

GENERAL CONCLUSIONS

The scope of the network society

In Chapters 1 and 2, network society was defined as a form of society increasingly organizing its relationships in media networks, which are gradually merging with the social networks of face-to-face communication. This means that social and media networks are shaping the prime *mode of organization* and the most important *structures* of modern society. They are not the whole *substance* of society, as they are in the exaggerations of Manuel Castells (1996, 1997, 1998; see van Dijk, 1999). Society still consists of individuals, pairs, groups and organizations. Of course, they establish external and internal relations, but these relations do not equal society. The organic and material properties of individuals, pairs, groups and organizations with all their rules and resources cannot be cut out of society in order to return it to a set of formal relationships. Even a totally mediated society, where all relations are fully realized by, and substantiated in, media networks, where social and media networks equal each other, would still be based on bodies, minds, rules and resources of all kinds.

The first conclusion of this book is that modern society is *in a process of becoming* a network society, just as it is developing into an information society, a related concept. It is in a transition from mass to network society. Most contemporary societies are not yet full-grown network societies. Virtually all developing countries are still largely mass societies. To take the example of India: large parts of cities such as Bangalore or Hyderabad are strongly connected to the global network infrastructure and they are part of an Indian network society. However, the overwhelming part of the countryside of India still lives in a mass society as it consists of people with a high level of illiteracy and limited old mass media use. Their fast growing adoption of simple mobile phones is only a first step into the network society as described in this book. Developed societies are not 100 per cent network societies either. At least 20 or 25 per cent of the population never uses the Internet and many elderly scarcely use a mobile phone. In these countries, many people also use traditional mass media for information and entertainment, and face-to-face communication for social relationships.

A pervasive infrastructure

The main conclusions of this book will now be summarized in the arrangement of the seven 'laws of the Web' that were first introduced in Chapter 2 and that returned in virtually every chapter that followed. The first of these laws is the *law of network articulation*: a structure of relationships comes forward at the expense of the independence of the units they are linking. In Chapter 4, we have seen that networks are creating a network economy and networked organizations with actors who depend on each other. They serve as a new organizational form in between traditional hierarchies and markets. The new media sector itself is also networked when we take into account how the big new media companies are engaged in platform competition

offering their own standards and dependencies. In Chapter 4 and 5 it was shown that the national state is submitted to the yoke of global economic and financial networks. As a reaction, the state itself evolves into some kind of network state. Politics becomes Internet politics. In Chapter 6, we have noticed that our current law system, based on the notion of independent actors, acts and property items is undermined by networks. In Chapter 7 the idea comes forward that the whole social structure of modern society is increasingly built on networks. The structure is marked by network individualization and a polarized class structure of digital divides. Social media and online communities start to dominate social relationships. Chapter 8 has described the rise of a cyber-culture or a digital culture of hyper-linked user-generated content. Finally, In Chapter 9 we have seen that in using networks such as the Internet and mobile telephony we can be 'alone together' (Sherry Turkle), increasingly depending on others we cannot fully reach.

So, a network structure pervades all spheres of society. This makes the metaphor of networks as a nervous system of society an appropriate image. This is also true because the network structure connects all levels of society, usually called the micro-, meso- and macro-level, and merges the private and the public spheres. It was noticed that the dividing lines between these abstractions are blurring. On the Internet, interpersonal, organizational and mass communication come together. Using this medium, we bring the 'whole world' into our homes and workplaces. However, the blurring of traditional dividing lines does not result in their disappearance. It only means that we have to invent new dividing lines. The difference between public and private domains remains important. Interpersonal communication will not become equal to mass communication. It would be very harmful for people to remove every distinction between working time, leisure time and sleeping time because they can check new media connections everywhere and all of the time.

The articulation and pervasion of network structures have many effects that I have described in the previous chapters. However, two qualifications apply. First, this first law of the web is not a matter of natural necessity. In social science, structure, action and consciousness are a dialectic unity, such as that explained in the theory of structuration (Giddens, 1984). Structures appear in communicative action. This leaves room for agency and consciousness. Network structures are not natural necessities, but they are both defining and enabling. They offer choices within particular limits. This is why it is claimed here that the views presented in this book are neither pessimistic nor optimistic. In the first decades of the 21st century, new media such as the Internet are gradually appearing to be 'normal media'. Soon they will not be called 'new' anymore. Because they become normal media they will increasingly reflect all present characteristics and trends of society – both those being viewed as good and bad.

The second qualification is that the effects of network structures on society are not unidirectional. They have a *dual structure*. A combination of scale extension and scale reduction marks all applications of the new media in the economy, politics, culture and personal experience. This combination is the prime advantage and attractiveness of these media. It explains their fast adoption in what was considered to be a communications revolution. A dual structure results in several oppositions

explained in the previous chapters: centralization and decentralization, central control and local autonomy, unity and fragmentation, socialization and individualization. To claim that these opposites form a whole and may be observed in both the causes and the effects of new media usage is not the easy assertion of an indecisive author. It is a prime characteristic of network structure itself. Networks both connect and disconnect. They have centres, nodes and relations between them. At these points we find human beings who participate and decide differently and who are central or marginalized, included or excluded.

The pervasiveness of network structures in modern society is enforced by combinations of social and media networks. Media networks are not simply channels or conduits of communication: they are becoming social environments themselves (Meyrowitz, 1985, 1997). They are settings for social interaction, bridging the individual settings or environments of numerous people acting at their nodes and terminals. Media have their own particular characteristics, which are called communication capacities in this book, but we cannot understand how they work out in practice if we do not learn about the social context of their use and their users. This contextual approach explains the attention to the relationship between mediated and face-to-face communication in this book. The central conclusion is that media networks and mediated communication do not replace social networks and face-to-face communication, but are integrated with them. They become interwoven. They create a unified physical and media ecology that hopefully will combine the strong characteristics of meetings and mediation.

Inclusion and equation

The second law of the Web was called the *law of network externality*. Networks have effects on people and things external to the network. First, they contain a drive to connect. When a threshold of about 20 to 25 per cent access is reached, diffusion accelerates. This is what we have seen considering the Internet in the developed countries. Most developing countries are in that stage now. However, when a second tipping point is reached at about 65 to 70 per cent, saturation sets in. The last third of society is far more difficult to include. They contain people who do not want Internet access or have no means (money and skills) to use it. They consist of elderly or poor and low educated people or perhaps they are migrants. These are reasons why the digital divide remains a problem. Even when there is almost universal access, unequal digital skills come forwards.

Another network effect is the drive to standardize and equate. Without this effect, network communication would not be possible. Internet users want standards to be able to communicate with everybody. Standards are not just technical characteristics such as network protocols. They also are economic common forms. In a free market society, this means that a few big network companies are trying to promote their own standards. In Chapter 4 we have seen that Microsoft, Google, Apple and Facebook offer their own standards on their own Internet platform. The winner of this competition, if there is one, will largely control the Internet of the future.

Intermediation

In the early years of the Internet many people thought that this new medium was completely free and under the control of the users. Editors and mass media gate-keepers would no longer be needed. All users could choose, create and exchange contents themselves. This was the idea of disintermediation. It has proved to be completely false. The third law of the Web, the *law of network extension* holds that, in a short period of time, a network becomes so extended that intermediary and mediating nodes simply are required to make things work. This is a matter of scale. We would drown in the vast information ocean of the Internet without search engines. To organize our social relationships without the intermediary of a SNS would be impossible. Reading an online newspaper or magazine without any conviction that their contents have had a reality check (and even double checked) in an environment of misinformation and rumours, would simply be considered a waste of time. The more information and communication overload a medium contains, the more intermediaries are needed to organize contents and contacts. This means that quality information brokers, contact agents and newspapers have a future.

Intermediaries have become so vital that they tend to gather a lot of power. We have seen that companies such as Microsoft, Google, Apple and Facebook try to control the Internet according to their own design. The design of these American companies is certainly not neutral. We have argued that they have their own idea of the nature of the Internet. They claim to respond to the needs of the average Internet user, but their designs and corporate strategies are not entirely clear to most users. So, users do not know how their Internet behaviour is influenced by these designs. Who is familiar with the formulas behind the search engine Google? Who knows exactly what Facebook is doing with the personal data of its users? What ideas of social networking are behind the typical applications Facebook is offering you to keep in touch with your contacts? What kind of newspaper reading is promoted by Apple's iPad? And, wouldn't it be possible that a culture historian of the late 21st century 'discovers' that Microsoft software of a century ago was a typical product of American office culture?

Connectivity and contagion

According to the law of *network externality*, networks have effects on people and things external to the network. They have the internal drive to grow and to exert all kinds of effects on human behaviour and the organization of things in material production. According to the law of *small worlds*, they increase the connectivity of people, organizations and societies. Presently, connectivity accelerates to proportions never known before. This goes for people that can reach each other in a few seconds or minutes in all parts of the world with an abundant choice of partly overlapping media: telephone calls, voicemail, SMS, Instant Messages, email, fax, SNS messages, Twitter and chat messages. Despite broad and deep digital divides, access rates are growing fast everywhere. On account of this growth, the six degrees of separation, keeping individuals apart, tend to be reduced to five or even four (see Chapter 2).

A more recent development is that things are also increasingly connected using inbuilt chip technology. As we have seen, this changes production, distribution and consumption processes.

On the basis of this connectivity, social processes as old as human kind are finding new and ever faster venues. Among others, people imitate each other and their behaviour is clearly contagious. I have discussed the three *degrees of influence* between people (Chapter 2). As this network effect comes on top of an ever smaller number of *degrees of separation*, contagion is accelerating. This is exactly what we can observe: – both good and bad information (rumours, gossip) are spreading faster than ever before. For example, the stock markets have become places of herd behaviour. Here, inaccurate and irrational information processing often overrules accurate and rational processing. Stock prices jump up and down. With the aid of ICT networks, financial trade has become faster and more voluminous than ever before. Networks have become a mode of organization next to markets (Chapter 4). So, in the age of the rule of financial capital, these networks certainly are not innocent to the current credit and debt crises. The laws of contemporary global capitalism are causing this crisis, but evidently networks amplify its workings (Chapter 4).

The most basic consequence of the rise of connectivity and contagion is that the network society is an unstable type of society (Chapter 7). Though networks are able to assist in a better informed and organized society which is more coherent, they also amplify all current tensions in society.

Concentration and fragmentation

According to the law of *network extension*, the scale of a network is likely to extend. However, this can only happen when the internal structure of a network is adapted in such a way that the scale can also be managed via intermediaries and reduced to enable units to connect not only with everyone at random but also, and primarily, with those in a socially close cluster. The combination of scale extension and scale reduction is a structure of networks and the network society that has returned in every chapter. The most important example is a concept under tension: network individualization. Individualization is scale reduction while networking means scale extension.

The opposites of scale extension and scale reduction return in all kinds of opposing tendencies at a lower level of abstraction that have marked the analysis of the network society in this book. An important one is the combination of unity or concentration and fragmentation. Networks help to create a new social cohesion in society but they also serve to increase a social and cultural diversity of countless subcultures. In the media sector, the opposite scales appear as a combination of new media concentration and fragmentation. The Internet is increasingly dominated by a few big companies with the surprising effect that media concentration on the Internet is higher than in the traditional media. At the other end we find the fragmentation of Anderson's long tail: a countless number of small media sources are available on the Internet. Strikingly, the middle that consists of medium-sized Internet

media is much smaller. As we have seen, Internet media concentration is reinforced by the *law of the limits to attention* on the Web.

The rich are getting richer, but what will happen to the poor?

The law of the limits to attention on the Web is linked to another law, *the power law*, among others via ‘Googlearchy’: those sources that are already on top of the list become even more popular because of search engine ranking. This produces concentration and inequality of sources. ‘The rich are getting richer’ is the most popular expression. In this book it was argued that social and information inequality tends to rise in networks despite the fact that networks are able to connect and to spread knowledge and other resources. Those that already have the most material, social, cultural and personal resources are most likely to acquire the special resource of the Internet and the resourceful opportunities this network brings. They have the best chances to reach physical access and the highest motivations to use it. They develop the best digital skills of all kinds. And they use it to a large degree for serious applications that give them an advance in their studies and careers.

What will happen to the poor? A slinking number is excluded because they have no access at all. A growing number will face *relative* inequality because they benefit systematically less from the new media than those rich in resources. The information elite is likely to grow. Relative inequality is especially important in a network society because in this kind of society, power is built on relationships (van Dijk, 2005). Without defending an instrumentalist view of technology (see van Dijk, 2010a), I have to conclude that the access and use of networks are important tools that work like a lever in the hoarding of opportunities (Tilly, 1998).

Trend amplification

A last conclusion concerns the overall effect of the new media on modern society. Will they have revolutionary implications for society, will they only gradually transform society, or will they have no substantial effect? To put it another way: will the network society be an altogether different type of society? In this book, the answers to these questions are that changes will be evolutionary rather than revolutionary and that the network society will not be an altogether different type of society.

These answers do not oppose the acceptance of the concept of the communications revolution discussed in Chapters 1 and 3. This is a revolution at the level of media development itself. It is not a concept of the revolutionary effects of media on society. On the contrary, the first communications revolution at the turn of the 19th to 20th century, as described by Beniger, was a *consequence* of a revolution – the industrial revolution. In this book, we have frequently observed that the new media intensify trends that have already appeared before and that they reinforce existing social relationships in modern society. According to the seventh law of the Web, the new media are *trend amplifiers*. This comes close to the picture presented by Brian

Winston in his *Media Technology and Society* (1998). In a detailed overview of media history from the telegraph to the Internet, he contends that modern media's most important contribution is the so-called 'law of the suppression of radical potential'. New media technologies, which have a revolutionary promise at first, are later moulded to existing social processes. According to Winston, we should not forget that these processes both promote and hinder the adoption of new technologies. It would be interesting to test this 'law' in the development of the Internet from its revolutionary promise in the 1990s to its 'normalization' in the first part of the 21st century.

However impressive and wide-ranging the potential social consequences of the new media, as described in this book, they will not change the foundation of present developed societies, let alone developing societies. Perhaps ICT has made a contribution to the collapse of the Soviet Union and other communist states, as this technology does not fit traditional bureaucratic authority and planning (see Castells, 1998). However, capitalism is here to stay. It is likely to be reinforced or reinvigorated by the new media in an accelerated, flexible and socially harsher shape. However, instability and crisis potential grow equally fast.

Patriarchy may be in crisis in large parts of the world (Castells, 1997), but it will take a very long time before it withers away, and the new media will have only a small, if any, part in that process. Nor will ecological destruction be halted by the new media. At the most, these media contribute to a dematerialization of the economy and to higher efficiency and effectiveness in helping to save natural resources. The globalization of the economy is not caused by ICT, but is intensified by it. It is to be observed that the national state and sovereignty are undermined by the new media, but they will not disappear. Moreover, a concentration of politics in a surveillance state, party state or infocratic state is a possibility as well (Chapter 5). Rising social and information inequalities are not caused by ICT, but they might be increased by an exclusive appropriation of its opportunities by a relatively minor part of the population. I could carry on in this vein for many more pages, but it seems wiser to continue describing the diverging ways modern societies have tried to fit the advent of this new technology to their existing policies.