# Theories of the Information Society

*Third edition*

**Frank Webster**

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In memory of Frank Neville Webster
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# Acknowledgements

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# Contents

# Introduction

It seems to me that most people ask themselves, at one time or another, what sort of society is it in which we live? How can we make sense of what is going on with our world? And where is it all taking us? This is a daunting and frequently bewildering task because it involves trying to identify the major contours of extraordinarily complex and changeable circumstances. It is, in my view, the duty of social science to identify and explain the most consequential features of how we live now, the better that we may see where we are headed, so that we might influence where we are going. Some people quickly give up on the task, frankly admitting confusion. Still others, encountering disputation, retreat into the comforting (and lazy) belief that we see only what we choose. Fortunately, most people stick with trying to understand what is happening in the world, and in so doing reach for such terms as 'capitalism', 'industrialism', 'totalitarianism' and 'liberal democracy'. Most of us will have heard these sorts of words, will have voiced them ourselves, when trying to account for events and upheavals, for important historical occurrences, or even for the general drift of social, economic and political change.

In all probability we will have argued with others about the appropriateness of these labels when applied to particular circumstances. We will even have debated just what the terms might mean. For instance, while it can be agreed that Russia has moved well away from Communism, there will be less agreement that the transition can be accurately described as a shift to a fully capitalist society. And, while most analysts see clearly the spread of markets in China, the continuation of a dictatorial Communist Party there makes it difficult to describe China in similar terms as, say, we do with reference to Western Europe. There is a constant need to qualify the generalising terminology: hence terms like 'pre-industrial', 'emerging democracies', 'advanced capitalism', 'authoritarian populism'.

And yet, despite these necessary refinements, few of us will feel able to refuse these concepts or indeed others like them. The obvious reason is that, big and crude and subject to amendment and misunderstanding though they be, these concepts and others like them do give us a means to identify and begin to understand essential elements of the world in which we live and from which we have emerged. It seems inescapable that, impelled to make sense of the most consequential features of different societies and circumstances, we are driven towards the adoption of grand concepts. Big terms for big issues.

The starting point for this book is the emergence of an apparently new way of conceiving contemporary societies. Commentators increasingly began to talk about 'information' as a distinguishing feature of the modern world thirty years or so ago. This prioritisation of information has maintained its hold now for several decades and there is little sign of it losing its grip on the imagination. We are told that we are entering an information age, that a new 'mode of information' predominates, that ours is now an 'e-society', that we must come to terms with a 'weightless economy' driven by information, that we have moved into a 'global information economy'. Very many commentators have identified as 'information societies' the United States, Britain, Japan, Germany and other nations with a similar way of life. Politicians, business leaders and policy makers have taken the 'information society' idea to their hearts, with the European Union urging the rapid adjustment to a 'global information society', thereby following in the tracks of Japan which embraced the concept of information society in the early 1970s (Duff, 2000).

Just what sense to make of this has been a source of controversy. To some it constitutes the beginning of a truly professionalised and caring society while to others it represents a tightening of control over the citizenry; to some it heralds the emergence of a highly educated public which has ready access to knowledge while to others it means a deluge of trivia, sensationalism and misleading propaganda. Among political economists talk is of a novel 'e-economy' in which the quick-thinking knowledge entrepreneur has the advantage; among the more culturally sensitive reference is to 'cyberspace', a 'virtual reality' no-place that welcomes the imaginative and inventive.

Amidst this divergent opinion, what is striking is that, oppositional though they are, all scholars acknowledge that there is something special about 'information'. In an extensive and burgeoning literature concerned with the information age, there is little agreement about its major characteristics and its significance other than that – minimally – 'information' has achieved a special pertinence in the contemporary world. The writing available may be characteristically disputatious and marked by radically different premises and conclusions, but about the special salience of 'information' there is no discord.

It was curiosity about the currency of 'information' that sparked the idea for the first edition of this book, which I wrote in the early 1990s. It seemed that, on many sides, people were marshalling yet another grandiose term to identify the germane features of our time. But simultaneously thinkers were remarkably divergent in their interpretations of what form this information took, why it was central to our present systems, and how it was affecting social, economic and political relationships.

This curiosity has remained with me, not least because the concern with information persists and has, if anything, heightened – as has the variability among analysts about what it all amounts to. While I was writing the first edition of this book discussion appeared stimulated chiefly by technological change. The 'microelectronics revolution', announced in the late 1970s and early 1980s, launched a fleet of opinion about what information technology (IT) was set to do to us. Then favoured topics were 'the end of work', the advent of a 'leisure society', the totally

'automated factory' in which robots did everything. These subjects went out of style somewhat as full employment returned and persisted, but the enthusiasm for technologically driven changes remains. Today's agenda concerns the Internet especially, the 'information superhighway' and cybersociety brought about now by information and communications technologies (ICTs). Hot topics now are electronic democracy, virtual relations, interactivity, personalisation, cyborgs and online communities. Much comment now seizes on the speed and versatility of new media to evoke the prospect of radical transformations in what we may do. Thus when a tsunami enveloped large parts of South East Asia on 26 December 2004, the phones went down, but e-mail and the Internet rapidly became the means to seek out lost ones. And when, on 7 July 2005, terrorists bombed the London underground and bus system, the phone system shut (probably for security reasons), yet people quickly turned to the Internet for news and mutual support, while the photographic facilities on many mobile phones displaced traditional media to provide vivid pictures of the immediate devastation.

At the same time, however, in some quarters at least there had been a switch away from technology to what one might consider the softer sides of information. Among leading politicians and intellectuals there is an increased concern for 'informational labour', for the 'symbolic analysts' who are best equipped to lead where adaptability and ongoing retraining are the norm. Here it is people who are the key players in the information society, so long as they have been blessed by a first-rate education that endows them with the informational abilities to survive in a new and globalised economy. Now deal-makers, managers, software engineers, media creators and all those involved with the creative industries are seen as key to the information society. This shift in analysis from technology to people, along with a persistence of general concern for information, encouraged me to produce this third edition of *Theories of the Information Society*.

I focus attention on different interpretations of the import of information in order to scrutinise a common area of interest, even though, as we shall see, interpretations of the role and import of information diverge widely, and, indeed, the closer that we come to examine their terms of reference, the less agreement even about the ostensibly common subject matter – information – there appears to be.

Setting out to examine various images of the information society, this book is organised in such a way as to scrutinise major contributions towards our understanding of information in the modern world. For this reason, following a critical review of definitional issues in Chapter 2 (consequences of which reverberate through the book), each chapter thereafter looks at a particular theory and its most prominent proponents and attempts to assess its strengths and weaknesses in light of alternative theoretical analyses and empirical evidence. Starting with thinkers and theories in this way does have its problems. Readers eager to learn about, say, the Internet and online–offline relations, or about information flows in the Iraq War, or about the consumption of music that has accompanied the spread of MP3 players, or about politics in an era of media saturation, will not find such issues considered independently in this book. These topics are here, but they are incorporated into chapters organised around major thinkers and

theories. Some readers might find themselves shrugging here, dismissing the book as the work of a dreamy theorist.

I plead (a bit) guilty. As they progress through this book readers will encounter Daniel Bell's conception of post-industrial society which places a special emphasis on information (Chapter 3), the contention that we are living through a transition from Fordist to post-Fordist society that generates and relies upon information handling to succeed (Chapter 4), Manuel Castells's influential views on the 'informational capitalism' which operates in the 'network society' (Chapter 5), Herbert Schiller's views on advanced capitalism's need for and manipulation of information (Chapter 6), Jürgen Habermas's argument that the 'public sphere' is in decline and with it the integrity of information (Chapter 7), Anthony Giddens's thoughts on 'reflexive modernisation' which spotlight the part played by information gathered for surveillance and control purposes (Chapter 8), and Jean Baudrillard and Zygmunt Bauman on postmodernism and post-modernity, both of whom give particular attention to the explosion of signs in the modern era (Chapter 9).

It will not escape notice that these thinkers and the theories with which they are associated, ranging across disciplines such as sociology, philosophy, economics and geography, are at the centre of contemporary debates in social science. This is, of course, not especially surprising given that social thinkers are engaged in trying to understand and explain the world in which we live and that an important feature of this is change in the informational realm. It is unconscionable that anyone should attempt to account for the state of the world without paying due attention to that enormous domain which covers changes in mass media, the spread of information and communication technologies, new forms of work and even shifts in education systems.

Let me admit something else: because this book starts from contemporary social science, it is worth warning that some may find at least parts of it difficult to follow. Jürgen Habermas is undeniably challenging, Daniel Bell – outside popularisations of his work – is a sophisticated and complex sociologist who requires a good deal of effort to appreciate, and postmodern thinkers such as Jean Baudrillard are famously (and irritatingly) opaque in expression. So those who are confused will not be alone in this regard. It can be disconcerting for those interested in the information age to encounter what to them can appear rather alien and arcane social theorists. They know that there has been a radical, even a revolutionary, breakthrough in the technological realm and they want, accordingly, a straightforward account of the social and economic consequences of this development. There are paperbacks galore to satisfy this need. 'Theory', especially 'grand theory' which has ambitions to identify the most salient features of contemporary life and which frequently recourses to history and an array of other 'theorists', many of them long dead, does not, and should not, enter into the matter since all it does is confuse and obfuscate.

But I must now assert the value of my 'theoretical' starting point. I *intentionally* approach an understanding of information via encounters with major social theorists by way of a riposte to a rash of pronouncements on the information age. Far too much of this has come from 'practical' men (and a few women) who,

impressed by the 'Information Technology Revolution', or enthused by the Internet, or unable to imagine life without e-mail, or enraptured by bloggers, or captivated by 'virtual reality' experiences that outdo the mundane, have felt able to reel off social and economic consequences that are likely, even inevitably, to follow. In these frames work will be transformed, education upturned, corporate structures revitalised, democracy itself reassessed – all because of the 'information revolution'.

Such approaches have infected – and continue to infect – a vast swathe of opinion on the information society: in paperback books with titles such as *The Mighty Micro*, *The Wired Society*, *Being Digital* and *What Will Be*, in university courses designed to consider the 'social effects of the computer revolution', in countless political and business addresses, and in a scarcely calculable amount of journalism that alerts audiences to prepare for upheaval in all aspects of their lives as a result of the information age.

An aim of approaching information from an alternative starting point, that of contemporary social theory (at least that which is combined with empirical evidence), is to demonstrate that the social *impact* approaches towards information are hopelessly simplistic and positively misleading for those who want to understand what is going on and what is most likely to transpire in the future. Another aim is to show that social theory, combined with empirical evidence, is an enormously richer, and hence ultimately more practical and useful, way of understanding and explaining recent trends in the information domain.

While most of the thinkers I examine in this book address informational trends directly, not all of them do so. Thus, while Daniel Bell and Herbert Schiller, in their very different ways and with commendable prescience, have been insisting for over a generation that information and communication issues are at the heart of post-war changes, there are other thinkers whom I consider, such as Jürgen Habermas and Anthony Giddens, who give less direct attention to the informational domain. I hasten to say that this is neither because they have nothing to contribute to our understanding of information nor because they do not consider it to be important. Rather it is because their terms of debate are different from my focus on the subject of information. For this reason I have felt free to lead off from discussion of, say, Habermas's notion of the public sphere or from consideration of arguments surrounding an alleged shift from Fordism to post-Fordism, before moving towards my interest in informational issues. Since I am not trying to provide a full exposition of particular social theories but rather to try to understand the significance of the information domain with the best tools that are available, this does not seem to me to be illegitimate.

It needs to be said, too, that, throughout this book, there runs an interrogative and sceptical view of the information society concept itself. One or two commentators complained that the earlier editions of *Theories of the Information Society* were so critical of the notion of an information society that there seemed no point in writing a whole book about it. I return to that point in Chapter 10, but state here that it seems appropriate to give close attention to a term that exercises such leverage over current thought, even if one finds it has serious shortcomings. The information society might be misleading, but it can still have

value in a heuristic sense. At the same time, a major problem is that the concept 'information society' often carries with it an array of suppositions about what has and is changing and how change is being effected, yet it is used seemingly unproblematically by a wide section of opinion. Recognition of this encouraged me in my choice of title since it meant at least that people would see instantly, at least in very broad terms, what it was about. Nonetheless, I do hope to shake some of the confidence of those who subscribe to the notion of the arrival of a novel information society in what follows. I shall be contesting the accuracy and appropriateness of the concept in many of its variants, though I do find it useful in some respects. So readers ought to note that, though I am often critical of the term, on occasions I do judge it to be helpful in understanding how we live today.

In my second chapter I subject the concept 'information society' to some scrutiny and, there, readers will come across major definitional problems with the term, but at the outset I would draw attention to a major divide that separates many of the thinkers whom I consider in this book. On the one side are subscribers to the notion of an information society, while on the other are those who insist that we have only had the *informatisation* of established relationships. It will become clear that this is not a mere academic division since the different terminology reveals how one is best to understand what is happening in the informational realm.

It is important to highlight the division of opinion as regards the variable interpretations we shall encounter in what follows. On the one hand, there are those who subscribe to the notion that in recent times we have seen emerge information societies which are marked by their differences from hitherto existing societies. Not all of these are altogether happy with the term 'information society', but in so far as they argue that the present era is special and different, marking a turning point in social development, I think they can be described as its endorsers. On the other hand, there are scholars who, while happy to concede that information has taken on a special significance in the modern era, insist that the central feature of the present is its continuities with the past.

The difference between information society theorists and those who examine informatisation as a subordinate feature of established social systems can be one of degree, with thinkers occupying different points along a continuum, but there is undeniably one pole on which the emphasis is on change and another where the stress is on persistence.

In this book I shall be considering various perspectives on 'information' in the contemporary world, discussing thinkers and theories such as Daniel Bell's 'post-industrialism', Jean-François Lyotard on 'postmodernism', and Jürgen Habermas on the 'public sphere'. We shall see that each has a distinct contribution to make towards our understanding of informational developments, whether it is as regards the role of white-collar employees, the undermining of established intellectual thought, the extension of surveillance, the increase in regularisation of daily life, or the weakening of civil society. It is my major purpose to consider and critique these differences of interpretation.

Nonetheless, beyond and between these differences is a line that should not be ignored: the separation between those who endorse the idea of an

information society and those who regard informatisation as the continuation of pre-established relations. Towards one wing we may position those who proclaim a new sort of society that has emerged from the old. Drawn to this side are theorists of:

- *post-industrialism* (Daniel Bell and a legion of followers)
- *postmodernism* (e.g. Jean Baudrillard, Mark Poster, Paul Virilio)
- *flexible specialisation* (e.g. Michael Piore and Charles Sabel, Larry Hirschhorn)
- *the informational mode of development* (Manuel Castells)

On the other side are writers who place emphasis on continuities. I would include here theorists of:

- *neo-Marxism* (e.g. Herbert Schiller)
- *Regulation Theory* (e.g. Michel Aglietta, Alain Lipietz)
- *flexible accumulation* (David Harvey)
- *reflexive modernisation* (Anthony Giddens)
- *the public sphere* (Jürgen Habermas, Nicholas Garnham)

None of the latter denies that information is of key importance to the modern world, but unlike the former they argue that its form and function are subordinate to long-established principles and practices. As they progress through this book, readers will have the chance to decide which approaches they find most persuasive.

CHAPTER TWO

# What is an information society?

If we are to appreciate different approaches to understanding informational trends and issues nowadays, we need to pay attention to the definitions that are brought into play by participants in the debates. It is especially helpful to examine at the outset what those who refer to an information society mean when they evoke this term. The insistence of those who subscribe to this concept, and their assertion that our time is one marked by its novelty, cries out for analysis, more urgently perhaps than those scenarios which contend that the status quo remains. Hence the primary aim of this chapter is to ask: what do people mean when they refer to an 'information society'? Later I comment on the different ways in which contributors perceive 'information' itself. As we shall see – here, in the very conception of the phenomenon which underlies all discussion – there are distinctions which echo the divide between information society theorists who announce the novelty of the present and informatisation thinkers who recognise the force of the past weighing on today's developments.

## Definitions of the information society

What strikes one in reading the literature on the information society is that so many writers operate with undeveloped definitions of their subject. It seems so obvious to them that we live in an information society that they blithely presume it is not necessary to clarify precisely what they mean by the concept. They write copiously about particular features of the information society, but are curiously vague about their operational criteria. Eager to make sense of changes in information, they rush to interpret these in terms of different forms of economic production, new forms of social interaction, innovative processes of production or whatever. As they do so, however, they often fail to establish in what ways and why information is becoming more central today, so critical indeed that it is ushering in a new type of society. Just what is it about information that makes so many scholars think that it is at the core of the modern age?

I think it is possible to distinguish five definitions of an information society, each of which presents criteria for identifying the new. These are:

1 technological
2 economic

3 occupational
4 spatial
5 cultural

These need not be mutually exclusive, though theorists emphasise one or other factors in presenting their particular scenarios. However, what these definitions share is the conviction that quantitative changes in information are bringing into being a qualitatively new sort of social system, the information society. In this way each definition reasons in much the same way: there is more information nowadays, therefore we have an information society. As we shall see, there are serious difficulties with this *ex post facto* reasoning that argues a cause from a conclusion.

There is a sixth definition of an information society which is distinctive in so far as its main claim is not that there is more information today (there obviously is), but rather that the character of information is such as to have transformed how we live. The suggestion here is that *theoretical knowledge/information* is at the core of how we conduct ourselves these days. This definition, one that is singularly qualitative in kind, is not favoured by most information society proponents, though I find it the most persuasive argument for the appropriateness of the information society label. Let us look more closely at these definitions in turn.

## Technological

Technological conceptions centre on an array of innovations that have appeared since the late 1970s. New technologies are one of the most visible indicators of new times, and accordingly are frequently taken to signal the coming of an information society. These include cable and satellite television, computer-to-computer communications, personal computers (PCs), new office technologies, notably online information services and word processors, and cognate facilities. The suggestion is, simply, that such a volume of technological innovations must lead to a reconstitution of the social world because its impact is so profound.

It is possible to identify two periods during which the claim was made that new technologies were of such consequence that they were thought to be bringing about systemic social change. During the first, the late 1970s and early 1980s, commentators became excited about the 'mighty micro's' capacity to revolutionise our way of life (Evans, 1979; Martin, 1978), and none more so than the world's leading futurist, Alvin Toffler (1980). His suggestion, in a memorable metaphor, is that, over time, the world has been decisively shaped by three *waves* of technological innovation, each as unstoppable as the mightiest tidal force. The first was the agricultural revolution and the second the Industrial Revolution. The third is the information revolution that is engulfing us now and which presages a new way of living (which, attests Toffler, will turn out fine if only we ride the wave).

The second phase is more recent. Since the mid-1990s many commentators have come to believe that the merging of information and communications

technologies (ICTs) is of such consequence that we are being ushered into a new sort of society. Computer communications (e-mail, data and text communications, online information exchange, etc.) currently inspire most speculation about a new society in the making (Negroponte, 1995; Gates, 1995; Dertouzos, 1997). The rapid growth of the Internet especially, with its capacities for simultaneously promoting economic success, education and the democratic process, has stimulated much commentary. Media regularly feature accounts of the arrival of an information 'superhighway' on which the populace must become adept at driving. Authoritative voices are raised to announce that 'a new order . . . is being forced upon an unsuspecting world by advances in telecommunications. The future is being born in the so-called *information superhighways* . . . [and] anyone bypassed by these highways faces ruin' (Angell, 1995, p. 10). In such accounts a great deal is made of the rapid adoption of Internet technologies, especially those that are broadband-based since this technology can be always on without interrupting normal telephony, though on the horizon is wireless connection whereby the mobile phone becomes the connector to the Internet, something that excites those who foresee a world of 'placeless connectivity'– anywhere, anytime, always the user is 'in touch' with the network. Accordingly, data is collected on Internet take-up across nations, with the heaviest users and earliest adopters such as Finland, South Korea and the United States regarded as more of information societies than laggards such as Greece, Mexico and Kenya. In the UK by summer 2005 almost six out of ten households could access the Internet (http://www.statistics. gov. uk/CCI/nugget.asp?ID=8&POS=1&COIR), putting it several points behind leading nations such as Denmark and Sweden that had 80 per cent household connectivity, but still far ahead of most countries (http://europa.eu.int/rapid/ pressReleasesAction.do?referenec=STAT/05/143). The spread of national, international and genuinely global information exchanges between and within banks, corporations, governments, universities and voluntary bodies indicates a similar trend towards the establishment of a technological infrastructure that allows instant computer communications at any time of day in any place that is suitably equipped (Connors, 1993).

Most academic analysts, while avoiding the exaggerated language of futurists and politicians, have nonetheless adopted what is at root a similar approach (Feather, 1998; Hill, 1999). For instance, from Japan there have been attempts to measure the growth of Joho Shakai (information society) since the 1960s (Duff *et al.*, 1996). The Japanese Ministry of Posts and Telecommunications (MPT) commenced a census in 1975 which endeavours to track changes in the volume (e.g. numbers of telephone messages) and vehicles (e.g. penetration of telecommunications equipment) of information using sophisticated techniques (Ito, 1991, 1994). In Britain, a much respected school of thought has devised a neo-Schumpeterian approach to change. Combining Schumpeter's argument that major technological innovations bring about 'creative destruction' with Kondratieff's theme of 'long waves' of economic development, these researchers contend that information and communications technologies represent the establishment of a new epoch (Freeman, 1987) which will be uncomfortable during its earlier phases, but over the longer term will be economically beneficial. This new

'techno-economic paradigm' constitutes the 'Information Age' which is set to mature early in this century (Hall and Preston, 1988; Preston, 2001).

It has to be conceded that, commonsensically, these definitions of the information society do seem appropriate. After all, if it is possible to see a 'series of inventions' (Landes, 1969) – steam power, the internal combustion engine, electricity, the flying shuttle – as the key characteristic of the 'industrial society', then why not accept the virtuoso developments in ICT as evidence of a new type of society? As John Naisbitt (1984) puts it: 'Computer technology is to the information age what mechanization was to the Industrial Revolution' (p. 28). And why not?

It may seem obvious that these technologies are valid as distinguishing features of a new society, but when one probes further one cannot but be struck also by the vagueness of technology in most of these comments. Asking simply for a usable measure – In *this* society *now* how much ICT is there and how far does this take us towards qualifying for information society status? How much ICT is required in order to identify an information society? – one quickly becomes aware that a good many of those who emphasise technology are not able to provide us with anything so mundanely real-worldly or testable. ICTs, it begins to appear, are everywhere – and nowhere, too.

This problem of measurement, and the associated difficulty of stipulating the point on the technological scale at which a society is judged to have entered an information age, is surely central to any acceptable definition of a distinctively new type of society. It is generally ignored by information society devotees: the new technologies are announced, and it is presumed that this in itself heralds the information society. This issue is, surprisingly, also bypassed by other scholars who yet assert that ICT is the major index of an information society. They are content to describe in general terms technological innovations, somehow presuming that this is enough to distinguish the new society.

Let me state this baldly: Is an information society one in which everyone has a PC? If so, is this to be a PC of a specified capability? Or is it to be a networked computer rather than a stand-alone? Or is it more appropriate to take as an index the uptake of iPods or BlackBerries? Is it when just about everyone gets a digital television? Or is individual adoption of such technologies of secondary significance, the key measure being organisational incorporation of ICTs? Is the really telling measure institutional adoption as opposed to individual ownership? Asking these questions one becomes conscious that a technological definition of the information society is not at all straightforward, however self-evident such definitions initially appear. It behoves those who proclaim adoption of ICTs to be the distinguishing feature of an information society to be precise about what they mean.

Another objection to technological definitions of the information society is very frequently made. Critics object to those who assert that, in a given era, technologies are first invented and then subsequently *impact* on the society, thereby impelling people to respond by adjusting to the new. Technology in these versions is privileged above all else, hence it comes to identify an entire social world: the Steam Age, the Age of the Automobile, the Atomic Age (Dickson, 1974).