 2015, when the US Federal Communications Commission (FCC) approved Net Neutrality. The Net Neutrality is a rule that mandates Internet Service Providers (ISPs)

⁵¹ Lavender, Paige. "Obama Signs Order Creating New Cyber Sanctions Program." *The Huffington Post*. TheHuffingtonPost.com, 01 Apr. 2015. Web. 03 Apr. 2015. See more: http://www.huffingtonpost.com/2015/04/01/obama-cyber-sanctions_n_6985172.html

⁵² Wu, Tim. "Network neutrality, broadband discrimination." *Journal of Telecommunications and high Technology law* 2 (2003): 141-179

to treat all Internet traffic equally.⁵³ Nonetheless, Wu's success could be difficult to replicate in countries where freedom of speech is restricted and governments are using mobile technologies (e.g. data mining) to persecute those willing to speak up. Examples of those censorship tactics can be found in China, where an Internet Firewall (Great Firewall of China) blocks certain websites from operating in the country. The Great Firewall has limited Chinese freedom of speech by stopping users from posting words banned by the Chinese government [King *et al.* 2013: 3].

China's example can show us how technology can be a hurtful tool rather than a positive contributor to society. Therefore, mobile technology should be understood as a global tool that connects citizens regardless of race, citizenship, gender, or social class.

⁵³ "Net Neutrality: A Free and Open Internet." *The White House*. The White House, n.d. Web. 01 Apr. 2015.

Conclusions

Electronic commerce (*e-commerce*) is the combination of consumerism principles and technological innovations that evolved into new forms of trading goods and services (e.g., websites, apps, and online stores). The development of *e-commerce* has not been a simple process since it depends on many technological and sociological variables. For *e-commerce*, technology is neither the cause of nor the solution to its problems; it is only a tool that allows public and private initiatives to develop online business models.

Even though *e-commerce* has increased market participation, it has not replaced traditional retailers. However, there is evidence that in the last two decades, at least in the U.S., *e-commerce* has been widely accepted and is becoming one of the most recognizable forms of trading.

Several entrepreneurs, such as Jeff Bezos, Michael Dell, and Pierre Omidyar, among others have seen the economic benefits of *e-commerce* and have developed successful business models that have changed consumerism's panorama. Nevertheless, these entrepreneurs became successful because they took advantage of their previous experiences and took risks to create new market niches. Still, *e-commerce* is not free of flaws and has showed its fragility and uncertainty (i.e., the dot-com collapse). Like any other business model, successful *e-commerce* depends on laws, protocols, and social participation.

Therefore, the future of *e-commerce* will depend on the ability to continue developing guidelines and regulations that can encourage a healthy electronic marketplace where consumers and sellers can exchange products and services with confidence.

What makes eBay successful—the real value and the real power at eBay—is the community. It's the buyers and sellers coming together and forming a marketplace.

—Pierre Omidyar

Bibliography

- "2014 Full-Year Financial Metrics." PayPal. PayPal, 2014. Web. 10 Apr. 2015.
- "Becoming American Express." *American Express Our Story, Becoming American Express*: (n.d.): n. pag. Web. 19 Apr. 2015.
<https://secure.cmax.americanexpress.com/Internet/GlobalCareers/Staffing/Shared/Files/our_story_3.pdf>.
- "Dot-com Bubble." *Historical Encyclopedia of American Business*. Ed. Richard L. Wilson. Vol. 1. Pasadena, CA: Salem Press, 2009. 236-237. Web. 7 Apr. 2015.
- "Consumer Credit Protection Act - Laws Protecting Your Rights." *Debtor News*. N.p., n.d. Web. 19 Apr. 2015. <https://www.debt.org/credit/your-consumer-rights/protection-act/>.
- "E-commerce 1999." United States Department of Commerce, 7 Mar. 2001. Web. 10 Apr. 2015.
- "Ebay - Became Public Company In 1998." - Million, Ipo, Item, and Percent. *Free Encyclopedia of E-commerce*, n.d. Web. 03 Apr. 2015.
- "EBay: Number of Active Buyers 2010-2014 | Statistic." *Statista*. N.p., n.d. Web. 09 Apr. 2015.
- "Electronic Funds Transfer (EFT)." *Electronic Funds Transfer (EFT)*. Bureau of the Fiscal Service, n.d. Web. 04 Apr. 2015.
- "How Americans Get Their News - American Press Institute." *American Press Institute RSS*. N.p., 17 Mar. 2014. Web. 11 Apr. 2015.
- "How Companies Collect Your Private Information When You Browse Online." *Reputation.com*. N.p., 28 Sept. 2011. Web. 01 Apr. 2015.
- "How Does Spam Affect Your Business?" *Help Net Security*, n.d. Web. 06 Apr. 2015.
- "Learn - Mobile App Risk Management & Data Security - Appthority." *Appthority*. N.p., n.d. Web. 01 Apr. 2015.
- "Michael Dell Biography." – *Academy of Achievement*. N.p., 5 Feb. 2013. Web. 10 Apr. 2015.
- "Net Neutrality: A Free and Open Internet." *The White House*., n.d. Web. 05 Apr. 2015.
- "Nielsen Reports Fourth Quarter And Full Year 2014 Results; 34th Consecutive Quarter Of Revenue Growth." *Nielsen Reports Fourth Quarter And Full Year 2014 Results*. The Nielsen Company, 2 Feb. 2015. Web. 11 Apr. 2015.

- Regulation Z Truth in Lending Introduction Background and Summary (n.d.): n. pag. *The Federal Reserve System*. Web. 19 Apr. 2015.
<http://www.federalreserve.gov/boarddocs/supmanual/cch/til.pdf>.
- "Summary of the Operating Agreement between eBay and PayPal." *Separation.ebayinc.com*. *EbayInc*, 9 Apr. 2015. Web. 10 Apr. 2015.
- "The Birth of a Company." Dell. N.p., n.d. Web. 10 Apr. 2015.
- "The Internet Revolution Is the New Industrial Revolution." *Forbes*. Forbes Magazine, n.d. Web. 05 Apr. 2015.
- "App" Def. 1. Dictionary.Com Online. *Dictionary*, N.D. Web. 05 Mar. 2015.
- 2014 Full-Year Financial Metrics." *PayPal*. PayPal, 2014. Web. 10 Apr. 2015.
- Adam, Alison, and Eileen Green. "Virtual Gender: Technology, Consumption and Identity Matters". London: *Routledge*, 2000. Print.
- Al-Mashari, Majed, Abdullah Al-Mudimigh, and Mohamed Zairi. "Enterprise Resource Planning: A Taxonomy of Critical Factors." *European Journal of Operational Research* 146.2 (2003): 352-64.
- Allen, Peter Van Der. "Super Bowl Ad Cost Doesn't Lead to Return on Investment - Philadelphia Business Journal." *Widgets RSS*. N.p., 13 Jan. 2014. Web. 03 Apr. 2015.
- Aydın, Erdal, and Burcu Kılınc Savrul. "The Relationship between Globalization and E-commerce: Turkish Case." *Procedia-Social and Behavioral Sciences* 150 (2014): 1267-1276.
- Bajari, Patrick, and Ali Hortacsu. "The winner's curse, reserve prices, and endogenous entry: empirical insights from eBay auctions." *RAND Journal of Economics* (2003): 329-355.
- Baldacci, Kevin. "7 Lessons You Can Learn from Jeff Bezos About Serving the Customer." *Deskcom*. N.p., 06 June 2013. Web. 01 Apr. 2015.
- Becker, S. Ann. *Electronic Commerce: Concepts, Methodologies, Tools and Applications*. Hershey PA: *Information Science Reference*, 2008. Print.
- Boorstin, Daniel J. "A. Montgomery Ward's Mail-Order Business," *Chicago History* (1973) 2#3 pp 142-152.
- Borgie, Lana. "Trends in Producer Prices between E-commerce and Brick-and-mortar Retail Trade Establishments : Beyond the Numbers" *U.S. Bureau of Labor Statistics*. U.S. Bureau of Labor Statistics, n.d. Web. 08 Apr. 2015.

- Bogaisky, Jeremy. "Retail In Crisis: These Are The Changes Brick-And-Mortar Stores Must Make." *Forbes Magazine*, 12 Feb. 2014. Web. 07 Apr. 2015.
<http://www.forbes.com/sites/jeremybogaisky/2014/02/12/retail-in-crisis-these-are-the-changes-brick-and-mortar-stores-must-make/>.
- Brandt, Richard L. "One Click: Jeff Bezos and the Rise of Amazon.com". New York: *Portfolio/Penguin*, 2011. Print.
- Bunnell, David, and Richard Luecke. "The E-Bay Phenomenon: Business Secrets behind the World's Hottest Internet Company". New York: *Wiley*, 2001. Print.
- Cacy, J. A., and Richard Roberts. "The US Economy in 1987 and 1988." *Economic Review Dec* (1987): 3-15.
- Campbell, Neill. "What are the reasons for Amazon's successful international expansion?" *Quora*. 2012
- Chaudhury, Abhijit, and Jean Kuilboer. E-business and E-commerce Infrastructure: Technologies Supporting the E-business Initiative. Boston, Mass.: *McGraw-Hill*, 2002.
- Cheyfitz, Kirk. "Thinking inside the Box: The 12 Timeless Rules for Managing a Successful Business." New York, NY: *Free*, 2003. Print.
- Clark, Michael. "The need for tactile input in electronic commerce". *Diss.* 2000.
- Coenen, Frans. "Data Mining: Past, Present and Future." *The Knowledge Engineering Review* 26.01 (2011): 25-29. *The Knowledge Engineering Review*. Web. 11 Apr. 2015.
- Coffman, Kerry G., and Andrew M. Odlyzko. "The size and growth rate of the Internet." *First Monday* 3.10 (2001): 1-44.
- Cohen, Adam. *The Perfect Store: Inside EBay*. Boston: *Little, Brown*, 2002. Print.
- Collins, Tom. "The Legendary Model T Ford: The Ultimate History of America's First Great Automobile." Iola, WI: *Krause Publications*, 2007. Print.
- Columbus, Louis. "Roundup Of Mobile Apps & App Store Forecasts, 2013." *Forbes Magazine*, 09 June 2013. Web. 02 Apr. 2015.
<http://www.forbes.com/sites/louis columbus/2013/06/09/roundup-of-mobile-apps-app-store-forecasts-2013/>.
- Consalvo, Mia, and Charles Ess. "The Handbook of Internet Studies. Chichester", *West Sussex*, U.K.: *Wiley-Blackwell*, 2011. Print.
- Cranor, Lorrie F., Joseph Reagle, and Mark S. Ackerman. "Beyond Concern: Understanding Net Users' Attitudes About Online Privacy." *AT&T Research Labs*, n.d. Web. 1 Apr. 2015.

- D.L. Baumer, J.B. Earp, J.C. Poindexter, "Internet privacy law: a comparison between the United States and the European Union, *Computers & Security*", 2004, pp. 400–410
- Dell, Michael; Fredman, Catherine (2010-09-21). "Direct From Dell: Strategies that Revolutionized an Industry" (Collins Business Essentials) (p. 200). *HarperCollins*. Kindle Edition.
- Draut, Tamara, and Javier Silva. "Borrowing to Make Ends Meet: The Growth of Credit Card Debt in the '90s." New York, NY: *Demos*, 2003. Print.
- Dvoskin, Elizabeth. "What Secrets Your Phone Is Sharing About You." *WSJ. The Wall Street Journal*, 13 Jan. 2014. Web. 12 Apr. 2015.
- Ed. Cynthia Rose. Vol. 10: 1990-1999. Detroit: *Gale*, 2004. p65-70
- Ed. Roger R. Flynn. "Vol. 4: Electronic Universe." New York: *Macmillan Reference USA*, 2002. p146-150.
- Erwin, G. J., and Craig Neville. Blewett. "Computing for a Small Business". Kenwyn: *Juta*, 1998. 256. Print.
- Etherington, Darrell. "EBay And PayPal To Split Into Two Separate Companies." *TechCrunch*. N.p., 30 Sept. 2014. Web. 10 Apr. 2015.
- Fox, Susanna, and Lee Raine. "Part 1: How the Internet Has Woven Itself into American Life." *Pew Research Centers Internet American Life Project RSS*. N.p., 26 Feb. 2014. Web. 09 Apr. 2015.
- Frieden, Jonathan D., and Sean Patrick Roche. "E-Commerce: Legal Issues of the Online Retailer in Virginia." *Rich. JL & Tech*. 13 (2006): 1.
- Golfarelli, Matteo, Dario Maio, and Stefano Rizzi. "The Dimensional Fact Model: A Conceptual Model For Data Warehouses." *International Journal of Cooperative Information Systems*. (1998): 215-47.
- Google Play Store. "Android." *Yelp. Google*, n.d. Web. 01 Apr. 2015.
- Graham, Mark. "Disintermediation, altered chains and altered geographies: the internet in the Thai silk industry." *The Electronic Journal of Information Systems in Developing Countries* 45 (2011).
- Gray, Matthew. "Total Number of Websites." *Internet Live Stats*. NetCraft and Internet Live Stats, 2014. Web. 2 Apr. 2015.
- Hänninen, Sami. "Applying Data Mining Techniques to ERP System Anomaly and Error

- Detection." Thesis. *Alto University, School of Science and Technology*, 2010. Print.
- Hansell, Saul. "On-Line Shopping: Good, Bad and Growing; Not Every Maker Wants Its Products Sold on the Net, at Least Not by Others." *The New York Times*. The New York Times, 09 Dec. 1998. Web. 15 Apr. 2015.
<http://www.nytimes.com/1998/12/10/technology/line-shopping-good-bad-growing-not-every-maker-wants-its-products-sold-net-least.html>
- Holl, Susan. "Online Shopping Tactics". N.p.: n.p., 2013. Ebook Edition.
- Indvik, Lauren. "Forrester: U.S. Online Retail Sales to Hit \$370 Billion by 2017." *Mashable*. N.p., 12 Mar. 2013. Web. 2 Apr. 2015.
- Jackson, Eric M. "The PayPal Wars: Battles with EBay, the Media, the Mafia, and the Rest of Planet Earth." Los Angeles, CA: *World Ahead Pub.*, 2004. Print.
- Kang, Peter. "PayPal's Growing Pains." *Forbes*. Forbes Magazine, n.d. Web. 03 Apr. 2015.
- Kapner, Suzanne. "How the Web Drags on Some Retailers." *WSJ. The Wall Street Journal*, 01 Dec. 2014. Web. 12 Apr. 2015. <http://www.wsj.com/articles/how-the-web-drags-on-some-retailers-1417477790>
- Kaufman-Scarborough, C. "Time Use and the Impact of Technology: Examining Workspaces in the Home." *Time & Society* 15.1 (2006): 57-80. Web. 18 Mar. 2015.
- Keiser, Sandra J., and Myrna B. Garner. "Beyond Design: The Synergy of Apparel Product Development". New York: *Fairchild Publications*, 2003. Print.
- Kerr, Ian, and Jessica Earle. "Prediction, Preemption, Presumption." *Stanford Law Review*. N.p., 3 Sept. 2013. Web. 12 Apr. 2015.
- King, Gary, Jennifer Pan, and Margaret E. Roberts. "How Censorship in China Allows Government Criticism but Silences Collective Expression." *American Political Science Review* 107.02 (2013): 326-43. Web.
<http://gking.harvard.edu/files/gking/files/censored.pdf>
- Kleinbard, David. "The \$1.7 Trillion Dot.com Lesson." *CNNMoney*. CNN, 9 Nov. 2000. Web. 2 Apr. 2015. <http://cnfn.cnn.com/2000/11/09/technology/overview/>
- Kraay, Aart, and Jaume Ventura. "The dot-com bubble, the Bush deficits, and the US current account." *University of Chicago Press*, 2007. 457-496.
- Kuner, C. (2011), "Regulation of Transborder Data Flows under Data Protection and Privacy Law: Past, Present and Future", *OECD Digital Economy Papers*, No. 187, OECD Publishing.

- Landers, Jonathan M., and Ralph J. Rohner. "Functional Analysis of Truth in Lending, A." *UCLA L. Rev.* 26 (1978): 711.
- Laurie, Ed and J. Fundukian "Data Mining." *Gale Encyclopedia of E-commerce*. 2nd ed. Vol. 1. Detroit: Gale, 2012. 172-174. Web. 1 Apr. 2015.
- Laurie, Ed J and Fundukian. "ARPAnet." *Gale Encyclopedia of E-commerce*. 2nd ed. Vol. 1. Detroit: Gale, 2012. 33-34. Gale Virtual Reference Library. Web. 3 Apr. 2015
- Leiner, Barry M., *et al.* "A brief history of the Internet." *ACM SIGCOMM Computer Communication Review* 39.5 (2009): 22-31.
- Leiner, Barry M., *et al.* "The past and future history of the Internet." *Communications of the ACM* 40.2 (1997): 102-108.
- Lewis, Elen. "The EBay Phenomenon: The Story of a Brand That Taught Millions of Strangers to Trust One Another". London: *Marshall Cavendish Business*, 2008. Print.
- Luckerson, Victor. "Here's How Facebook Doubled Its IPO Price." *Time*. Time, 24 July 2014. Web. 04 Apr. 2015.
- Lyon, David. "The Politics of Surveillance." *Surveillance Society: Monitoring Everyday Life*. Buckingham: Open UP, 2002. 132-33. Print.
- MacKenzie, Donald A., and Judy Wajcman. "The Social Shaping of Technology: How the Refrigerator Got Its Hum". Milton Keynes: *Open UP*, 1985. Print.
- Mandell, Lewis. "The credit card industry: a history". *Twayne Pub*, 1990.
- Manyika, James, and Charles Roxburgh. "The great transformer: The impact of the Internet on economic growth and prosperity." *McKinsey Global Institute*, October 1 (2011).
- Mangalindan, JP. "A History of The iPhone." *Fortune A History of TheiPhone Comments*. *Fortune Magazine*, 26 Sept. 2013. Web. 05 Apr. 2015.
<http://fortune.com/2013/09/26/a-history-of-the-iphone/>
- Manzoor, Amir. "E-commerce: An Introduction". Saarbrücken: *LAP Lambert Acad. Publ.*, 2010. 2-3. Print.
- Marsan, Carolyn Duffy. "CAN-SPAM: What Went Wrong?" *Network World*. N.p., 06 Oct. 2008. Web. 6 Apr. 2015.
- McComb, William. "Clicks And Mortar: Why In-Store Experience Matters (Now More Than Ever)." *Forbes*. *Forbes Magazine*, 11 June 2011. Web. 01 Apr. 2015.

- Melnik, Mikhail I., and James Alm. "Does a seller's ecommerce reputation matter? Evidence from eBay auctions." *The journal of industrial economics* 50.3 (2002): 337-349.
- Miles, Steven. "Consumerism: As a Way of Life". London: *Sage Publications*, 1998. Print.
- Miles, Steven. "Spaces for consumption". *SAGE Publications*, 2010.
- Molla, Alemayehu, and Paul S. Licker. "E-Commerce Systems Success: An Attempt to Extend and Respecify the Delone and MaClean Model of IS Success." *J. Electron. Commerce Res.* 2.4 (2001): 131-141.
- Morrison, Kimberlee. "Social Media Has Changed How Consumers Shop Online [Infographic]." *SocialTimes*. N.p., 22 Dec. 2014. Web. 01 Apr. 2015.
- Ng, Johnny K.c., and W.h. Ip. "Web-ERP: The New Generation of Enterprise Resources Planning." *Journal of Materials Processing Technology* 138.1-3 (2003): 590-93. Web.
- Pcworld. N.P., 15 Dec. 2014. Web. 11 Apr. 2015.
- Pederson, Jay P. International Directory of Company Histories. Detroit, MI: *St. James*, 2005. Print.
- Perez, Sarah. "iTunes App Store Now Has 1.2 Million Apps, Has Seen 75 Billion Downloads To Date." *TechCrunch*. TechCrunch, 2 June 2014. Web. 01 Apr. 2015.
- Raice, Shayndi. "Facebook sets historic IPO." *Wall Street Journal* (2011).
<http://www.wsj.com/articles/SB10001424052970203935604577066773790883672>
- Randall, Alan. "Problem of Market Failure, The." *Nat. Resources J.* 23 (1983): 131.
- Reed, Brad. "A brief history of smartphones." *PC World* (2010).
- Ritzer, George. "Explorations in the Sociology of Consumption: Fast Food, Credit Cards and Casinos". London: *SAGE*, 2001. Print.
- Roebuck, Kevin. "Crowdfunding: High-impact Strategies-What You Need to Know: Definitions, Adoptions, Impact." *Benefits, Maturity, Vendors* (2011).
- Rouse, Margaret. "What Is Learn IT: How Spam Affects Email Marketing Campaigns?" *SearchCRM*. N.p., n.d. Web. 02 Apr. 2015. See more:
<http://searchcrm.techtarget.com/definition/Learn-IT-How-Spam-Affects-Email-Marketing-Campaigns>
- Roy Dholakia, Ruby. "Going shopping: key determinants of shopping behaviors and motivations." *International Journal of Retail & Distribution Management* 27.4 (1999): 154-165.

- Rowley, Jennifer E. "Retailing and Shopping on the Internet". *Bradford*: MCB UP, 1996. Print.
- Sayer, Peter. "French Researchers Find That Android Apps Exploit Permissions." *Pcworld*. N.P., 15 Dec. 2014. Web. 11 Apr. 2015.
<http://www.pcworld.com/article/2859752/android-apps-exploit-permissions-granted-french-researchers-find.html>
- Seybold, Andrew M. "The convergence of wireless, mobility, and the Internet and its relevance to enterprises." *Information, Knowledge, Systems Management 7.1* (2008): 11-23.
- Silverstone, Roger, and Eric Hirsch. "Consuming Technologies: Media and Information in Domestic Spaces". London: *Routledge*, 1992. Print.
- Spector, Robert. "Amazon.com: Get Big Fast ; inside the Revolutionary Business Model That Changed the World". London: *Random House Business*, 2000. Print.
- Spiro, Josh. "The Great Leaders Series: Jeff Bezos, Founder of Amazon.com." *Inc.com*. N.p., n.d. Web. 02 Apr. 2015. <http://www.inc.com/30years/articles/jeff-bezos.html>
- Steffan, Randall R. "We Asked You – You Told Us: Results of the 1993 Readership Survey." *Healthcare Management Forum 6.3* (1993): 55-56. Web.
- Stone, Brad. "The Everything Store: Jeff Bezos and the Age of Amazon". N.p.: Little, Brown, 2013. Kindle Edition.
- Tarasewich, Peter, Robert C. Nickerson, and Merrill Warkentin. "Issues in mobile e-commerce." *Communications of the association for information systems 8.1* (2002): 41-65.
- Thornton, Jennifer, and Sunny Marche. "Sorting through the Dot Bomb Rubble: How Did the High-profile E-tailers Fail?" *International Journal of Information Management 23.2* (2003): 121-138.
- Tian, Yan, and Concetta Stewart. "History of E-commerce." *Encyclopedia of E-commerce, E-Government and Mobile Commerce*. Mehdi Khosrow-Pour. Vol. 1. Hershey, PA: *Idea Group Reference*, 2006. [559]-564. Web. 6 Apr. 2015.
- Trembly, Lisa J., and Michael F. Bevacqua. "Back to the Future with the Consumer Fraud Act: New Jersey Sets the Standard for Consumer Protection." *Seton Hall Legis. J.* 29 (2004): 193.
- Urban, Jennifer M. and Hoofnagle, Chris Jay and Li, Su, "Mobile Phones and Privacy" (July 10, 2012). *BCLT Research Paper Series*; UC Berkeley Public Law Research Paper No. 2103405.

Vanderkam, Laura. "The best time to send email so it will get read." *CBS Moneywatch*. 2012. <http://www.cbsnews.com/news/the-best-time-to-send-email-so-it-will-get-read/>

Waxer, Cindy. "How Data Mining Can Boost Your Revenue by 300%." *CNNMoney*. CNN, 28 Oct. 2013. Web. 28 Mar. 2015.

Weiss, Martin. "Internet: History." *Computer Sciences*. Ed. Roger R. Flynn. Vol. 4: Electronic Universe. New York: *Macmillan Reference USA*, 2002. 146-150. Web. 6 Apr. 2015.

Wigand, Rolf T. "Electronic Commerce: Definition, Theory, and Context." *The Information Society* 13.1 (1997): 1-16. Web.

Williams, Magdalen. "E-commerce Inquiry to Business 2000." *Economic Trends* 572 (2001): 29-36.

Woolsey, Ben, and Emily Starbuck. "The History of Credit Cards." *CreditCardscom News*. N.p., 2009. Web. 15 Apr. 2015. <http://www.creditcards.com/credit-card-news/credit-cards-history-1264.php>

World Wide Web Timeline." *Pew Research Centers Internet American Life Project RSS*. Pew Research Center, 11 Mar. 2014. Web. 09 Apr. 2015.