

# World Wide Internet

Changing Societies, Economies and Cultures

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**Introduction:  
From World Internet Project to World Wide  
Internet**



## **From World Internet Project to World Wide Internet**

The book you are now reading is the product of a research project launched almost 10 years ago. The World Internet Project is made up of many national reports written by different research teams in recent years. We have also been able to deliver to the academic community and society at large international reports that address the comparative dimensions tapping cross-national and cross-cultural similarities and differences in the uses of the Internet. But this is the first time the data gathered by the World Internet Project are published with the aim to develop new hypotheses regarding the role of the Internet in changing our lives and societies.

In the pages that follow, we will share with readers various insights on the role of the Internet in changing our societies, economies and cultures. Contributions to this book come not just from different countries but also from different scientific fields and different scientific cultures. In this introduction, we would like to offer a brief historical account on the development of WIP and walk readers through a roadmap of the ideas behind the organization as well as the content of the different chapters in this book.

### **The World Internet Project (WIP)**

The World Internet Project was founded upon a belief that we lost a great opportunity understanding the impact of television and that the ultimate influence of the web and other forms of digital

communication will eclipse that of television. The WIP was designed for scholarly understanding of the economic, political and social impact of digital technologies. Fostering collaboration among dozens of countries around the globe, the project has established benchmarks for attitudes and behaviors in the digital era. During the last decade, the project has been committed to sharing high-quality and innovative data and insights with academics, governments, journalists, corporations, and general public around the world.

The World Internet Project originated at the UCLA Center for Communication Policy (now the USC Annenberg School Center for the Digital Future) and was founded with the NTU School of Communication Studies in Singapore and the Osservatorio Internet Italia at Bocconi University in Milan, Italy. Since its inception, the project recognized the increasing influence of digital technology and the power of the Internet as a true international phenomenon. It has always been on the project's agenda to expand to include all the regions of the world. While it was important to find partners among developed countries before they grow too acclimated to the web, it was considered equally important for us to work with developing countries as they began to move on-line.

We believe that the Internet (in whatever format of distribution: PC, television, wireless or some yet to be developed systems) will transform people's social, political and economic lives. We also believe that the influence and importance of the Internet would dwarf that of the most important instrument of cultural influence of the past 50 years: television. Potentially the Internet represents change on the order of the industrial revolution or the printing press. With that belief in mind, the World Internet Project was designed to get in on the ground floor of that change and to watch and document what happens as households and nations acquire and use the Internet.

The main objective of the World Internet Project is to explain how the Internet is changing the world – today and tomorrow. The project was the first wide-scoped, longitudinal exploration of how life is being transformed by computers and the Internet, with year-

to-year comparisons of the social and cultural changes as people use this extraordinary technology. The studies were also the first to answer such broad questions about the Internet on a global scale. While the methodological and international collaboration process is complex, the rationale behind the project is remarkably simple: track households as they go on-line and continue to follow them as their usage increases and becomes more comprehensive.

The USC Annenberg School Center for the Digital Future conducts the survey in the United States and coordinates the international partner projects. Independent teams in each country direct the implementation of the international partner projects with the goal of finding the most qualified teams in each country or region from distinguished universities or research centers. As of 2009, the project has attracted approximately 30 national or regional participants. Each year the researchers meet in one location to share results, explore common issues and concerns and continue to refine the methodology and scope of the work.

The U.S. research team became interested in this project while doing extensive work in the 1990s on television. In 1998 television viewing by children under the age of 14 in the United States dropped for the first time in the medium's 50-year history. For the very first time children found something more appealing: computers and the Internet. While television has had an unprecedented influence on culture, its influence has been primarily in the domains of entertainment and leisure. It is now becoming clear that computers and especially the Internet are producing effects comparable to television's on work, school and play.

Believing that the importance and influence of computer technology and the Internet will dwarf that of television, project designers hope to achieve in research what should have been done on television in the 1940s. The research plan calls for drawing a truly random and representative national sample of computer and Internet users and non-users. Each year the project carries out an extensive survey of the sampled households and then, using standard longitudinal methods for retention, tracks the process whereby non-users become users and users become more advanced

and comfortable users. The use of the Internet will continue to grow (though probably through wireless and television devices rather than computers) until it reaches the television-level of consumption of 98.3%.

Using a combination of well-accepted social scientific survey methods and techniques, the different research teams conduct long-term longitudinal studies on the impact of computers, the Internet and related technologies on families and society. In each country researchers follow the growth and change patterns in computer and Internet use and non-use in more than 1,000 households. The households are surveyed year after year, as computer and Internet use evolves. As important as tracking Internet use, possibly even more so, is surveying non-users. We regularly track social and cultural behaviour of non-users to see if and how attitudes and actions change as households obtain computers and Internet access.

This project intends to determine why non-users do not participate and what their sense of the connected world is. In so doing, we hope to learn what compels many of them to become users later on and how their established patterns of media use, child-rearing, economic and political behavior and other activities change. When, for example, household penetration of the Internet reaches 90%, we will be able to determine who the 10% non-users are, why they remain non-users and how they do off-line what most of the world is doing on-line. In short, this project looks at the hundreds of factors that are likely to change and remain vigilant. In addition to providing reliable information about who is on-line and how and why, the project traces whether a situation of information haves and have-nots develops and the ways in which our social, political and economic lives are changing.

Our objective has been to coordinate a truly international effort in the long run to understand how both industrialized and non-industrialized countries are affected by the use of information technology.

With this book we intend to move beyond our founding objectives and contribute to the development of the scientific field

of Internet research by gathering in a single volume knowledge acquired by more than 30 research teams in countries and regions spanning Asia and Europe, the Middle East and South America, North America and Oceania.

### **World Wide Internet**

This book focuses on the social, economical and cultural changes brought about by our appropriation of a given technology: the Internet. Although being born almost 40 years ago, the Internet only reached the current technological maturity a decade ago. This book focuses specifically on that time frame and on the different geographical spaces that constitute the research ground for the teams involved. Gathering such a huge number of researchers and themes in a common volume posed some challenges. The way we chose to address the issues was to allow each team to focus on its own research, the only common rule being the use of data gathered under the WIP research and, whenever possible, complemented by other available data. The book is organized in seven parts, each a cluster of research around a common theme.

The first part of this book focuses on the Internet as a medium and its role in changing our digital ecologies and communicational models. The first chapter by Gustavo Cardoso and Vera Araújo suggests that the Internet has moved from being a space of keepers of knowledge into a space mainly built around the communication activities that configure the archetype of the communicator. Cardoso and Araújo examine common traits we find between words written about the Internet before 1997 and actions performed by the users of the Internet in 2007. In this chapter the authors argue that although we could frame the primordial studies about the Internet in the fundamental opposition of uses between information spaces and social spaces or communities, after a decade of Internet usage, communication has emerged as the major driving force in our daily uses of the Internet.

The second chapter, by Olle Findahl, looks at the Internet as a complement to traditional media. Findahl states that there are many



signs of difficult times for traditional newspapers and broadcast television, especially in US. However, a more thorough analysis of readers and viewers in countries with high Internet penetration and high newspaper reach like Japan and the Nordic countries does not support that conclusion. Findahl suggests that the habits of reading newspapers in paper format have changed very little since the Internet was introduced even if reading a newspaper online is one of the most popular activities among the users of the Internet in all ages in those countries. Also time spent viewing TV seems also to be constant during the last 10 years when the use of the Internet has increased. The strong tradition of reading a daily newspaper and watching broadcast television seems to have survived at least the first 10 years of the Internet in countries with high newspaper reach and high Internet penetration. Findahl argues then that the development of traditional media is not the same in all countries.

The third chapter, by Fernando Gutiérrez and Octavio Islas, looks at the new digital ecology in Mexico. The authors argue that Mexico, as in other parts of the world, has witnessed the rise of a new media ecology. This new ecology carries particular characteristics that have been altering the environment and contributing to the formation of new societies. The Internet is one of its most essential components. In their chapter, Gutierrez and Islas show how environments are changing in Mexico and how the Internet gives a fresh perspective to traditional activities in this North American society.

The fourth chapter, by Shunji Mikami, focuses its attention on the role played by the Internet under a changing media environment in Japan. Since the mid-1990s, new media such as the Internet, mobile phones, and digital TV services began to spread in Japan, fostered by government policies and severe market competition, resulting in a diversified media environment. The Internet in Japan is characterized by penetration of the FTTH broadband and mobile service. Judging by the users' evaluation, the Internet is not highly regarded as sources of information or entertainment, compared with traditional mass media such as TV or newspapers.

Another look at the newspapers consumption and industry ends

the first part of this book. Looking now at the United States of America, Robert Lunn and Michael Suman focus on the analysis of the Internet users and the possible relationship with newspaper readership. Lunn and Suman follow a longitudinal examination of Internet diffusion, using adopter categories and ramifications of Internet usage in order to discuss the importance of newspapers to the American society. Lunn and Suman argue that existing literature shows that the technology diffusion process is inherently complex, usually involving heterogeneous populations, and is correspondingly under-conceptualized through the use of single summary percent utilization figures. In their examination of data from the longitudinal Digital Future Project, Lunn and Suman examine how United States Internet diffusion, including attitudes, opinions, and behaviours for the same 453 subjects, varied over a seven year period (2000 - 2006). Lunn and Suman identified the existence of several Internet usage dimensions: distinct adoption, non-adoption, discontinuance, and intermittent usage patterns. The chapter ends with the argument that membership in different Internet adoption groups might be related to a systematic decline in the importance of newspapers as a source of information over time in the US.

Part two of this book is dedicated to the dichotomy of use vis-à-vis non-use of the Internet and how digital exclusion and social inclusion are related with the use of the Internet. The chapter by Angus Cheong and Jianbin Jin examines the evolving pattern of the digital Divide. Cheong and Jin's work sheds new insight on one of the frequently ill-defined concepts in social science: digital divide on the Internet. Guided by previous conceptualization and operationalization of the concept, Cheong and Jin adopt the methods researchers have been using for the purpose of quantifying the magnitude of the digital divide. They argue that previous research efforts have been largely descriptive, inevitably yielding diverse presentations and interpretations. They propose the adoption of a standard measure of distribution inequality, i.e., Gini coefficient, under a defining framework which encompasses three key constitutive components: levels of analysis, inequality

types and types of ICT, in the studies of digital divide. Following that path, Cheong and Jin explore the dynamic nature of the digital divide by constructing six digital divide indexes from the survey databank of seven probability surveys over a period of eight years collected in Macau. Cheong and Jin's research suggests the existence of a "dynamic disequilibria" of digital divide in which different evolutive patterns between access divide and usage divides at the individual level exist.

Turning to four European countries Britain, the Czech Republic, Hungary, and Sweden, Ellen Helsper and Anna Galácz discuss the links between social and digital exclusion. They argue that social exclusion is linked strongly to digital engagement. The groups at a general disadvantage in society tend to also be at a disadvantage in relation to ICT access, skills and have lower levels of engagement over a breadth of activities. Although this has been shown in a variety of different studies, Helsper and Galácz point out the near total absence of insight on how the links between digital and social exclusion vary between countries. Their chapter looks at the similarities and differences in the links between social disadvantage and digital engagement in four European countries. The two researchers hypothesized that countries with higher levels of socioeconomic inequality will show stronger links between social and digital exclusion and that countries with higher rates of diffusion have highly concentrated unified social exclusion in relation to digital exclusion. Helsper and Galácz conclude that the four European countries are very similar in the ways in which digital and social disadvantage are related. Nevertheless, there is some evidence that countries with high socioeconomic inequality show stronger links between social and digital exclusion. However, overall wealth in a country was as important as inequality in determining average levels of disengagement. In the two countries with low diffusion rates, the Czech Republic and Hungary, different types of social exclusion were grouped together more closely in their relation to different types of engagement than they were in the high diffusion countries, Britain and Sweden. This suggests that a diverse approach to tackling digital disengagement in different

groups is necessary in high diffusion countries while a more unified social intervention is suitable in low diffusion countries to counter links between social exclusion and digital disengagement.

The third chapter, by Marcela Cristini and Guillermo Bermudez, focuses on Internet access and secondary school test scores in Argentina. The analysis of the individual test results was then correlated with the socioeconomic status of households and to their Internet access at home and school. Through the use of econometric measures, the authors discover a significant positive effect of Internet access on test performance in a broader context of the equality of opportunities in Argentina.

The fourth chapter, by Nicolas Demertzis and Vassilis Gialamas, looks at Cyprus users, non-Users, and Internet Connectedness. Treating Cyprus as an information society in the making, Demertzis and Gialamas argue that in spite of the recent progress in information and communication technologies (ICT), Cyprus is torn by digital divides across gender, education, age, region and income. Apart from the split between the haves and the have-nots, there are divides in access as well. Most of the Cypriots are not Internet users. The authors detect a substantive group of people which seem to be either immune to ICT or are peripheral Internet users. These are people who do not possess a PC, are not connected to and have never used the Internet, are unwilling to use it in the near future or have used in the past and are likely to continue to use it. According to the authors, Internet penetration in Cyprus will not follow a steadfast course unless youngsters get connected in great numbers rapidly. However, the authors have reasons for expecting that in the mid- and long run, Internet penetration will grow and the digital divide between Cyprus and other developed countries will diminish.

The fifth chapter by Alejandro Gutierrez and Ana Maria Trimmino discusses social inclusion through information and communication technologies (ICT) in La Boquilla, Colombia. Gutierrez and Trimmino argue that ICT's are currently on the business, governments and citizens' daily agenda, for their capacity to improve the communication and transportation of information for

the building of a modern society. Through the ICT and especially through the adoption and Internet use, there is an opportunity to prevent some people from being excluded from social development processes and products. Further, Gutierrez and Trimmino argue that, through the use of impact measure, the Internet and computer use could stimulate the community participation in the short term.

This second part of the book ends with a chapter by Anikó Bernát, Zoltán Fábrián, Anna Galács and Bence Ságvári who examine digital literacy in Hungary. The authors prepared in 2007 a study that aimed to segment and present social groups in Hungary from the point of view of digital literacy in order to support policy action. According to their analysis results, digital literacy is closely correlated with socio-demographic attributes as well as other factors such as culture and media consumption. People in the higher-level groups are mostly digitally literate, while the digitally illiterate members of the middle groups form the most important target groups of policy actions. To measure the chances of becoming digitally literate, the authors introduced a complex indicator, the Individual Digital Opportunity (IDO) index.

The third part of this book addresses the Cultures of Internet. The first chapter, by Scott Ewing and Julian Thomas, examines the creative dynamics of the broadband Internet in Australia, focusing on the production and consumption of cultural content. The focus of this chapter is on what Ewing and Thomas call the 'creative Internet', uses ranging from relatively straightforward user-generated content such as posting photographs to the distribution of more complex amateur-produced material. The aim of this chapter is to outline the knowledge, the motivations, incentives, and authorial practices which sustain production and consumption of cultural content. Ewing and Thomas begin by considering the relationship between the development of the 'creative Internet' and broadband access. They then turn to some of the social dynamics of this creative activity, considering first gender and then age in relation to broadband access. Ewing and Thomas offer us a tentative approach as to the profile of the producer and consumer of cultural content in the Internet.

The second chapter, by André Caron and Letizia Caronia, addresses the so-called new screens and young people's appropriation of entertainment content.

Caron and Caronia state that although new information and communications technologies have become extremely dynamic, content has been fairly controlled and regulated. It is now much easier to access on the Internet and is increasingly independent from any formal institutional framework. Images on screens, which used to be viewed on different platforms in specific locations and at predictable times, now transcend space and time, particularly for the younger generations. The question asked here is: how do young people appropriate and evaluate movie and video game content? Are rating systems still relevant in these new media environments? In order to begin answering such questions, Caron and Caronia suggest that we need to better understand the needs, expectations and skills of today's youth. Some consider young people to be passive, easy to manipulate, unaware of their values and entirely lacking in critical thinking skills, whereas others see them as active users able to interpret, judge and choose, and, consequently, capable of using knowledge and competencies. Caron and Caronia chose a qualitative approach designed to take young people's everyday environment into account in the construction of their relationships with these images on the new and traditional screens to which they now have access. The study included family interviews (semi-structured interview guides), logbooks and digital video cameras that were used by the young participants to gather information on this topic. Findings shed new insights on the cultural dimensions of youth consumption and production.

Part three ends with the contributions from Carlos Taberner, Jordi Sánchez-Navarro, Daniel Aranda and Imma Tubella who investigate the relationship between media practices and connected lives of young people in Catalonia and Spain. The authors argue that the widespread diffusion of ICT's, particularly the Internet and the explosion of global mobile communication, has brought about a new turn in the rules under which mass communication has been run to date. For one thing, ICT's have opened the door

to direct participation and thus, while appropriated by individuals into their everyday lives, to the emergence of user-driven participatory/collaborative culture(s). In this context, the young, as their lives unfold in an increasingly media- and technology-rich environment where ICT's are gradually becoming paramount, play a fundamental role as conducive to socio-cultural transformations linked to media and communication practices. Among these, online social networking stands out as a powerful change factor, both as a multimodal form of cultural consumption and a specific ever renewing set of media practices identity formation, status negotiation and peer-to-peer sociality.

Part four addresses the politics of the Internet, particularly elections, political expectations and political efficacy. Two chapters comprise this part, one addressing the Chilean environment and another France. Sergio Godoy Etcheverry connects Internet usage, the media, and political expectations in Chile from 2003 to 2008. He describes how the Internet affects usage and expectations about traditional media in Chile since 2003. This chapter also discusses the influence of the Internet on political expectations of Chileans relative to other countries. Three quarters of Chileans get their perceptions about reality from TV, one of the two media aside from radio which has universal penetration. Besides, newspapers are highly influential on defining the news agenda of all the other media. Godoy argues that if the web affects newspapers and television, it may also affect political perceptions of empowerment since users can circumvent these gatekeepers of information for mass mobilization and public opinion expression. In other words, Godoy invites the reader to accompany him in a preliminary examination of whether the Internet is the driving force behind the irreversible and dramatic social change.

The second chapter focuses on the Internet and the 2007 French Presidential Election. Thierry Vedel analyzes the event and the uses of the Internet and raises questions about the fate of traditional media. Vedel's chapter is about the place and role of the internet in the 2007 French presidential election and more specifically the study of how the internet was used by candidates and voters. Did

the internet intensify the process of electoral competition? Did it help to pull more citizens into the campaign process and contribute to a diversification of their information sources? Vedel argues that the literature on the topic offers two conflicting views. The mobilization thesis sees the Internet as a tool for revitalizing politics and empowering citizens, whereas the normalization thesis holds that the Internet mostly reinforces established powers and existing levels of political engagement. This chapter is organized in two parts. The first part focuses on the supply side of the campaign and documents how the Internet was used by presidential candidates, based on a qualitative analysis of their online strategies and a content analysis of their web sites. The second part scrutinizes the sources voters used to get information about the election and how voters used the political online resources available during the campaign.

Vedel's findings both support and challenge the normalization theory. The Internet was only a marginal component in the strategies of candidates who took advantage of TV for direct contacts with voters. The content analysis demonstrates a strong gap in online activities between main and minor candidates, which reflect inequalities in resources and, to a lesser extent, ideological differences. However, while the Internet has not yet become an essential part of French politics, its usage during the presidential campaign illustrates the increasing role of activation methods (by opposition to mobilization) in modern campaigning as well as the aspiration for new forms of political activism. Because of the interlinked nature of the Internet and of its *modus operandi*, people who are not interested in politics and/or are not especially active in offline or conventional politics may engage in some kind of political activity online.

Part five of the book focuses on the role played by Internet in our daily routines and our common human trait as potential consumers and patients. Andreina Mandelli and Silvia Vianello bring to our attention the consumers' involvement in organizations in the era of social media. This chapter is concerned with the increasing customer involvement in organizational roles through consumer



communities whose importance has been augmented over the last few years, due to the diffusion of the Internet for business and brand-related activities as well as increased consumer activism and participation in content production and exchange. Mandelli and Vianello highlight the importance of the diffusion of the so-called social media where user-generated content and user participation become central. Mandelli and Vianello's chapter aims at exploring research questions on these new consumption phenomena and the changed role of branding in new interconnected markets.

In their chapter, Rita Espanha and Francisco Lupiáñez-Villanueva deal with the health content of the Internet and how its usage affects the autonomy of the user through the transformation of social status from consumers to patients. Espanha and Villanueva point out that information access and dissemination are growing and the ways in which this information and knowledge democratization occur are many, scattered and diverse. If that is true, then what concerns individual health and its daily management on the Internet may also be true, because they never involved as much information as nowadays. The aim of this chapter is to identify and characterize the role of daily information and communication practices for health management in Portugal and to identify and characterize some trends on a global scale of the Internet use for health purpose. Espanha and Villanueva propose an e-readiness index to the Network Society, by considering all Internet activities within WIP database for 2007. Results of cluster analysis show that citizens of poor health are also more likely to be less e-ready. They may even drop out of the Internet. Parallel to the "informed patient" concept, Espanha and Villanueva suggest that when looking at the health dimensions of the Network Society, we must consider the "generational divide" and the "e-readiness divide" concepts.

Part six is devoted to the Internet and Social life, focusing on a wide range of dimensions from sociability to social behavior. The first chapter by Alfred Choi looks at the Internet use in family relations and conflict resolution. Choi reminds us that the Internet is widely believed to have huge impacts on individuals, families, and society at large. But he also states that differences in opinion

exist with regards to whether or not the Internet is beneficial or harmful to family and social relationships and activities. In this chapter Choi reviews two conflicting perspectives on this issue and employs both quantitative and qualitative research to determine whether or not Internet use has effects on family relations. The quantitative part of the research involves multivariate statistical analysis on a national random sample of 1,000 survey respondents. The qualitative part involves in-depth interviews and observations of 10 nuclear families with teenage children. The ethnographic analysis included objective measurements of the child's Internet use (as recorded in personal diaries provided), and data obtained from in-depth interviews on parental awareness and parenting style, level of parent-child conflict, and parents' method of conflict resolution. By means of this multi-method triangulation, Choi's findings are twofold. The quantitative research did not support the pessimistic view of negative effects of Internet use on family relationship. But the qualitative research showed that the interaction of Internet use, parental awareness and parenting style influence the level of conflict and the method of conflict resolution shapes the outcome of the parent-child conflict.

The second chapter takes readers to the issue of Interpersonal Communication in China. Guo Liang and Gai Bo address how different social ties, such as family, friends, colleagues or classmates, are using different ICT tools, such as landline phone calls, mobile phone calls and SMS, Internet email, QQ/ICQ and MSN. Guo and Bo attempt to provide a detailed picture of how people use the new media in their daily interactions in China. They argue that both mobile call and SMS are widely used for personal purposes among mobile phone users in China. However, email and ICQ/QQ are more popular than MSN in daily interpersonal communications. Besides, face-to-face communication plays a more important role in maintaining parent-child and spousal relationships than in maintaining other social ties and work ties. Guo and Bo also suggest that new media are more likely to reinforce the social ties outside family and help people extend their social networks.

In the third chapter, Yair Amichai-Hamburger addresses the

effects of the Internet on our social lives. The author starts by discussing the leading psychological components that influence people's behavior on the net and moves on to describe the debate between those who believe that the Internet is conducive to an active social life and those who argue to the contrary. The results of the World Internet Project, as they pertain to the Internet-social life connection, are assessed in order to recommend an approach for further research in this field.

The fourth chapter is the responsibility of a multi-national team of researchers, David Smahel, P. Vondrackova, L. Blinka and Sergio Godoy-Etcheverry, which focus on the comparison of addictive behavior on the Internet. This chapter presents data on the prevalence of addictive behaviour on the Internet in the Czech Republic and a comparison of two addictive behavior dimensions (conflict and mood modification) among users in Chile, the Czech Republic and Sweden. Findings suggest that Internet users in the Czech Republic and Chile scored similar and higher than Swedes in dimensions of conflict and mood modification. Swedes had a lower incidence of "dangerous" online activities (visiting chat rooms, playing online games) and greater tendency to carry out "practical activities" (bank services). In terms of the prevalence of addictive behavior on the Internet in the Czech Republic, results show that a total of 3.4% of Internet users could be described as Internet addicts.

This book ends with Part Seven whose theme revolves around the role of the Internet in social change and how such a network configuration influences both the global and the local. The first chapter is written by Ilhem Allagui and Tim Walters and focuses on the United Arab Emirates and the Patterns of Internet usage, in a multi-group society, from "Locals" to "Expats". In their analysis, Allagui and Walters describe the socio-technological transformation that the UAE has witnessed in the last decade. The UAE Internet users show diversity and difference in their Internet usage patterns that vary by ethnicity, origin and education level. This chapter portrays the social integration of the Internet in UAE as well as its political, economical and cultural implications.

The second chapter by Tibor Dessewffy and Anna Galász addresses the development of what is suggested to be the Information Society in Hungary. Dessewffy and Galász argue that over the last decade, Internet diffusion and usage have shown some interesting characteristics in Hungary. After the changes at the end of the 1980's – the so-called dual transition – one of the important questions facing Hungary was how the country could join the flow of technological transformation taking place over the world. Despite some promising signs, the Internet proved to be a technological innovation taking off very slowly in Hungary. In this chapter Dessewffy and Galász investigate this phenomenon and offer some possible explanations. The authors find it inevitable to take into account the cultural background and the role of values into consideration when explaining technological change and of technological adoption processes as socially embedded.

The book ends with the contributions of Goodwin, I., Smith, N., Sherman, K., Crothers, C., Billot, J., & Smith, P. on the Internet use in New Zealand and its implications for social change. In this chapter, the authors draw on the findings from the first World Internet Project survey undertaken in New Zealand to examine the implications of Internet use for social change. It is argued that in a rapidly transforming global environment, monitoring the impact of technological change informs possible interventions aimed to alleviate social inequalities at both the micro and macro levels. The chapter first discusses existing Internet research in New Zealand before presenting major World Internet Project New Zealand (WIPNZ) results. Key trends currently shaping New Zealanders' Internet use are highlighted and the chapter also briefly sketches the nature of the 'digital divide' within the country. The findings provide insight into the broad contours of Internet use and their relationship to key social transformations in New Zealand.

### **Changing societies, economies and cultures**

The seven parts that build this book address many of the uncertainties of current societies and the role of Internet adoption

and use on coping with uncertainty. But we like to think that this is not just a book about the countries and regions participating in the World Internet Project. It is our belief that much of the themes here addressed and conclusions reached could be helpful for other scholars and decision makers in other parts of the World that are not yet members of this research network. The main motive behind this book is to share knowledge with others who share with us the same concerns or simple curiosity and to understand the times we are living in and the future being built today. We hope to live up to the expectations that this introduction might have fostered.

*Gustavo Cardoso, Angus Cheong and Jeffrey Cole*

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