Internet and Society

Social Theory in the Information Age

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Preface

Internet and society is an emerging research field. A number of strands are converging to feed this field. Among them are sociology of technology, new media studies, and social informatics. It does not come as a surprise that this field, as such, is in a premature state of affairs and has to search for its transdisciplinary foundation. Thus, social theory is challenged in the information age.

The present book is an attempt to fill the gap. What makes it distinct from other attempts are the following features:

First, it gropes for a unified approach by making use of a combination of two different theoretical backgrounds. On the one hand, there is a paradigm shift throughout science, including social science and humanities, initiated by the findings in thermodynamics regarding open, dynamical, nonlinear, complex, self-organizing systems. The concept of self-organization is considered being able to bridge the gap between system theory and action theory approaches in social theory. On the other hand, it is a fact that many theorists in information society research, in particular, the critics of the information society concept, are of Marxian origin. Christian Fuchs contends that some arguments of the Marxist tradition are still valid while some are not. He shows that by a proper merger of both lines of thought a grand social theory framework may emerge that is able to grasp capitalism in the age of the Internet.

Second, this theoretical framework is substantiated by a tremendous amount of empirical details found in the literature comprising every essential aspect of society from economy to politics to culture to technology to environment. The data regarding the impact the Internet has on each of these subsystems evidence the aggravation of system-specific manifestations of an underlying antagonism between cooperation and competition. The Internet may be interpreted as a technological catalyst of social struggles.

Third, in so doing, the data suggest the only reasonable and practicable conclusion for guiding action: a proactive attitude towards shaping the Internet for a global, sustainable information society that provides opportunities for all to participate and for survival, in the long run.

The book is worth reading for students, scholars, and practitioners interested in the bigger picture of the Internet society that affects us day by day.

Wolfgang Hofkirchner
Professor for Internet and Society
University of Salzburg
May 2007

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1 Introduction

The Internet is ubiquitous in everyday life. On the Internet, we search for information, plan trips, read newspapers, articles, communicate with others by making use of e-mail, instant messaging, chat rooms, Internet phone, discussion boards, mailing lists, video conferencing; we listen to music and radio, watch videos, order or purchase by auction different goods, write our own blogs, and contribute to the blogs of others; we meet others, discuss with others, learn to know other people, fall in love, become friends, or develop intimate relations; we maintain contact with others; we protest, access government sites, learn, play games, create knowledge together with others in wikis, share ideas, images, videos; we download software and other digital data, and so forth. On the Internet, we also can feel being lost, disoriented, dissatisfied, scared, bored, stressed, alienated, lonesome, and so forth.

The Internet obviously is here to stay. How has this system transformed our lives and our society? What are the positive effects? What are the negative ones? Which opportunities and risks for the development of society and social systems are there? This book tries to contribute in helping people to find their own answers to such questions. Its main goal is to work out a theoretical understanding of the relationship of Internet and society. The problem that it addresses is the question of how society and the Internet need to be shaped by humans in order to avoid risks and maximize human happiness.

The study on Internet and society undertaken here takes place within a larger framework that has during the last years been labeled with categories like Internet research, ICTs and society, social informatics, informatics and society, new media research, information society theory, information society research/studies, Internet studies, Web research, etc.

Social informatics is a widely used term for this field of research. It was defined as "the interdisciplinary study of the design, uses, and consequences of ICTs that takes into account their interaction with institutional and cultural contexts" (Kling, Rosenbaum, and Sawyer 2005, 6). This definition implies that both the social design processes of ICTs and social ICT usage are important.

2 *Internet and Society*

The terms *Internet* and *new media* are understood as technological concepts by many (although they are frequently described as techno-social systems by social scientists); hence my contention is that *Internet research* or *new media research* are not wisely chosen terms because they can convey the impression of a technological determinist understanding. I therefore consider the term *information and communication technologies & society research* (ICT&S) more suitable (Fuchs/Hofkirchner 2006).

ICT&S is also short for the Center for Advanced Studies and Research in Information and Communication Technologies & Society (ICT&S Center, http://www.icts.uni-salzburg.at) at the University of Salzburg. Its opening took place in March 2004; the idea for such a research center was created by Ursula Maier-Rabler, who is now the ICT&S Center's academic director. One of the center's units of competence is the eTheory unit, headed by Wolfgang Hofkirchner, who became professor at the center in October 2004. I joined the Center and the eTheory unit in October 2005 as assistant professor for Internet and society. It is the vivid atmosphere at the ICT&S Center—with all ups and downs attached to it—and at the University of Salzburg that has provided me with the intellectual climate for writing this book. Hence, I want to thank all the people at the ICT&S Center, my students, and my colleagues at the Department of Communication Science for giving me the opportunity for my own continuous learning and intellectual growth.

ICTs is a term that is used for technologies of cognition, communication, and cooperation that are computerized (i.e., work with digital logic) and networked. The term *Internet* frequently is used for a specific type of ICTs, the global network of computer networks that is based on the TCP/IP protocol and has developed from the ARPANET. Much of the analysis in this book is devoted to the Internet in this understanding; however, the category *Internet* is not only seen as one specific network but as the general phenomenon of the interconnection of networked knowledge-based technologies and networked social systems.

The research field of ICT&S deals with the interplay of new information and communication technologies (ICTs) and society. Two interconnected aspects of ICT&S research are:

- The social shaping/social design of ICTs.
- The impacts of ICT usage on society.

The task is the analysis of these relationships and the contribution to the design of society and ICTs so that a participatory knowledge society can emerge. ICT&S research deals with opportunities and risks of the knowledge society and the shaping of technology and social systems.

ICT&S research is a double process, consisting of (1) a process in which human actors design ICTs and in which it is analyzed how society shapes ICTs, and (2) of a process in which it is assessed how the usage of ICTs

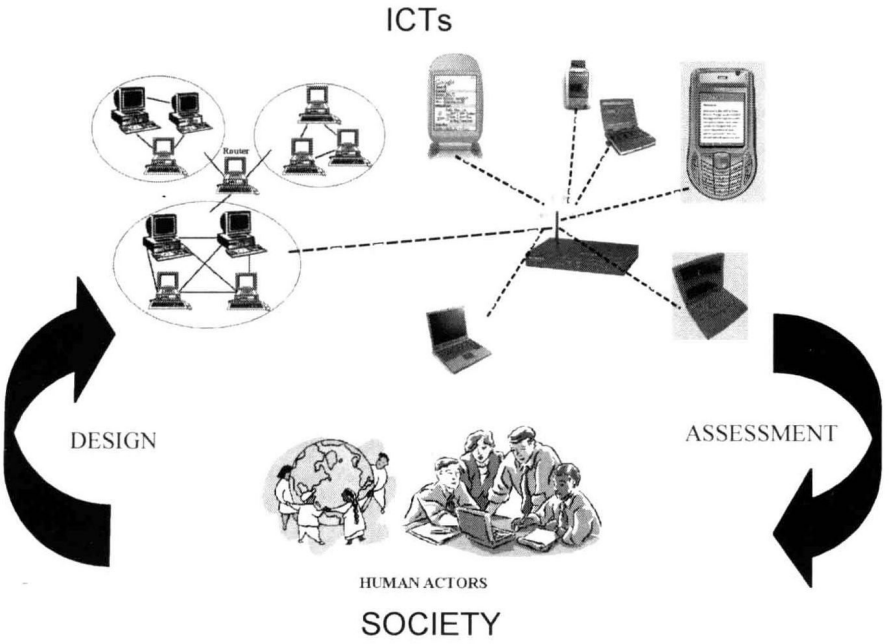

Figure 1.1 ICT&S Research.

transforms society (fig. 1.1). That ICTs are shown at another level than society here doesn't mean that they exist outside of it. Rather, ICTs are an immanent part of society.

Conceiving ICT&S as a double process of design and assessment implies that the relation of the two levels is inherently dynamic, they are mutually connected to each other, and they have constructive effects onto each other. Such dynamic thinking in philosophy can be found in the dialectical tradition. In dialectics, two separate entities become connected and form a higher-level unity that feeds back onto its parts. Dialectical development is a dynamic process of unity in diversity. In contemporary social science, dialectics has played a role, for example, in conceiving the relationship between social structures and human practices, as Anthony Giddens's structuration theory or Pierre Bourdieu's theory of habitus have exemplified.

Technological determinist accounts see technology as the driving force of society, as an independent factor outside of society that has linear effects on social systems. Social shaping approaches (such as social constructivism, actor network theory, neo-Marxist technology critique, cultural studies; for this distinction cf. Mackay 1995) consider technology as being invented, designed, changed, and used by humans and influenced by an overall societal context. The dialectical view advanced in this book, which conceives the relationship of ICTs and society as dynamic process, allows escaping the techno-deterministic view that only technology shapes society and the

socioconstructivist view that only society shapes technology. The endless dynamic loop involved in this approach is based on the idea that humans in society shape (i.e., design and use) ICTs and that in this process technology conditions, that is, enables and constrains, human cognition, communication, and cooperation. Such a self-referential loop has been described as the approach of mutual shaping of society and ICTs (Lievrouw and Livingstone 2006; Herdin, Hofkirchner, and Maier-Rabler 2007).

What sort of science is ICT&S? Some argue that it is a transdiscipline (Hunsinger 2005; Lamb and Sawyer 2005; Sawyer and Tyworth 2006) because it would approach its object of study beyond and across disciplinary and interdisciplinary perspectives, there would be no single perspective, and researchers from different disciplines would cooperate in order to construct a common ground. Some say it is an interdisciplinary field of research (Duff 2000: 180). For others it is an emerging new discipline with its own journals, institutions, departments, studies, curricula, conferences, associations, projects, students, researchers, grants, a unified object of research, specific research methods, and so forth (Vehovar 2006). Wesley Shrum (2005) argues that Internet research is an indiscipline because it crosses the boundaries between traditional disciplines. No matter which position one takes here, it is obvious that ICT&S transgresses the traditional boundaries between the social and the engineering sciences. It is a boundary-deconstructing science.

Computerized network technologies change all areas of society; they pose challenges and opportunities in a networked globalizing world. Analyzing networks and networked social systems requires networking science. Transdisciplinarity means a higher-level system of research with a shared language, a unity in diversity of disciplines, approaches, methods, categories, theories, and so on. It emerges from the communication of scientists who have different backgrounds but share an interest in a common topic of research from different angles.

Some argue that Internet and society can be researched with traditional social science methods, whereas others argue that new methods are needed. My contention is that old methods are needed but that, due to the emergence of cyberspace, transformations of methods are also needed, as is shown by the emergence of methods of online social research (cf., e.g., Batinic, Reips, and Bosnjak 2002; Johns, Chen, and Hall 2004). The methods of ICT&S research are based on a dialectic of the new and the old: ICT&S needs all methods employed for designing and engineering ICTs, and it needs all methods employed for conceptualizing and analyzing society. Hence, a mix of methods from informatics and the social sciences forms a precondition for the existence of ICT&S. By their interplay, all of these methods can form a higher-level unity in diversity so that new cooperative methods emerge. Design produces applications; the latter's usage by humans changes society and social system. These changes need to be assessed, so that new design requirements emerge that again result in new applications, and so on. This dynamic process is at the heart of the methodological level of ICT&S.

ICT&S is not yet a fully developed field of research. There are many interacting parts that try to form a joint whole. The novelty of this field brings along excitement and openness as well as uncertainty about its future.

Kling, Rosenbaum, and Sawyer (2005, 6sq.) argue first that social informatics is empirically focused but then say that analytically it refers to studies that develop theories or to empirical studies that contribute to theorizing. If a theory is understood as a logically interconnected set of systematic hypotheses that describe worldly phenomena and the latter's foundation, structure, causes, effects, and dynamics; and empiricism as the observation and collection of data for constructing systematic and reflected knowledge, then one arrives at two levels of science. There is no theory that isn't grounded in empirical observations and no empirical research that doesn't make some theoretical assumptions. However, there can be a different stress of the two factors, and hence one can distinguish between theoretical research (primarily theoretically informed) and empirical research (primarily empirically informed). The work undertaken in this book is understood as a contribution to a theory of Internet and society. Why is social theory important in this context? The emergence of the Internet has transformed society. In research this has resulted in a plurality of concepts such as Internet economy, digital democracy, cyberculture, virtual community, cyberlove, eParticipation, eGovernment, eGovernance, online journalism, social software, Web 2.0, and so forth. There is no clear meaning of these terms; some of them remain very vague or contradictory. One of the goals of the work at hand is to contribute to the theoretical clarification of concepts that arise in the context of the relation of Internet and society. It is a theoretical approach grounded in a multitude of other theories and concepts that to a certain extent are dialectically synthesized so that a complex, multidimensional analysis that avoids deterministic understandings can emerge.

There are microlevel (individual), middle-range (organizational), and wide-range (society) theories and research designs in ICT&S research (Rice 2005). The approach undertaken in this work is predominantly located at the societal level; it is a wide-range theory of Internet and society that focuses on how society as a whole and its subsystems interact with Internet technologies.

Steve Sawyer and Michael Tyworth (2006) argue that social informatics is critical, but not in the sense of emancipation as advanced by critical theory, but more in the sense of an orientation that challenges accepted and taken-for-granted knowledge on ICT design, development, deployment, and use. Kling, Rosenbaum, and Sawyer (2005, 7) say that the critical orientation of social informatics is that it doesn't automatically and uncritically accept the goals and beliefs of the groups that commission, design, and implement ICTs. Critique for these authors means a critique of technological determinism. The work at hand understands itself not just as a social theory but also as a critical theory of Internet and society. The challenge of ideologies and accepted knowledge has always been one important aspect of the tradition

of critical theory, although not the only one. One of the lines of thought that inform this book is the tradition of critical theory, as advanced by people like Herbert Marcuse, Theodor W. Adorno, Max Horkheimer, and Jürgen Habermas.

In summary, the main moments of critical theory that are also important for a critical theory of Internet and society are (cf. Horkheimer 1937; Marcuse 1937a):

- A dialectical critique of society doesn't focus on that which exists in society but on the possibilities of existence. It identifies moments and movements in society that negate dominant structures and open up possibilities for a Hegelian negation of the negation of existing structures.
- Critical theory is a lever of possible practice.
- It identifies differences of essence and appearance.
- It is concerned about the situation of human existence and is oriented on the improvement of human existence and happiness for all.
- It points out tendencies and real possibilities of development and human intervention, conditions, and perspectives of human practice.
- It transcends concrete reality and anticipates possible forms of being.
- It comments on the concrete forms of being.
- It develops categories that question the world that is and that which existing society has done to humans.
- The language of critical theory criticizes one-dimensional thought by creating a linguistic and theoretical universe that is complex and dialectical.
- Given categories and societal facticities are not considered as natural but as historical. Critical theory is a deconstruction of ideologies.
- It argues for humane conditions so that humans are reconciled with societal being that has been estranged from them.
- For critical theory the human being is more than an exploitable object.
- Critical theory argues that happiness, self-determination, and freedom can only be achieved by a transformation of the material conditions of existence.
- It stresses the importance and power of imagination for anticipating possible futures.
- Its goal is a reasonable society, an association of free people based on a sustainable utilization of technical means. It starts from the judgment that human life is livable or can and should be made livable and that in a given society there are specific possibilities for improving human life and specific ways and means for realizing these possibilities.
- Critical theory takes partisanship for oppressed humans.
- It strives for a condition without exploitation and oppression and for the emancipation of humans from enslaving relationships.

- It comprehends societal relationships as totalities.
- It points out the irrationality of the existing rationality and the rationality of irrationality in existing society.

In summary, this means that the approach worked out in this book is critical in the sense that it focuses on social problems in the context of Internet and society, it identifies opportunities and risks, sees them related to the larger social structure of contemporary society, and understands them as antagonistic forces.

Scott Lash (2002) has argued that critical theory in the information society must be immanent critique because there would be no outside space for transcendental critical reflection due to the immediacy of information (the speed and ephemerality of information would leave almost no time for reflection), the spatiotemporal extension caused by informatization and globalization processes, the vanishing of boundaries between human and nonhuman and culture as well as between exchange value and use value. Information critique would have to be an immanent critique without transcendentals. Critique of information would be in information itself, and it would be modest and also affirmative. The arguments in the book at hand are different: I argue that the information society has potentials for cooperation that provide a foundation for the full realization of the immanent essence of society—cooperation. Cooperation is seen as the very essence of society (an argument that can be found in the writings of young Marx, Marcuse, and Macpherson), it is an immanent feature of society and the human being as such, but this potential is estranged in modern society. This immanence is in contemporary society transcendental because the existence of society is different from its essence. The information society promises a new transcendental space—a cooperative society (or participatory democracy)—that is immanent in society as such (but not existent in alienated societies) and potentially advanced by information and information technology. But such a society isn't reached automatically because there is an antagonism between cooperation and competition immanent in capitalism and hence also in the capitalist information society that threatens the potentials for cooperation. Hence, for establishing an outside of and alternative to global informational capitalism, transcendental self-organizing political projects are needed that have alternative goals, practices, and structures of organization that, however, make use of existing structures (such as communication technologies) in order to transcend these very structures and create a new global space—a participatory democracy. The idea of this book is that information produces potentials that undermine competition but at the same time also produces new forms of domination and competition. The philosophical argument is based on the logic of essence and on the dialectic of immanence and transcendence. The line of argument assumes a formal identity of immanence and transcendence with society as the system of reference (cf. Fuchs and Zimmermann 2008). Transcendence is not something that is

externally given to being but as immanent essence (and thus *wirklichkeit*) of that being. Transcendentals are societal forces that represent needs and goals that form the immanent essence of society but are repressed within the existing antagonistic totality and can't be realized within it. Hence, I don't agree with Lash that transcendental critique and dialectical critique (like the one of the Frankfurt school) are outdated. A dialectical framework of critique is needed for understanding the interconnected opportunities and risks of global informational capitalism. Facing Paul A. Taylor's (2006) critique that Lash's information critique is media determinist and risks becoming uncritical and conformist due to the lack of transcendentals, Lash (2006) now seems to argue for the dialectic of immanence and transcendence. One of my main points is that due to informatization the dialectics of thinkers like Hegel, Marx, and Marcuse gain a new topicality in transposed forms.

Another framework of the work at hand is self-organization theory. In the last decades, self-organization theory has emerged as a transdisciplinary theory that allows describing reality as permanently moving and producing novelty ("emergence"). The concept of self-organization grasps the dynamic, complex, evolving nature of systems in nature and society. The main motivation for taking up this notion is that contemporary society seems to be inherently complex, networked, and dynamic and that an explanation of its phenomena with this concept is manifest.

In the social sciences, the main representative of self-organization theory is Niklas Luhmann. I am impressed with the fact that Luhmann was one of those scientists who have shown that social theory is important today, but overall I am very critical of his theory because of its conceptual elimination of human actors from society. The understanding of self-organization advanced here is one that is oriented on human practice and puts humans and human interests into the very center of theory and society. Hence, a critique of Luhmann and the elaboration of a human-centered notion of social self-organization in the context of Internet and society runs throughout the book. The approach advanced is rather Habermasian than it is Luhmannian. Habermas argues that his critical theory of communicative action criticizes societies that don't make use of the learning capacities that they have and that surrender to an unguided increase of complexity, and it criticizes scientific approaches that can't deconstruct the paradoxes of societal rationalization because they consider complex societies only in abstract terms and neglect these societies' historical constitution (Habermas 1981, vol. 2, 549sq.). This means that Habermas understands his theory as a critique of the suppression of societal potentials and of ideologies that legitimize such developments.

However, other than Habermas, I think that it makes sense to employ a general notion of systems that are produced by human practice. For Habermas, systems are social relationships coordinated by the media money and power. He sees the systems concept related to instrumental reason and opposes it with the critical idea of a lifeworld of communicative discourse

that has been colonized by systems in capitalist society. Habermas's theory lacks a universal concept that can explain the common ground of society and social relationships. If the concept of systems is defined on a very general level, one can describe society on a more general level that allows the distinction of different types of societies and systems (such as closed systems, coercive systems, capitalist systems, heteronomous systems, rigidly controlled systems, deterministic systems, purposive systems, heuristic systems, open systems, purposeful/purpose-seeking systems, lifeworld systems, participatory systems, etc.), the critique of coercive settings of society, and the advancement of liberating settings.

In systems thinking, there are some approaches that have been influenced by Habermas and critical theory. They have provided an alternative to the instrumental framework advanced by Luhmann. These are approaches such as critical systems thinking, critical systems heuristics, social systems design, and soft systems methodology. They have tried to integrate critical thinking and systems thinking. They can be considered as an incorporation of Habermasian ideas into systems theory. The understanding of systems advanced in the book at hand is close to the overall framework of critical systems theories that have tried to give the systems concept a humane twist.

The question how opportunities and risks emerge from the interrelation of Internet and society is reframed as an antagonism between cooperation and competition. The analysis of this antagonism in contemporary society runs as a thread throughout the book. Specific research questions that are treated are:

- What specific type of system is the Internet?
- In which society do we live?
- Which role do networks and knowledge play in contemporary society?
- Which role do cooperation and competition have in the information ecology?
- Which role do cooperation and competition have in the Internet economy?
- Which role do cooperation and competition have in online politics?
- Which role do cooperation and competition have in cyberculture?

In chapter 2, the notion of self-organization is introduced and related to dialectical thinking. These ideas are used throughout the book as theoretical framework that has ethical implications. In chapter 3, a general model of society is introduced, and the role of cooperation and competition in modern society is clarified. This model serves as the background for analyzing the Internet and society in the subsequent chapters. In chapter 4, the notion of the Internet is discussed. It is described as a techno-social system. After the two main categories (Internet, society) have been clarified in chapters 1–4, the relationship of Internet and society is discussed in chapters 5–9.

The arguments advance from the abstract to the concrete. In chapter 5, the question is discussed in which society we live and which key concept should be employed for analysis. The notions of transnational informational capitalism and transnational network capitalism are introduced. In chapters 6–9, it is subsequently shown how the antagonism between cooperation and competition shapes the relation of Internet and society in the ecological system (information ecology, chap. 6), the economic system (Internet economy, chap. 7), the political system (online politics, chap. 8), and the cultural system (cyberculture, chap. 9) of transnational informational capitalism. Phenomena relating to virtualization, dematerialization, resource and energy intensity of ICTs, information monopolies, open source, Internet gift economy, digital divides, digital democracy, information warfare, electronic surveillance, cyberprotest, and virtual community are subsequently discussed. In chapter 10, the main arguments of the book are brought together and an outlook is given.

There are certain phenomena of Internet and society such as eLearning, eHealth, digital art, Web art, online journalism, or cyberscience that can, due to limitations of space, not be analyzed in detail here but need to be addressed in separate publications in the future.

Figure 1.2 summarizes the dimensions of Internet and society that are treated in this book.

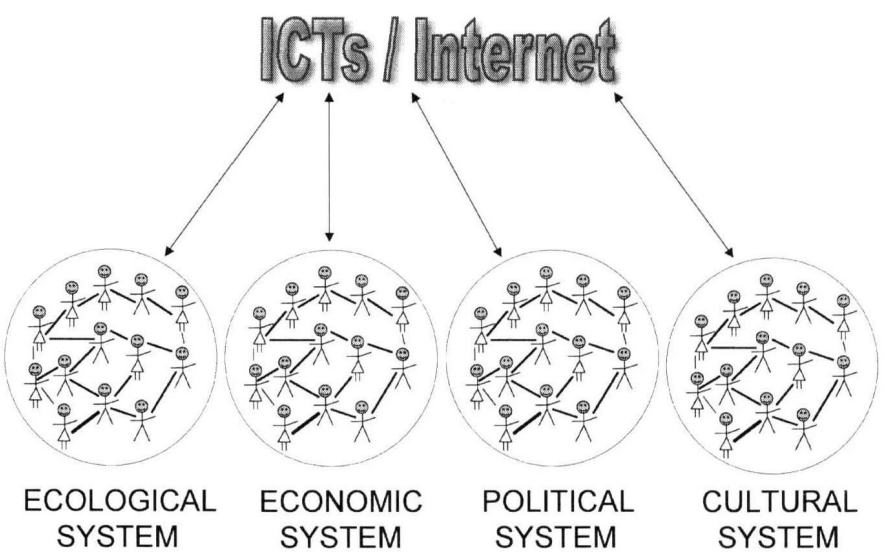

Figure 1.2 Dimensions of Internet and society.