Chapter 7

The Societal Impact of the World Wide Web – Key Challenges for the 21st Century

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INTRODUCTION

Many lessons from history offer strong evidence that technology can have a definite effect on the social and political aspects of human life. At times it is difficult to grasp how supposedly neutral technology might lead to social upheavals, mass migrations of people, and shifts in wealth and power. Yet a quick retrospective look at the last few centuries finds that various technologies have done just that, challenging the notion of the neutrality of technology. Some examples include the printing press, railways, and the telephone.

The effects of these technologies usually begin in our minds by changing the way we view time and space. Railways made the world seem smaller by enabling us to send goods, people, and information to many parts of the world in a fraction of the time it took before. Telephones changed the way we think about both time and distance, enabling us to stay connected without needing to be physically displaced. While new technologies create new opportunities for certain individuals

or groups to gain wealth, there are other economic implications with a wider ranging impact, political and social. Eventually, as the technology matures, social upheavals, mass migrations and shifts in economic and political power can be observed. We find concrete examples of this dynamic phenomenon during the Reformation, the industrial revolution, and more recently, as we witness the ongoing information technology revolution.

Before the Reformation, the church controlled an effective monopoly on knowledge and education. The introduction of the printing press in Western Europe in the mid-15th century made knowledge and ideas in book form widely available to a great many more people. Printing hastened the Reformation, and the Reformation spread printing further. By the early 16th century, when Martin Luther posted his 95 theses on the castle church, the political movement was well underway. The printing press changed the way in which we collected, transmitted, and preserved information prior to that time. Mass production and dissemination of new ideas, and more rapid response from others were instrumental in launching a worldwide social phenomenon.

Dramatic changes in the economic and social structures in the 18th century characterized the industrial revolution. Technological innovations were made in transportation and communication with the development of the steam engine, steam shipping, and the telegraph. These inventions and technological innovations were integral in creating the factory system and large-scale machine production. Owners of factories were the new wealthy. The laboring population, formerly employed predominantly in agriculture, moved in mass to the factory urban centers. This led to social changes as women and children were introduced into the workforce. Factory labor separated work from the home and there was a decline of skilled crafts as work became more specialized along the assembly line.

The inventions of the telegraph and telephone dramatically changed the manner in which we conduct business and live our daily lives. They allowed the collection, validation, and dissemination of information in a timely and finan-cially efficient manner. More recently, we are experiencing the information technology revolution, led by the introduction of computers. The rate of change has accelerated from previous times–with generations of technology passing us by in matters of months rather than decades. We are witnessing significant shifts in wealth and power before our eyes. Small start-up high technology and Internet companies, and their young owners, represent a very wealthy class–and an extremely powerful one. Small countries such as Singapore and Ireland, through the strategic use of information technology and aggressive national policy, have transformed their respective economies and positioned themselves in the competitive global economy.

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