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DIGITAL SOCIETY

Key Questions

- What is digital society?
- What is the relationship between technology and social change?
- What does it mean, from a social perspective, that things are digital?
- In what social and historical context was the internet created, and how has it evolved?
- What is the relationship between digital media and society?
- How does 'the digital' impact what it means to live in and research our present-day social world?

Key Concepts

Digital society * digital media * the internet * social change * post-industrial society * information society * media ecology * deep mediatisation

Today we have the internet. We have smartphones, smart homes, digital doctors, and online courses. We have apps, social media, and wearable digital devices tagged onto our bodies. One stunning statistic after another tells us about the extreme amounts of data flowing through the silicon, copper, optical fibre, and wireless infrastructures in the skies, under the ground, and in our laps and pockets. We also have new emerging forms of artificial intelligence (AI), enabling users to interact with digital media in unprecedented ways. Especially, the advances in the area of so-called generative AI, where machines can self-learn and create content, are rapidly transforming the digital media landscape. In many respects, historical science fiction visions of a future where the boundaries between humans and machines are blurred have become reality. Even if not in the exact same forms that may have been predicted. There is no doubt, however, that digital

forms of communication are today more than ever putting their mark on social – cultural, political, and economic – life in our world. Instead of digital things in society, we increasingly have a truly digital society.

As you will notice while reading this book, the societal consequences of these transformations are quite complex. They are multifaceted, oftentimes unpredictable, and far-reaching. On the one hand, digital media have brought about a certain degree of democratisation of the public sphere, enabling a wider range of voices to participate in social, political, and cultural dialogues. We have seen this in recent years, for example in the rise of social media activism, where movements such as #BlackLivesMatter and #MeToo have leveraged digital platforms to raise awareness and effect positive societal change. The more powerful computers become, and the more advanced things regular users can achieve through ever-evolving interfaces with new opportunities, the greater the potential for individual creativity, collective action, and social impact. Yet, on the other hand, these advances in digital media have also led to a range of new challenges and risks.

This has been evident through the role that digital media platforms and online communication have played in relation to a series of significant events and phenomena throughout the last decade, such as the resurgence of populism, the spread of fake news, and the manipulation of public opinion through targeted propaganda. During the COVID-19 pandemic, there was talk of an internet-fuelled 'infodemic' – an overabundance of information, both accurate and inaccurate, which made it difficult for people to find reliable sources and make informed decisions about their safety (Cosentino 2022). When 'digital demagogue' Donald Trump emerged as the leader of the alleged free world, his social media posts became a focal point for divisive rhetoric, amplifying fear and misunderstanding on a global scale (Fuchs 2018). The Russian invasion of Ukraine spawned talk of a 'TikTok war' as both sides took to the platform to disseminate their narratives, further complicating the situation and presenting new challenges for fact-checkers and policymakers (Primig et al. 2023). ChatGPT (see Chapter 11), the first widely available AI capable of generating human-like text, spawned great curiosity as it enabled new pathways for creativity, brainstorming, and playfulness by doing things such as recasting classic novels in the shape of rap lyrics, or rendering drawings of fantastical creatures based on text descriptions. At the same time, this kind of generative AI also raised serious concerns about its potential misuse, such as the creation of deepfake videos, text-based misinformation campaigns or the automated generation of malicious content. Today, digital media platforms appear to be evolving at a breakneck speed, in ways that continuously reshape the landscape of how we communicate, consume, interact, and generally relate to the social world around us.

The new digital media technologies – like the wheel, the printing press, the steam engine, the telephone, and television before them – contribute to shaping

today's society. At the same time, people in society continuously contribute to shaping the new media technologies through the ways in which they use, adapt, or resist them. In general, this process of society transforming and being transformed by media happens along the lines of what historian of technology Melvin Kranzberg (1986: 545–546) has called Kranzberg's first law. It goes like this:

> Technology is neither good nor bad; nor is it neutral. […] Technology's interaction with the social ecology is such that technical developments frequently have environmental, social, and human consequences that go far beyond the immediate purposes of the technical devices and practices themselves, and the same technology can have quite different results when introduced into different contexts or under different circumstances.

We can easily find examples of how the interplay between society and digital media technologies can lead to a myriad of unexpected and bottom-up uses that illustrate the dynamic nature of this relationship. To take but one example, research on the real-time crime and safety tracking AI app *Citizen*, used in New York City, has shown that it is not only used for the top-down promotion of 'public safety', but also for so-called sousveillance – the practice of watching from below. For example, residents have used the app to monitor law enforcement activities during protests, thereby fostering accountability and enhancing their sense of safety (Riddell 2023). This dual use of the app provides an illustration of how digital media technologies can empower communities to both protect themselves, and to assert their rights in the face of authority. Such processes, where technology gets unexpected, unintended, or complementary uses, can be both direct and indirect, both strategic and random. The bottom line is that, at the intersection of digital media and society, power dynamics are constantly shifting and being redefined.

This book is about digital media and society, and I have chosen to use the concept of 'digital society' throughout the book to refer to the result of the equation of digital media + society. As you will soon become aware, there are many other potential suggestions, both for what is the best equation for describing society today, and as regards to how it is best resolved. This is because social scientists love to name things. We like to develop sets of concepts – theories – that we imagine will grasp some of the key features of some slice of reality. Among the things we love the most is to give names to phases and periods in the history of society. The early sociologists battled each other to put labels on the emerging industrialised society and early modernity, and on social patterns and phenomena within those frameworks. Now, since about half a century back, the race is on to characterise our present age of multitude, fragmentation, computerisation, and global connectivity. As you will see in the first few chapters of this book, there is definitely no lack of suggestions, but there is, however, a lack of consensus

over which concepts are the best. For the time being, then, let's call our present society *digital society*. I mean, then, society as affected by digitally networked communication tools, technologies, and platforms, such as the internet, social media, and AI.

In this first chapter, I discuss what the *digital* is, and how it can affect the *social*. I give a historical background to the internet – a key set of technologies at the centre of digital society. Depending on which social theorist you ask, this same society might also be called by a number of fancy names, such as a post-industrial society, an information society, a network society. I also introduce in this chapter what *media* are, from a perspective where they are seen as *environments* for social interaction, rather than simply as channels for the transmission of information. Today's media environments are increasingly complex and entangled, as new tools and technologies are introduced so frequently.

Internet or Internet?

The word for the globally interconnected network of computers is sometimes written with a capital 'I', and sometimes not. I have chosen to go with the non-capitalised version of the word in this book. I will talk about the internet rather than the Internet. Early in its history, in the 1970s, the name of this new fantastic network was most commonly written as 'the Internet', and this is still a very common form today. Actually, in some documents up until the early 1990s, the internet was even called the INTERNET, with all capitals (Post 2013). While views differ, and there might indeed be some good arguments for retaining the capital 'I', one must decide on one of the options when writing a book like this. I think a good way of seeing it is that, today, the internet is incorporated into the lives of people in a way similar to radio (not Radio) and television (not Television). I have used the same logic in writing about the web rather than the Web.

MEDIA AND SOCIAL CHANGE

Throughout history, different media, such as cave paintings, television, or the internet and mobile phones, have all played a specific role in how we relate to the world, and how we understand how society has transformed, and is continuously transforming. Media are tools, channels, platforms, and strategies which we can use to obtain, produce, and share knowledge about the world around us, through communication and interaction. Media are at the centre of how we, as groups and individuals, relate both to society at large – as a structure – and the many social activities that happen within it – as a setting for our lives together. In general, people are making sense of their lives, their sociality, and their place

in history through their relationships with media. And as media today are largely digital – smartphones, laptops, smartwatches, the internet, Facebook, Instagram, YouTube, and TikTok – it is quite expected that these platforms are embedded in how we are doing social things.

Media don't just enable us to say, think, and do things. They involve possibilities as well as limitations for how we can act and interact. This is what we mean when we say that they are structures. If we regard media as just television, radio, the internet, and so on, there is, of course life beyond media, where people can think, create, and do stuff. But a wider definition of media includes our very languages – both written and spoken – and the more abstract cultural and symbolic 'mythologies' and ways of thinking. Media enable and limit actions in the same way that languages do. Just as a 1990s television producer could not transmit either smell or touch to the audience, and bloggers in the early 2000s could not embed, and express themselves with, video as easily as is the case in the age of YouTube, Instagram, Snapchat, and TikTok, languages also 'decide' what can be said and done, or not. Depending on the media – broadly defined – that we are using, some things are more likely to be created, thought, done, or achieved than others. This is why a science of the social must deal with the media of its time. Beyond the specialisms of media studies, where things like film genres or journalistic conventions are analysed, there is also a need for social scientists more generally to examine the role of media. No matter if one adheres to Marxism; to the theories of sociological classics like Weber, Durkheim, or Simmel; to traditions in social theory such as symbolic interactionism, structuralism, or post-structuralism; there is always an interest in the tools and structures used in the creation and maintenance of social reality, and thus in media – even if broadly defined.

Discussion 1.1

Different tools and platforms that we use to get or spread information, and communicate, enable and limit what we can do in their own specific ways. The medium used will alter our ways of seeing, speaking, and acting. Think about the difference between learning about current events from the website of a big media corporation and from friends on Facebook or Instagram. In what ways are your uses of television and YouTube or TikTok similar, and how do they differ? How do you act in a phone call as compared to in text messaging with the same person? Try to think of other examples of how different media lead to different ways of thinking and behaving. Some questions to start with could include: How does the format of information presentation on social media differ from that on a traditional news website, and how might that affect your understanding or opinion on a topic? Consider the immediacy and brevity of social media posts versus the more in-depth analysis you might find on a comprehensive news platform. How does the use of hashtags on social media platforms like

Instagram or Twitter/X shape the way we discover and engage with new information or communities? Another aspect to think about is the role of algorithms in shaping our media consumption. For instance, how does the YouTube recommendation algorithm influence what videos you watch next, and how does this compare with how you might choose a programme to watch on traditional, or streaming, television? The personalised nature of online content can create a unique, tailored experience for each user, but it can also lead to echo chambers where one is rarely exposed to differing viewpoints. Consider also the differences in interaction and engagement between different media. On platforms like Twitch or YouTube viewers can leave comments in real time, creating a dynamic and interactive form of communication that differs quite a bit from more passive forms of media consumption, such as watching a TV series or listening to a podcast. How does this level of interaction affect your relationship with the content creator or your understanding of the content itself?

Throughout history, key shifts in technological ability and practice have changed how people relate to the social sphere and the world around them. The invention of writing by the Sumerians around 3,000 years BCE enabled the transition from reliance on spoken word and memory to the preservation of laws, stories, and other items through the creation of written text. Media theorist Marshall McLuhan wrote, back in the 1960s, that one of the most crucial transformations of people's ways of being social following the transition from oral to written cultures was the separation of thought and action. McLuhan claimed that this was because the process of externalising spoken sounds into media, such as letters, changed people's 'mental processes'. With the subsequent historical emergence of other technological developments – the introduction of the printing press, radio, telephones, television, computers – McLuhan (1962: 32) identified a development towards an 'externalization of our senses' that creates:

> a technological brain for the world. Instead of tending towards a vast Alexandrian library the world has become a computer, an electronic brain, exactly as in an infantile piece of science fiction. And as our senses have gone outside us, Big Brother goes inside. So, unless aware of this dynamic, we shall at once move into a phase of panic terrors, exactly befitting a small world of tribal drums, total interdependence, and superimposed co-existence.

In today's age of AI, maybe this 'externalization of senses', and the notion of an 'electronic brain', is more relevant than ever. As advancements in digital media technology continue to evolve, we are witnessing an increased fusion of human senses with digital interfaces, and as AI becomes more sophisticated and

integrated into our daily lives, our reliance on these 'externalized senses' becomes increasingly prominent. Even if McLuhan was quite pessimistic about what life would be like inside the 'electronic brain' of society, he made the vital point that it is impossible to analyse or theorise about social and cultural change without focusing on how people and their communication and interactions are affected by the media technologies that they use. Much like, as he put it (1962: 64), 'the alphabet is an aggressive and militant absorber and transformer of cultures', and that 'a nomadic society cannot experience enclosed space', any digital media application – Instagram, YouTube, TikTok, or any other – will affect and shape sociality, and influence what we can say, do, or experience, or not. At the same time, people's uses of the applications will also contribute in turn to shaping them. For example, the mutual shaping that takes place between digital media applications and their users comes into expression through the ways in which platforms evolve based on user feedback and emerging trends in how they are used. Instagram initially focused on photo sharing, but as users began to demand more dynamic content, the platform introduced features like Stories and Reels, directly influenced by competitors like Snapchat and TikTok. This not only changed the way users interact with the platform but also how they communicate and present themselves online fostering, by extension, a more video-centric social media landscape (Menon 2022). Similarly, TikTok's algorithm, which curates content based on user interaction, preferences, and behaviour, has significantly influenced the type of content being produced (Klug et al. 2021; 2023). This symbiotic relationship highlights how digital media applications and their users are in a constant state of flux, influencing and being influenced by each other, shaping both the digital environment and the social interactions within it.

Because of this constant process of shaping and re-shaping social science needs to concern itself with the roles of the prevailing media formats in the development of the social and how this evolves and transforms. This is especially important for the new media of any era, as they might be harder to approach critically during the time that we familiarise ourselves with these technologies and integrate them into our everyday existence. As scholars we must, as McLuhan (1962: 40) wrote, try to capture the new 'translation of culture' which happens alongside the introduction of new media technology. One particular challenge of this is that:

> Every technology contrived […] by man has the power to numb human awareness during the period of its first interiorization. (1962: 153)

Today, we live in a digital society in the sense that we are in an era where our lives, our relationships, our culture, and our sociality are digitalised, datafied, and affected throughout by digital processes. When we repeatedly speak of 'the digital' in this way, we use it as an encompassing notion for our current experience

of social life. But what is 'the digital', really? Is it a purely technological phenomenon? How does it relate to humankind? To communication and interaction? Are there measurable qualities to what it is to be 'digital' or has it rather to do with subtler or gradual processes? What does it mean that society 'becomes digital'? What changes have digital technologies and digital media introduced to the forms and methods through which we relate to each other and the world around us, and how can such transformations be analysed?

WHAT IS THE DIGITAL?

From the outset, the digital has to do with mathematics. Being digital, then, means simply using numbers – digits – rather than analogous objects to convey information. When some form of input is numerically encoded, it can be subjected to mathematical processes such as addition, subtraction, multiplication, or division, through algorithms – procedures by which computers carry out stuff – that are defined in software programs. In computing, input values are converted to binary numbers, 0 and 1, instead of using all numbers ranging from zero to nine. The binary system was invented by philosopher and mathematician Gottfried Leibniz in the 1600s. He used this system for coding, computing, and controlling information when experimenting with ideas for machines that could do calculations by using things such as marbles – being in place, or not – and punched cards – having holes, or not. This is how the computers that we have today, in anything from smartphones and laptops to refrigerators and drones, work too, but with refined microelectronics instead of marbles or holes.

The usefulness of binary numbers for building computers, robots, and other gadgets has to do with the electronic aspects, as in e(lectronic)-mail or e(lectronic)-democracy. In digital electronics, the number '0' means that the electricity is off, while '1' means that it is on, and different computerised things communicate – transfer instructions and information – with the help of electronic pulses of these ones and zeroes. The power of binary is that it works with the smallest and most efficient computer programs, or circuits, which are created through series of 1/0 switches. Technologically speaking, this binary system forms the basis for everything we do that is digital.

Experiments similar to those of Leibniz were developed by scientist Charles Babbage in the 1800s, through his work to first construct a 'Difference Engine' (difference as in the 0/1 idea of binary), and later, a more complex 'Analytical Engine'. Ada Lovelace, who worked on creating instructions for the Analytical Engine, is considered to be the world's first computer programmer. While neither the computer nor the code was ever finished or tested, these early attempts paved the way for the subsequent development of computers and software throughout

late modern history. Lovelace, who wrote in her notes about possibilities for computing that included many other uses than just calculating numbers, was a visionary. She made the important distinction between the numbers, the operations to be performed, and the results to be achieved. She wrote in one of her notes that the Analytical Engine:

> might act upon other things besides number, were objects found whose mutual fundamental relations could be expressed by those of the abstract science of operations, and which should be also susceptible of adaptations to the action of the operating notation and mechanism of the engine. […] Supposing, for instance, that the fundamental relations of pitched sounds in the science of harmony and of musical composition were susceptible of such expression and adaptations, the engine might compose elaborate and scientific pieces of music of any degree of complexity or extent. (Toole 1992: 178–179)

At their core, then, computers have been invented and developed to solve mathematical problems, but their actual capabilities, obviously, stretch far beyond mathematics. During the latter parts of the 20th century, digitisation had advanced beyond purely scientific applications, as text, sound, graphics, and images became digitally encodable. Today, computers can store and transmit data, which changes how we deal with anything from our family photos and recipes to government documents or business plans. We have also learnt that computers can manage communication networks, and this has transformed how we form friendships, and how we connect and stay in touch with people, sometimes across large geographical distances. Computers can also process text, images, and sound, which has changed the ways in which writers write, musicians play, and painters paint. Spaceships and airplanes are flown by computers, and digital devices are increasingly entangled in our everyday lives, in the form of laptops, tablets, smartphones, and things like robot vacuum cleaners and other smart home technologies. The digitalisation of ourselves and sociality continually moves ever closer with wearable devices and smart scales, showers, and toilets. Today, on the threshold of a thriving age of AI, we can see computers taking on even more complex tasks, such as driving cars, analysing medical images, making predictions and decisions, and even engaging in creative endeavours like writing poetry or composing music. Still, at the heart of every computer lie circuits that contribute to all of these social and cultural transformations, through the breaking down of operations into mathematical equations. As Paul Ceruzzi (2003: 1), a computer historian, puts it:

> Deep inside a computer are circuits that do those things by transforming them into a mathematical language. But most of us never see the equations, and few of us would understand them if we did. […] As far as

the public face is concerned, 'computing' is the least important thing that computers do.

When we speak of today's society as being digital, we don't very often mean to say that it just draws upon binary numerical operations. What we do tend to mean is that it has been transformed in a number of quite drastic ways, following the development of the early 'computing' machines into smart devices which have increasingly enabled large-scale networked connections, coordination, synthetisation, and communication in both automated and human-driven ways.

THE RISE OF INFORMATION SOCIETY

The binary numerical system, and the advances in computing that were enabled by it, made digital information, communication, and solutions into crucial tools, dimensions, and forces of social life. This social transformation happened gradually during the 20th century and is still constantly evolving today. In the early 1970s, sociologist Daniel Bell had already described the emergence of a future society where handling and relating to information would be at the very centre of daily life, even though today's social media, tablets, smartphones, and wearable devices might not have been exactly what he envisioned.

Bell (1973) used the term *post-industrial society* – which he later came to partly replace with the notion of an *information society* – to refer to entirely new forms of production and community that he claimed had replaced the previously prevailing industrial society. He said that this happened because of a powerful convergence between telecommunications and computer technologies. Bell talked about how different forms of work had been predominant during different historical eras and argued that this had defined various types of society in different periods. Pre-industrial agricultural societies were dominated by the 'extractive work' of farmers, while the defining form of work in the subsequent industrial society had been the labour of fabrication, carried out by factory workers. The coming of the post-industrial society in the Western world, during the latter parts of the 20th century, was characterised by service employment and 'information activities'. Bell's idea was that as the form of work that was predominant in a certain era became rationalised to a certain level, a shift happened to the next form: when farming became highly automated, people turned to cities for work; as factories were increasingly robotised, people had to turn somewhere else.

Bell argued that what was emerging during the second half of the 20th century was an information society that met new needs that were arising among a post-industrial workforce. For Bell, the most important things that were then produced were services, and he felt that services were always 'games between people'.

He said that information had become the material of work for a majority of people. Banks do transactions, therapists are engaged in dialogues, teachers convey and stimulate knowledge, software developers write code, and advertisers and journalists compose and transmit images and symbols. All of these jobs are about delivering services, and the service work that is done is also largely information work. As a result of this, Bell said that 'information professionals' represented the most prominent category of jobs on the new labour market. This did not mean that everyone was now a journalist or a marketer, but that nearly everyone dealt with information in some form as a key part of their work. While Bell talked optimistically about this, in terms of 'the rise of knowledge experts', the same development has more recently come under debate as critical researchers have seen both the information work of professionals and consumers in digital society as a sort of *digital labour* – a concept that I will return to in Chapter 8. What the likes of Bell saw in terms of opportunity, democratisation, personal development, learning, and enjoyment can, from another perspective, be seen as just another form of mass value production for the benefit of capitalists.

Discussion 1.2

Think about the notion of information work and information professionals. Is it still true today that the majority of people work with information in various ways? Envision a pre-digital society (agricultural or industrial) and try to think of jobs in that society which you think were *not* information work. Try to think of ways that those jobs might still be defined as being dependent on various forms of information. Think of some jobs today that are clearly about dealing with information. Now try to think of ways to argue that these jobs are also about material aspects of social reality. Do you agree that we now live in an information society? What has happened with industrial capitalism? Has it been replaced? Some questions to start exploring might include the following:

- Is the modern work environment truly dominated by information work, or are there still significant holdovers from the industrial era?

- Does the digitalisation of various industries and occupations mean that every job is now an information job?

- With the advent of AI, will the human role in information work decrease or increase? AI programmers and developers are certainly information workers, but what about all of us who contribute to creating the masses of text on social media on which the AI models are trained?

- What about the new generation of social media jobs, such as influencers? Do they represent a new kind of information work or is it a mere reiteration of old forms in new packaging? Can we classify influencers as information professionals?

Another proponent of the post-industrial perspective, futurist Alvin Toffler (1970, 1980), claimed – like Bell – that mediated information was now to become de-massified. Instead of the standardised messages that were transmitted, broadcast as it were, through traditional *mass media* channels from a few select senders to the uniform masses of the many, we were now to get something that he called 'narrowcasting'. This idea is quite similar to what writer and entrepreneur Chris Anderson argued some decades later in his book *The Long Tail* (2006). Anderson said that things with small niche audiences will survive, and are important, in the digital world, in ways that they could not possibly be in a situation where one had to focus on a small number of things with huge audiences. In the early 1980s, Toffler imagined that digital media would work very much like they do now in the 2020s. Writing about what he called the 'bedlam of blip culture', he predicted, as many writers and researchers have more recently discussed, that the myriad small pieces of content offered through electronic media over time will make people more active in navigating and piecing things together by themselves:

> [People today become] more at ease in the midst of this bombardment of blips – the ninety-second news-clip intercut with a thirty-second commercial, a fragment of song and lyric, a headline, a cartoon, a collage, a newsletter item, a computer printout. […] Rather than trying to stuff the new modular data into the standard […] categories or frameworks, they learn to make their own, to form their own 'strings' out of the blipped material shot at them. (Toffler 1980: 166)

This, it could be argued, is what we do now as we piece together our own individualised everyday media flows by stringing together bits such as tweets, news service notifications, Instagram live broadcasts, Netflix and podcast episodes, TikTok feeds, and so on. Some of these we choose ourselves, while others are offered or even pushed to us by automated recommendation systems. It is, in fact, quite striking how apt Toffler's description of 'blip culture' is to describe the bite-size consumption of information and experiences we see in the shape of TikToks, YouTube Shorts, Instagram Reels in today's media climate. While Toffler might have referred to 'blip culture' in the context of television and radio broadcasts, the concept has clearly become even more relevant and pervasive in the digital age.

Another often emphasised feature of digital society is that it compresses time and space and makes both of them less important. For example, when we send texts, direct messages, or emails to each other, there is – quite obviously – no need for us to be in the same place to be able to communicate. The exchange need not be instantaneous either, as we can respond to digital messages whenever it suits us. In Chapter 4, I will discuss such transformations in more depth. But for the time being, let's just ask ourselves whether these characteristics of computer-mediated communication really are that revolutionary? Haven't we

already since ancient times – since the first symbolic language, actually – been able to get past limitations of space and time through various forms of mediated communication, ranging from rock carvings and pen and paper to the printing press and the telephone? This is a question of whether the coming of information society rather marks a *gradual difference*, or if it signals the transition into a *completely new form* of society.

Bell argued that the changed conditions for everyday micro-interaction brought on by digital technology contributed to profound social transformations. The power and influence of territorially based bureaucratic and political authorities would lessen, as would that of history and tradition. The punch clocks, schedules, and timetables that so strongly grounded and confined industrialism in space and time were to be replaced by other notions of time and space that were more fluid and dynamic – and that made physical presence less important. As the COVID-19 pandemic marked a shift towards remote work and digital communication on an unprecedented scale, Bell's arguments seem even more relevant. Indeed, the pandemic helped underscore the extent to which digital technology can alter our social landscape and redefine long-standing conventions, such as our workplace norms.

Bell and Toffler, in their time, generally thought that this development was steeped in opportunities, and they were both very optimistic about what was supposed to happen in the future. There would be no more manual work; people would become more intellectual and friendly; there would be an end to 'radical politics' (which they thought was a good development). Even though the high volumes of information floating about could sometimes be frustrating, and in spite of the stressful pace of blip culture, they both hoped – in Toffler's (1980: 2–3) words – for 'the death of industrialism and the rise of a new civilization'. Society was to become 'more sane, sensible, and sustainable, more decent and more democratic than any we have ever known'. People would no longer be reduced to numbers, or analysed only in terms of how much income they could generate (this is interesting in relation to debates today about people being reduced to data more than ever). Their vision of the electronic future was utopian: we would all live in a communal society where the environment, care, and education were the priorities, at the cost of individualism, capitalism, and competition (Bell 1973: 220, 283). There would be a sort of consensus democracy where no dictator could survive. Such utopian hopes, tied to the development of digital technology, alongside their counterpart in the shape of utopian fears, will be addressed further in Chapter 3.

The history of technology in general is marked by a series of disagreements over what impact new technologies will have on the society, and on the economy and culture. But aside from the debate over whether digital society is good or bad, there is also a debate about whether digital society ('the information

society', 'post-industrial society') has happened at all. On the one hand, there is no denying that many of the assertions of theorists such as Bell and Toffler have become reality. We need only look to our own daily lives to find plenty of proof that digital tools, platforms, and information are now immensely important, even if in varying ways, to most of us. Digital technology and digital media are an integrated and important part of a huge number – if not the majority – of common social activities. Banking and payments, travel and communications, culture and entertainment, cooking and cleaning, business and commerce. One can think of nearly any sector or activity, and quite easily realise how an ongoing, often accelerating, digitalisation is a vital part of what goes on there. We buy our train tickets in mobile applications, we stay up to date with global news on tablets, our cars and tumble dryers are connected to the internet, environmental activists mobilise with the help of social media platforms, AI corrects the language of our Christmas text messages to friends and relatives, and so on. In short, it is very easy to make the case that we live in a highly digitised world which is abundant with digital tools, platforms, and networks that shape our daily experiences and interactions.

This is so obvious that even those who might be critical of the theories about the information society as such still agree that digital information plays a very important role today and might do so even more tomorrow. For example, there are some Marxist theorists who were quite in opposition to Bell's ideas about post-industrialism. Some of them suggested that we instead speak of 'post-Fordism' (Lipietz 1987), referring to a transition from an era marked by mass production to an era of 'flexible specialisation' (Piore & Sabel 1984). While such writers argued that capitalism, like in the industrial society, was to remain the dominating force, they identified a number of changes similar to those discussed by Bell and Toffler. For example, they said that information processing had become more important, and that an increasing share of workers were now doing things with information, such as analysing and manipulating symbols, managing ideas, and constantly retraining themselves to deal with the increased flexibility and globalised character of social reality. Similarly, theorists who have described the late 20th-century social transformations in terms of 'post-modernity' also argue that the new age is marked by increased symbolic complexity and intensified flows of information (Lyotard 1984).

EVOLUTION, REVOLUTION, AND CRISES

But even if most seem to agree that we now live in a society where 'information', in its broadest sense, is crucial, does this automatically mean that the social and cultural changes which have followed from the technological innovations have

been enough to allow us to say that we have a *new* society? Are the changes comparable to the all-encompassing societal transformation that happened during the industrial revolution? While some writers obviously argue that this is the case, quite a few others remain sceptical. Critics such as, for example, the Marxists mentioned above, have said that digital information technologies might have changed many things, but not the fundamental continuity of capitalist industrialism. After having convincingly argued in several ways that we indeed live in a society where flows of information are at the very centre, sociologist Manuel Castells (1996: 520) wrote:

> However, this evolution towards networking forms of management and
> production does not imply the demise of capitalism. The network society,
> in its various institutional expressions, is, for the time being, a capitalist
> society. Furthermore, for the first time in history, the capitalist mode of
> production shapes social relationships over the entire planet.

In making this point, Castells spoke of a network society rather than an information society. While these two notions are largely overlapping, I will deal in more detail with the idea of a network society in Chapter 5. In either case, information society theorists like Bell and Toffler have been criticised by some for being historically short-sighted. Those who have denounced the 'information revolution' have argued instead that the developments during the latter half of the 20th century did not cause any dramatic shift, but were rather the culmination of trends in communication which stretch way back into the past. For example, sociologist and historian James Beniger (1986: 435) has suggested that we are dealing with a 'control revolution' that had started already in the mid-1800s:

> The Information Society has not resulted from recent changes […]
> but rather from increases in the speed of material processing and of
> flows through the material economy that began more than a century
> ago. Similarly, microprocessing and computing technology, contrary
> to currently fashionable opinion, do not represent a new force only
> recently unleashed on an unprepared society but merely the most recent
> installment in the continuing development of the Control Revolution.

Beniger's argument is that 'control crises' followed from the acceleration of society's entire processing system in the wake of the industrial revolution. In these crises, information-processing and communication technologies had a hard time keeping up with the speed of society. Thus followed the control revolution – a series of rapid technological changes in the arrangements used for collecting, storing, processing, and communicating information. These tendencies are in fact rather similar to what has been discussed in more recent years in terms of

big data (see Chapter 10). So, what may appear to be the advent of a new informational society, Beniger argues, is rather a digital intensification of industrialism. Similarly, even though gurus and prophets of the AI age speak in dramatic language about us entering into a completely new age (Bostrom 2016; Kurzweil 2005; Tegmark 2017), it can also be argued that AI certainly contributes to maintaining the existing capitalist structures, rather than disrupting them (Lindgren 2023, 2024).

Throughout the chapters of this book, I will deal with a number of research areas where studies have been made that, at least in some respects, can shed light upon whether the 1970s and 1980s prophecies and prognoses were right or wrong about what the emerging information society would entail in terms of social and cultural consequences. In most cases, we will see that the answer is neither a clear yes nor a definite no. As the digital society plays out in practice, things turn out to be quite a bit more complicated than those futurologists expected. In the end, it is not that important really whether one should label our present-day society 'post-industrial', 'post-Fordist', 'post-modern', or as an 'information society', 'network society', 'control society', or as marked by an AI-driven 'Fourth Industrial Revolution' (Schwab 2016). Such debates might be interesting for theorists who want to lay claim to having 'discovered' and named a certain era. In the end, however, one must be careful with such labels. Sociologist Krishan Kumar (2009: 29) writes:

> Labels, like rumours, can take on a life of their own. The labels of
> intellectual discourse are no exception. Once sufficiently established, they
> can govern reality […], at least scholarly reality. They inspire conferences,
> books, television programmes. They can create a whole climate of critical
> inquiry which, especially in these days of academic entrepreneurship and
> the multinational scholarly enterprise, feeds on itself. 'The lonely crowd',
> 'the affluent society', 'the technological society', 'the hidden persuaders',
> 'the power elite': these are all well-known examples of labels which in
> recent decades have generated much activity of this sort.

Indeed, there might also be ideological reasons for choosing certain concepts for describing things. 'The information society', and some of its related notions, actually fit quite well with Western neoliberal thinking. The idea that innovation and technology lead to a richer and hence better world maintains a faith, similar to that of the enlightenment, in progress and rationality. It is of course no secret today – with debates about surveillance, digital labour, consumer profiling, targeted advertising, and computational propaganda – that the information society idea is related in complex ways to big business and large-scale politics.

In this book, I use the notion of digital society to refer roughly to all of these developments. The concept is just as awkward as any alternative, but I think it is

important not to be blinded or constrained by concepts that carry a lot of histori-cal baggage. I try to use 'digital society' in a pragmatic way, as a fairly neutral label, when dealing with the social and cultural uses and consequences of digital media and digital technologies.

A GLOBAL NETWORK OF COMPUTERS

Before moving on to a more specific discussion of what digital *media* might mean, we must focus first on one of the key inventions of digital society – namely, the internet. This global network of computers, which enables and structures an unmeasurable amount of social activity around the world, feels today as if it was always there. But in fact, it only became widely available in the mid-1990s, through the invention of a protocol for something called the World Wide Web. In reality, the history of the internet goes quite a bit further back than the 1990s, and it is important to keep in mind that its emergence was shaped by a number of specific circumstances. The web did not just materialise, it was the product of certain efforts and projects.

In 1959, at the height of the Cold War, Paul Baran, a computer scientist at the RAND Corporation, a US military think tank, was given the task of creating a communications system able to withstand a nuclear attack. At least that's how the story goes. The strategy was to establish a computer network that did not rely on centralised command, and thus was not vulnerable to attacks targeting central hubs (Galloway 2004). Baran's network was based on the technology of packet-switching, through which messages are distributed in small fragments to be reassembled at the receiving end. The system was finally realised at the end of the 1960s through funding from the Advanced Research Projects Agency (ARPA), President Eisenhower's response to the Soviet Sputnik launch. The agen-cy's ARPANET, the first computer network based on packet-switching, was used by the military and by academics to transfer and exchange information. Cas-tells (2002: 24–25) describes how the Network Working Group, which was doing most ARPANET design in the late 1960s, consisted mainly of graduate students who had studied in the same secondary school in Southern California, later to become students of Leonard Kleinrock at UCLA. The so-called RFCs introduced in 1969 by one member of this group – Steve Crocker – became important for the subsequent development of the internet as a space for open communication: RFCs (Request for Comments) were memos about work in progress, and their 'intelligent, friendly, co-operative, consensual attitude […] set the tone for the way the Net developed' (Naughton 1999: 135). The young ARPANET developers, and the student culture of which they were part – as well as the wider context of late 1960s counterculture – is often said to have had a crucial impact on how

the global internet came to emerge. Castells (2002) writes that the birth of the internet happened at the rather unlikely intersection of science, military interests, and libertarian culture. It is a common misinterpretation that the internet was created solely as a military command-and-control mechanism, when it was in fact co-opted already from the start by academics (and others).

'E-mail', which was initially called network mail, was introduced in 1972, and the term 'internet' itself appeared in 1974 as an abbreviation for 'internetworking'. Control of the network was transferred from the Department of Defense to the National Science Foundation by the end of the 1980s, and then to commercial telecommunications interests in 1995. The fact that a global telecommunications network was already in place increased the efficiency by which the network could be distributed globally. The previously mentioned user interface called the World Wide Web was developed in 1991 by programmer Tim Berners-Lee, at the European Organisation for Nuclear Research (CERN), which had adopted connections to so-called IP addresses internally in 1985 and externally in 1989. The first graphical web browser, Mosaic, was released in 1993, and by 1998, all countries worldwide were part of the network. Since then, tools using the internet infrastructure – such as the web, social media, mobile apps, and smart devices – have become a crucial part of how people today obtain information, communicate, and interact, but also of how people are mapped and registered.

Like many other new media in their time, the internet was surrounded by an aura of magic during the first period of its expansion. In some respects, it has yet to wear off. In the 1990s, tales about what the net was, and what it would become, told stories about large-scale social change. The internet was claimed by many to be set to revolutionise most areas of social life as we knew it. The digitally networked social reality instigated by the internet would lead to a new economic system where everyone could take part. It offered new and efficient ways of putting suppliers, producers, and consumers in contact with each other. Innovation would be democratised and disruptive, while the playing field between big corporations and small startups would be levelled. The internet was also said to be destined to embody a new form of global democracy, based on mutual understanding and respect between people, no matter where they were from. Such predictions resonated with McLuhan's (1962: 8) vision that '[t]he new electronic interdependence recreates the world in the image of a global village' where the 'entire human family' is sealed 'into a single global tribe'. This would, the internet optimists thought, make people more knowledgeable about, and therefore more tolerant towards, one another.

As media researcher James Curran (2012a: 3) puts it: 'the internet would be an unstoppable force: like the invention of print and gunpowder, it would change society permanently and irrevocably'. But today, many people, including some of

those who were previously more optimistic, have become increasingly sceptical and pessimistic about the effects of the internet on society. Some of the utopian predictions have been realised, at least in part, but they have also come at the price of 'dotcom bubbles', economic crises, increased surveillance, and censorship. Large corporations and already powerful political and other social actors are dominating and controlling most parts of the net.

One reason for the initial strong optimism is that as the net became part of mainstream culture and society, it brought with it some baggage from its subcultural days. Notably, it carried dreams of a utopian existence in the science fiction of 'cyberspace'. Because of this, stories about the rise of the internet are often 'celebratory chronicles' or narratives about heroism (Curran 2012b: 35). In addition to the military-scientific influences that led to the internet infrastructure being flexible and modular, as well as based on exchange of information, it was also shaped by the ideals of 'hippy' values among countercultural groups who were early adopters of the network during the 1980s and 1990s. Berners-Lee (1996), the creator of the World Wide Web, was also driven by ideals of public service, since he wanted to make a 'shared information space'.

Furthermore, when the public internet began to be commercialised from 1991 onwards, its technical aspects were simplified and made increasingly user-friendly. So, around the year 2000, everything about digital society seemed to be fantastic and transformative. The dynamic mix of academic, countercultural, and public service influences had given rise to a seemingly open, decentralised, and diverse public space. However, porn and gambling, rather than 'creative works of minority artists' (Curran, 2012b: 42), seemed to be the easiest things to sell on the internet. And when more intense and developed forms of online commerce took off, many were forced to realise that this came at the price of ever more intrusive forms of advertising and spamming. At the same time, wealth was concentrated in the hands of huge corporations like Apple, Microsoft, Google, and, later, Facebook. The internet was progressively commercialised as big media companies with fast-growing fortunes established websites which looked and functioned better than anything non-commercial actors could yet create, and as search engine companies started to harvest data for advertising purposes, they also ushered new forms of commercial surveillance technologies into the mix. Around the same time, legislation strengthening intellectual property rights on the internet was passed in several countries. More recently, as progressive and democratic hopes as well as fears of disinformation and computational propaganda have been connected to the internet, its political role has become more debated. We shall return to this dualism (Chapter 3), as well as the political role of digital media more broadly (Chapter 9).

Discussion 1.3

You have read about the history of the internet as a military/academic project started in the 1960s. Since the mid-1990s, the internet has become increasingly commercialised and widespread. Today, it is ever-present to the point where it is nearly transparent to its users. It tends to feel like part of our lives to the extent that we don't think about when we are 'on the internet' or not. Try to think of situations when the internet, as a technology, becomes visible to you. What types of situations are these? What do you think about them? How do you deal with them? What about when you hear of how the data traces that you leave behind can be exploited by others? What about when you are in situations when you can't access the internet for some reason? Try to think of other examples of when the net comes into view.

For example, reflect on the moments when the fabric of the internet frays. For instance, when we are confronted with internet censorship or content restrictions based on geographical locations, the internet's architecture – often invisible in our unrestricted browsing – comes sharply into view. This can lead to frustration or curiosity about the global governance of the internet, prompting some to use technologies like VPNs to bypass such restrictions. It raises questions about freedom of information and the power structures that control access to it. Similarly, instances of temporarily bad connectivity, on a forest road or in a hotel room with bad wifi, can serve as harsh reminders of the underlying infrastructure that supports our often seamless online experiences. When faced with slow internet speeds, dropped connections, or complete outages, the invisible network of cables, satellites, servers, and data centres that we often take for granted suddenly becomes a crucial part of our consciousness.

Another type of situation to reflect over may be the moments of serendipity or frustration when algorithm-driven content – on social media platforms, search engines, or streaming services – either perfectly aligns with our interests and expectations, or completely misses the mark. Such situations can make us acutely aware of the algorithms curating much of our digital experience. They can lead to a reflection on the balance between convenience and privacy, encouraging us to explore settings that limit data collection or to diversify our digital footprints by seeking out alternative platforms.

MEDIA ECOLOGY

From the perspective of *media ecology*, the internet – as an intrinsic part of digital society – is a medium because it is an environment. And conversely, it is an environment because it is a medium. Media ecologists such as McLuhan (1964) and media theorist Neil Postman (1970) have maintained that media must be defined as something more wide-ranging than the traditional informational devices, such as radio, television, newspaper, movies, sound records,

computers, and so on. Instead, they argued, a medium is any symbolic structure, or social environment, that in some way, and under certain circumstances, defines human interaction and the production of culture. From this perspective, a newspaper is a medium because it provides us with a certain way of relating to the world – through print text, still images, and certain journalistic genres and conventions. It also establishes limits, as a conventional printed news*paper* does not allow for things like moving images, sounds, and online reader comments. In a similar way, from a media ecology perspective, coffeehouses, bowling alleys, and classrooms are also media, for the same reasons: they offer certain ways of relating to the world, while at the same time establishing boundaries for what can be said, done, expressed, learnt, or achieved. Sociologically speaking, this means that media, like the internet, are social structures.

Social structures offer resources – symbolic and others – that people can draw upon while doing things in society (Giddens 1984). This is also similar to what social psychologist Erving Goffman (1959) argued with his 'dramaturgical' perspective on interaction. People in society enter different roles and stages, while performing socially with a degree of agency, but always in relation to certain limitations or expectations. The environment of the interaction thus affects what we do, and how we do it. From the perspective of media ecology, media – such as the internet and its various incarnations and platforms – are such environments: symbolic structures within which we are situated and through which we engage.

This situatedness and embeddedness happens on two levels. First, there is the sensorial level, where things like a Facebook page, an Instagram profile, or a TikTok video each employ our senses in different ways, much like reading is visual, radio is auditory, and video games are visual and auditory, as well as tactile. In a way, the reality we sense is constructed or reconstructed through the medium at hand. Famously, McLuhan (1964: 35) defined media as 'extensions' of our senses that decide how people experience and become aware of the world around them. This also relates to what McLuhan meant when he, even more famously, declared that 'the medium is the message'. Switching from one medium to another reconfigures our senses and alters the ways in which we comprehend and reconstruct the world around us.

Second, there is the symbolic level, at which every medium is constituted by a certain systematic set of rules and codes in the form of vocabulary, grammar, and other conventions. While a director creating a film must master and relate to certain cinematic vocabularies, posting an Instagram photo might similarly require knowledge of conventions such as using hashtags and applying filters. And this is not mainly about knowing *how* to apply the filter or type the hashtag, but about mastering the social rules for *when* to use them

and how to make them *mean* certain things. As we learn these skills or attitudes, we are at the same time socialised and acculturated into the symbolic environment of the medium. In this sense, a medium is quite similar to a language or a culture that is used to make sense of the world. The notion of such sensemaking gets a particularly pertinent meaning in relation to the developments in generative AI, where Large Language Models (LLMs) trained on massive amounts of text data now increasingly underpin various functions of digital platforms. The LLMs, then, from the perspective of medium theory, can be seen as a new form of symbolic medium, one that not only uses existing sets of rules and codes but also learns and adapts them. Just like discourses and ideologies in society are bearers of meaning and power structures, these models also carry with them the predispositions and stereotypes, inclusions and exclusions, inherent in the data that they have been trained on (Lindgren 2024).

Media ecologists talk of some major changes throughout history and how these introduced crucial social transformations. The shift from a culture of talking to a culture of writing meant that the elders' role as experts and unique sources of knowledge diminished. The introduction of the printing press meant a further democratisation of information, and the arrival of electronic media contributed even more to balancing the temporal, spatial, and symbolic constraints for who could speak, where and when, and to whom. Today, we live in a world with a growing number of co-existing media, which means that we relate not to one, but to a combination of several environments. It is not sensible to conceive the internet as part writing, part still image, part moving image, part sound, part computer, part telephone, part television, and so on. Rather, it must be approached as a whole, and then as a whole that might be more than the sum of its parts.

While the content of radio, television, or the internet might be a football game or a political debate, the *message* – in McLuhan's terms – of each of these media is not that. The message is instead equal to the social changes that a medium generates. McLuhan (1964: 20) wrote that 'the "message" of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs'. He also argued that the content of a medium is always another medium: the content of television might be the medium of a theatrical play, the medium of football, and so on. He wanted to make the point that by just studying the content, we risk becoming entangled in this spiral of media within media within media. It was therefore better, he thought, to instead focus on understanding media in terms of the ways in which they transform the social. What changes in 'scale or pace or pattern' are introduced into 'human affairs' by smartphones, by TikTok, by 5G, by ChatGPT?

The User

The word 'user' might have a negative ring to it. And this is not only in those cases when it is related to drugs and addictions. In computing, there is the concept of the 'end user' who stands in contrast to the expert developers, programmers, or hackers who command the system, product, or service to be used. The end user is assumed to be less competent than the experts. In discussions of 'media use', the notion of usage tends to evoke an image of audience behaviours where something is served up for people to use, in order for them to get various forms of gratifications. The user, then, appears not only to be less knowledgeable, but also less resourceful and creative. In media studies during the last few decades, however, there has been increased talk about users being active participants. They have been shown in many contexts to be just as competent as the creators of content. Their expertise is sometimes of a different kind and comes into expression in how they make use of media content in smart and unexpected ways. But more and more often they also create entirely new things by and for themselves. Because of this, words like *prosumer*, or *produser*, or *participant* have become more popular than 'user' in some contexts. In this book, I have still opted for the word 'user' in many cases. I do this from a pragmatic perspective as I think it is a neat word which is easy to use (!) and understand, and because using things may indeed also mean using them to produce or create something other or new. I definitely agree that users of digital tools and platforms may indeed draw on these tools and platforms in their own production and circulation of things (tweets, blog posts, video clips, remixes, manifestos, etc.). They may use them to participate, and they may use them in ways that alter their intended or current meanings and functions.

TOWARDS DEEP MEDIATISATION

This leads us further onto a set of interrelated theories about remediation, media logics, and mediatisation – theories which all deal with different and overlapping aspects of the increased complexities of how media affect, and are affected by, our everyday lives.

Writing about *remediation* – how digital media continuously absorb and repurpose other forms of media – media scholars Jay David Bolter and Richard Grusin (1999) felt that McLuhan's notion of media nested within other media might not be refined enough to describe the direction that this process has taken in digital society. On the one hand, they show how this nestedness or layering can contribute to a sense of immediacy. A computer user might be so familiar with a particular interface that, when using it, it becomes transparent to them. Likewise, a gamer might be so immersed in a particular world or story that they forget

about the mediated aspects of how the story is told. Thus, the content of digital media might be experienced in very immediate ways. On the other hand, Bolter and Grusin write about 'hypermediacy' which is, in a way, the opposite. This is what occurs when the interface is instead very obvious and visible, allowing the user to interact with it, as, for example, on a website where different views can be selected or toggled, or with any platform where profile photos and info are added, where templates are customisable, and so on.

Media researchers David Altheide and Robert Snow (1979) presented the theory of *media logic* as a critique of the one-sided focus in mass communication research on the effects of media content on audiences. Instead of looking at the media as 'variables of impact', they argued that one must comprehend the contextualised role of media. How does a medium function as a form of communication, and how do they change our ways of seeing, speaking, and acting? This is similar to what McLuhan said.

To describe what media logic is, Altheide and Snow referred to classic sociologist Georg Simmel, who was interested in what he called social forms. Social forms, such as domination, conflict, or exchange, could be studied, Simmel (1971) said, separately from the actual content of specific occurrences of such forms. In other words, the interesting thing for a sociologist is the 'form' of, for example, conflict as it might occur and re-occur throughout times and places, rather than the specific content of any one conflict, and so on. Altheide and Snow (1979: 15) defined media logic as a 'processual framework through which social action occurs'. This means that the media researcher looking at such logics is interested not in specific content, but in how media operate as forms for organisation, presentation, and communication. Studies of, for example, sports events, protests, or politics, using data from digital media communication, can be carried out within fields like sports studies, social movement studies, and political science, without necessarily being interested in the digital aspects. Digital social research, relatively independent of the particular topic of communication, is interested in the (media) logic by which digital media alter social circumstances around, and for, sociality, communication, and interaction. Media scholar Stig Hjarvard (2013: 17) provides a clear definition:

> The term 'media logic' is used to recognize that the media have particular modus operandi and characteristics ('specificities of media') that come to influence other institutions and culture and society in general, as they become dependent on the resources that the media both control and make available to them. […] The logic of the media influences the social forms of interaction and communication, such as how political communication is performed in the media […] and media logic also influences the nature and function of social relations, as well as the relationships between sender, content, and recipient of communication.

From this perspective, the analysis of a TikTok post would not have to be mainly about its actual topic – what it is specifically saying about fashion, racism, heteronormativity, or gaming. It *could* be about that, but in order to qualify as digital social research it would definitely also have to be about how the medium of the internet, or user-generated self-publishing, or TikTok as a platform and genre affects how social relations are constituted, and how they function. It would also have to ask questions about what this particular medium does to the relationships between what is said, by whom, to whom, as compared to how those things work in other media or environments – following other 'logics'.

So, as you can see, thinking in terms of media logic does not have to mean that all media follow one, unified rationality. This might be the case in some studies of media logic, where focus has largely been on the meaning production of mainstream news (preferably on television). More generally, however, the notion refers to a variety of ways of working ('modus operandi' as Hjarvard has it) that different media might have. Different media distribute resources differently, and adhere to different formal and informal rules, opportunities, and limitations. For example, while politics in the 1980s mainly had to adjust its ways of speaking to get the maximum impact in newspapers and on television, politics in digital society can meet a wider range of different media logics: that of mainstream corporate media, that of citizen media, that of hashtag activism, and so on.

At the most general level, digital media affect the social through processes of mediatisation. Mediatisation describes how media have become an increasingly entangled part of our realities, a process that is accentuated by digital technology. This is not only in terms of how the mere quantity of media platforms and communication tools have increased. It is just as much about qualitative changes in how media communication is dispersed in new ways – temporally, spatially, and socially in digital society. Technologically mediated communication is now accessible all the time, at any place, so that more and more social settings are affected and shaped by communication through media.

As digital technology becomes more and more embedded in society and culture, it is likely to become increasingly transparent – so omnipresent that we don't think of it as a separate phenomenon. Some have written about a movement towards a *postdigital* state – an era where the digital is no longer new and exciting but something that is commonplace and assumed to the degree that it becomes invisible. The concept of the postdigital 'looks forward not to its end but to its ubiquity – to when it ceases to be interesting' (Tinworth 2012: n.p.). We are in a phase which, digital journalist Adam Tinworth (2012: n.p.) says,

> marks the transition from the era where we're excited by the shiny new digital toys that we have, and start to become excited by the changes that these shiny not-so-new toys are making in the way we live.

As argued by Nick Couldry and Andreas Hepp (2017), we live today in an age of *deep mediatisation*, where media can no longer be seen as specific channels of centralised content. Rather, media are now better understood as ever-present platforms for enacting social life itself (van Dijck et al. 2018). This is symptomatic of a transition from a mass media system to a social media ecology. Following ongoing processes of digitalisation (e.g. internet and social media), and datafication (e.g. AI, algorithms, and automation), our social world is suffused with technological media of communication that bring about a refiguring of the world in, and on, which we act. The point here is that social life of today is so entangled with the complex system of digital media platforms that more or less everything we do is mediatised in one way or another. We can imagine earlier historical eras when people were sometimes listening to the radio, and at other times not. Sometimes they were in front of their televisions, and sometimes not. Today, however, many of us are virtually 'always on', through digital means of interaction and information. People still today watch movies in actual theatres, and visit physical bank offices, voting stations, or therapists, but these, like most other social and societal activities, have become more or less mediatised in the sense that they may happen completely, or at least partly, in relation to digital devices, apps, and platforms. Couldry and Hepp (2017) illustrate how social relations today are actualised through a system of variously connected digital platforms, that bring about a much more intense embedding of media in social processes than was ever the case before. More and more aspects of society, and of our social lives, are saturated with digital communication media, in ways that transform our social domains in quite drastic ways.

ABOUT THIS BOOK

Digital media are seated at the centre of an ongoing process of social transformation. This process is not only about zeroes, ones, and technology, but about the societal changes that result from, enter into, and work through the software and hardware. These changes include new textual experiences in terms of genre and form, new ways of representing the world, new relationships between people (producers and consumers, teachers and students, politicians and citizens, and so on) and between humans and machines, new conceptions of the relationship between the body, nature, and technology, as well as new patterns of organisation and production.

This book is about digital society – our present-day society, which is deeply affected by and entangled with digital media technologies. I discuss what has been thought and said about it, what it is and what it could be, and how it can be understood from a social perspective. The first three chapters of the book offer

a broad theoretical and conceptual framework. While this chapter has provided the basis for approaching digital society, I deal with social media platforms in Chapter 2, and with the issue of optimistic versus pessimistic perspectives on digital media's impact on society in Chapter 3. The subsequent chapters (4–11) deal with a number of topical areas within the field of digital media and society. Chapter 4, *Interaction and Identity*, provides a framework for understanding how digital media have contributed to altering the parameters for how people interact and for how society is held together. In general, while analogue things tend to be fixed in time, space, and materiality, the digital tends towards a state of flux. It can move instantly across space and place; it can be edited, re-edited, and re-mixed. The digital also offers novel, low-threshold tools for the creation and circulation of content. It potentially enables new or transformed social roles and relationships, and such developments are addressed in Chapter 5 (on *Communities and Networks*). I also discuss how the internet and social media offer new ways of seeing and feeling – or being seen and felt (Chapters 6, *The Power of Visual Digital Media*, and Chapter 7, *Digital Emotions*). I also discuss how digitally networked media can contribute to challenging, altering, or potentially giving rise to new forms of participation, power, and politics (Chapter 8, *Power and Exploitation*, and Chapter 9, *Activism, Mobilisation, and Social Change*). In Chapter 10, *Datafication, Algorithms, and Artificial Intelligence*, I deal with issues of data surveillance, algorithmic power, and data justice. This chapter also explores the evolving realm of artificial intelligence (AI), shedding light on how these technologies are transforming the digital media landscape while also posing significant ethical, social, and political challenges. The last chapter, 11, *Software and Devices*, addresses how the softwarisation of society, as it plays out on a range of internet-connected things and gadgets, demands new research perspectives. It also looks into the field of Generative AI which has given rise to new forms of software that are capable of producing content autonomously, thereby challenging traditional notions of creativity, authorship, authenticity, and truth.

CHAPTER SUMMARY

In this first chapter of the book, we have looked at what it means to live in a constantly evolving digital society. Over the last half-century, computers, the internet, social media, and AI have contributed to important transformations of our social world. At the same time, society has continuously shaped these digital technologies. We have looked at different ways of describing the world we live in, focusing, for example, on previous writings about a post-industrial society or an information society. I have suggested that 'digital society' is a general term that can be used to encompass all such definitions, especially if one wants to focus on

the digital aspects of this transformation, which also has other dimensions. We have also seen how media can be fruitfully approached from a so-called ecological perspective, where media technologies (digital and other) are seen as social environments that enable certain forms of social action. Finally, we have looked at literature around deep mediatisation, which underlines that digital media must be seen as deeply embedded in social practices. In the next chapter, we will look more closely at one of the key phenomena in digital society, namely social media platforms.

Further Reading

Couldry, Nick & Hepp, Andreas (2017). *The Mediated Construction of Reality*. Cambridge, UK: Polity Press.

This text provides a comprehensive introduction to what its authors define as 'deep mediatisation'. It describes and discusses how society is reshaped through digital media and their related infrastructures. Deep mediatisation means a drastic transformation of social reality and its impacts on institutions, organisations, communities, and individuals.

Rohlinger, Deanna & Sobieraj, Sarah (2022). *The Oxford Handbook of Digital Media Sociology*. Oxford: Oxford University Press.

This handbook casts a sociological lens on the study of digital media, underlining its transformation from an exceptional phenomenon to a commonplace element in everyday life. It covers a broad spectrum of subjects such as health, work, elections, capital flows, intimate relationships, social movements, and the formation of identity.

McLuhan, Marshall (1962). *The Gutenberg Galaxy*. London: Routledge.
Meyrowitz, Joshua (1985). *No Sense of Place*. Oxford: Oxford University Press.
Castells, Manuel (1996). *The Rise of the Network Society*. Malden, MA: Blackwell.

These books by McLuhan, Meyrowitz, and Castells are examples – from the 1960s, the 1980s, and the 1990s, respectively – of scholarly writing about new media and social change.

Ceruzzi, Paul (2012). *Computing: A Concise History*. Cambridge, MA: The MIT Press.

This book offers a broad account of the history of computing from its very early days up to the 2010s, and also gives a background to the internet, the web, and social media.