

1 Introduction

New media challenge researchers to reconsider old theories. The internet has reemphasized a classic issue within political and cultural theory – the relationship between individual human agency and social structure: to what extent do local actions reproduce or transform global structures? Several early accounts of the internet expressed high hopes, not least, regarding its participatory potential and transformative capacity. Could clicks cumulatively change the world? – This introduction first revisits questions of structure and agency in a discussion of the work of Anthony Giddens. The discussion proposes a combination of his structuration theory with the tradition of ‘medium theory,’ which seeks to account for the distinctive technological and cultural potentials of different media. Media always make a difference in the dialectic of agency and structure – a dialectic that is inherently political. This has been witnessed, in recent decades, as diverse social actors from politics as traditionally understood, business, as well as civil society have relied on media both as means of self-presentation and as mechanisms for monitoring competing interests. Next, a brief review is given of previous research specifically about the web as technology, text, and social institution. This leads into an overview, finally, of the present collection of studies that examine the web as a source of agency as well as structure, and as an interface with contemporary politics and culture.

This volume examines the World Wide Web at a time when it has come to be taken for granted as part of everyday life, following an early period of much utopian hyperbole about the internet (e.g.,

Gates, 1996; Government, 1994; Negroponte, 1995; Rheingold, 1994). In less than a decade, the web has become one key component of the internet and, hence, of the communicative infrastructure of societies around the world (Nua Internet Surveys, 2005). Following the dotcom crisis of 2000 and its aftermath, the web is being incorporated into many of the established institutions of contemporary society: businesses, parliaments, museums, universities, as well as the family. In the terminology of structure and agency, this might imply, on the one hand, that the web will help to consolidate the powers that be and the social system as it currently exists. On the other hand, the specific characteristics of the web, and of the internet generally, may offer novel means of acting, at a distance and in collaboration with others, so as to challenge the status quo. The contributions to the volume analyze and assess such prospects with reference to some of the specific historical, institutional, and cultural contexts in which the web is being implemented and takes effect. Their shared premise is that the web is not an extraneous addition to, but a constitutive element of contemporary society at the local, national, as well as transnational levels. Information and communication technologies (ICTs) literally mediate between agency and structure, empowering and disempowering actors, questioning and reconfirming structures. Exploring these processes, the articles present studies of a range of concrete websites and their political implications.

The title of the volume – *Interface://Culture* – suggests that culture provides a common denominator for the media and their contexts of use, lending meaning both to the content of the media interface and to its perceived relevance beyond the interface. The title, further, symbolizes the mutual embedding of media technology and cultural practice. The web interface, beyond its usefulness as a technical device, constitutes a cultural forum (Newcomb & Hirsch, 1984) in which social ends and means, rights and responsibilities, are negotiated, legitimated, and, to a degree, acted upon. Interfaces come with cultural assumptions, and they carry political perspectives. Interfaces provide for agency and anticipate structure.

The subtitle of the volume points to the three-way process of media, agency, and structure. The web is a *political resource*; it may support political communication, organization, and mobilization in ways that either replicate, replace, or complement traditional media and movements. The web is also an *aesthetic form*; it articulates human experience in textual, visual, and auditive forms of discourse which, in certain respects, transcend or reconfigure previous media. This is, emphatically, not to suggest that the aesthetics of the web in itself entails particular political practices, or that contemporary politics requires a particular aesthetics on the web or in other media. Politics has always taken a variety of aesthetic and communicative forms with contested implications. The volume examines a diverse selection of websites, studying them as both discourses and resources, and approaching them as the user's concrete interface with the intangible institutions and complex agendas of contemporary social life.

The rest of this introduction develops a media perspective on agency, structure, and the web, identifying a number of interdisciplinary research questions that follow from this perspective. As part of an overview of Anthony Giddens' influential account of the agency-structure dialectic, the argument is made that Giddens, perhaps surprisingly, has tended to underemphasize the role of media. The tradition of 'medium theory,' next, offers a helpful supplement and corrective, indicating how, throughout history, different media technologies have facilitated certain forms of society, culture, and politics, while discouraging others. The web has come to the fore at a time when conceptions of 'politics' are in flux, thus generating a number of issues for interdisciplinary research that are presented here in outline. The following section notes the varied sources of theory and methodology regarding media texts and their social contexts, including media and communication studies, political science, computer science, art history, as well as other fields of inquiry. The brief review of previous research leads into a presentation and contextualization, finally, of the individual contributions to the volume.

Media, structure, and agency

Modern social theory has returned to social structure and human agency, time and again, since the seminal writings of Max Weber, Émile Durkheim, Karl Marx, and others. The dialectic was summed up with a vengeance by Marx in *The Eighteenth Brumaire of Louis Bonaparte* (1852):

Men make their own history, but they do not make it just as they please: they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given, and transmitted from the past. The tradition of all the dead generations weighs like a nightmare on the brain of the living. (Feuer, 1969: 360)

Whether or not the accumulated traditions and actions of the past may allow for social reform or even revolution has, indeed, remained the question.

A helpful synthesis of much subsequent research and debate has been offered by Anthony Giddens in a number of publications since the 1970s, as summed up in *The Constitution of Society* (Giddens, 1984). His 'structuration theory' is perhaps best understood as a meta-theory which seeks to transcend a number of dualisms from more than a century of social and cultural research, including subjectivist *or* objectivist, interpretive *or* causal, hermeneutic *or* materialist, micro- *or* macro-approaches to society and culture. Giddens' key notion is the 'duality of structure,' which defines human agency and social structure as each other's enabling conditions. Human agency, thus, is not the manifestation of any classic free will, as exercised by individuals or collectivities, nor is social structure a set of external constraints on their action. Instead, social subjects and social systems are continually reproducing and, to a degree, reforming each other. To exemplify, the press consists simultaneously of its structural properties – its political, technological, as well as cultural-conventional permanence – *and* of the myriad activities of journalists, sources, regulators, and audiences who both reproduce and challenge these properties. Like

other social institutions, the press, and the media as such, are not only reinterpreted, but reenacted in daily practice.

Giddens' framework has proven highly productive for other social and cultural theory, and for empirical studies of contemporary institutions, organizations, and practices. However, critical assessments (e.g., Bryant & Jary, 1991; Held & Thompson, 1989) have noted that the media remain somewhat of a blindspot in structuration theory (see further Jensen, 1995; Silverstone, 1999; Thompson, 1995). This seems surprising, not least in view of the emphasis that Giddens himself places on 'time-space distanciation' – the distribution and coordination of human activities across great distances and time differences – as a characteristic of social interaction in modernity. Media are a necessary, not just an incidental, condition of economic and political life on the scale that the world has witnessed over the last two centuries. It can, indeed, be argued that a third, general category of *medium* should be introduced on a par with *agency* and *structure* (Jensen, 2002). For one thing, this may contribute to transcending the lingering dualism of 'the duality of structure,' in addition to refocusing attention on the communicative and interpretive processes by which both actions and structures come to be perceived as meaningful in the flow of social life. For another thing, a renewed attention to the role of media in social structuration, paradoxically, may help studies of politics and culture to avoid media-centrism, i.e., the more or less determinist premise that, compared to earlier eras, we now live in a 'media society.' In one sense, all societies have been media societies with shifting configurations of technologies and institutions for the purpose of society-wide communication. In a historical and anthropological perspective, media include spoken and body language, scratch notes and scribal administrations, broadcasting and the internet. The very dialectic of agency and structure is 'political,' as discussed below, and the media are a key condition of the outcome and consequences of the dialectic.

A specific limitation of structuration theory arises from its understanding of the relationship between communication, consciousness, and action. Reformulating Freud, Giddens (1984) distinguishes three

forms of consciousness. 'Practical' consciousness, first, refers to a reflexive and self-monitoring mode that allows people to go about much, perhaps most, of their daily business without making their assumptions explicit either to others or to themselves. If questioned, they could do so, but need not, for many practical purposes. Second, 'discursive' consciousness denotes a focused form of intentionality or awareness that facilitates analysis and deliberation, for example, in public debate or private arguments. Third, and less importantly in the present context, Giddens' model of 'the unconscious' is largely comparable to that of Freud. In contrast to practical consciousness, it is not accessible for reflexivity and analysis outside of psychoanalytic and comparable settings.

While the category of practical consciousness has helped, along with, for example, Bourdieu's (1984) notion of *habitus*, to reemphasize the nexus of meaning and action in social theory, Giddens' (1984) definition of discursive consciousness unduly narrows the scope of 'discourse' to 'language': Discursive consciousness is "what actors are able to say, or to give verbal expression to" (p. 374). Both historically and currently, other semiotic systems have served as vehicles of explicit and focused understanding – from still and moving images, to formal models and maps – even if verbal language still has pride of place as the system reinterpreting other signs with a view to deliberation, communication, and action. In a digital context, several different semiotic systems coexist in remediated forms (Bolter & Grusin, 1999), arguably facilitating discursive consciousness at and through the interface. Moreover, being digital, the web and the internet as such, are relatively open to interventions by users that, to a degree, reshape the structure of the medium (see Finnemann, this volume). Whether verbal or not, the discourses by which users exercise their agency at the interface may be quite explicit and focused, to the point of reconfiguring the conditions of communication and the systems sustaining it. In order to analyze and assess the potentials and implications of the web for agency and structure, it is necessary to consider its distinctive characteristics as a medium, including its multisemiotic features and the openness of its structure to continuous modifi-

cation through social and cultural uses. Theories regarding the forms of communication, consciousness, and action that may be associated with particular media, have been developed particularly since the 1950s, and have, more recently, been identified as a research tradition under the heading of 'medium theory.'

Medium theory

"What are the relatively fixed features of each means of communicating and how do these features make the medium physically, psychologically, and socially different from other media and from face-to-face interaction?" (Meyrowitz, 1994: 50). This can be taken as the central question of medium theory.

Importantly, the general position does not entail any crude technological determinism, although some of its advocates – most famously Marshall McLuhan (1964) through his dictum that "the medium is the message" – have tended to map changes in the technological and textual structures of media rather directly onto their social and cultural context. The main source of inspiration for McLuhan as well as for much later medium theory, Harold A. Innis, stated his argument in a more traditional and scholarly fashion (Innis, 1951, 1972). Applying lessons from the study of economic monopolies to information monopolies, he described some of the ways in which power can be exercised as well as subverted through media. The available media within a given society condition 'who knows what and when.' At the level of whole societies and entire cultures, Innis suggested, the dominant media of a given age have a 'bias' toward either space or time, in the sense that they favor either stability over time or extended territories. Among the historical examples are stone tablets – the inscriptions last a long time, but do not travel well – as opposed to papyrus and paper, which can support a central power's control over distant provinces, but which are easily destroyed, and which, crucially, may be appropriated by an opposition for subversive communications on a similar scale.

Beyond media and communication research, both history and anthropology have substantiated the interdisciplinary relevance of medium theory. In a study of ancient Greece, for example, Havelock (1963) suggested how writing and literacy created the conditions for new institutions of producing, storing, and disseminating knowledge. When Plato attacked the poets for being less than trustworthy in social matters – politics, the writing of history, and science – he effectively announced the passing of an oral culture. Society increasingly came to be structured and maintained through practices of writing. This facilitated larger and more complex social systems, as agency and authority could be exercised across space and time through the alphabet. In an anthropological perspective, Goody and Watt (1963), around the same time as Havelock, reasserted literacy as a major social resource and as a necessary condition of, for example, political democracy. Whereas anthropology has traditionally served as a reminder that all human beings, all peoples of the world, have a culture, the technological and institutional conditions under which they create it are not equal.

As if to prove their point, that the dominant ideas of a given period will be informed by its media matrix, several of the studies cited here were published within the span of a few years. They appeared at a time when television was contributing to fundamental changes in public opinion about ‘culture’ and ‘the media,’ in addition to setting a new agenda for social and cultural research. In the academy as well as in the rest of society, television challenged taste cultures and social lines of division, as later studied by Meyrowitz (1985). On the one hand, medium theory may invite exaggerated notions of new epochs being induced by new media. On the other hand, new media do enable both researchers and the general public to reflect upon what, until then, may have appeared to be culturally given categories. As shown by John Durham Peters (1999), it was only from the late nineteenth century that ‘communication’ came to be thought of a general category of human interaction that covers mediated as well as non-mediated exchanges, following the development of the telegraph and subsequent ICTs.

Medium theory helps to address the shifting relationship between structure and agency in different historical settings. The internet has provided one more occasion for assessing how the media serve as means and conditions of meaning production in society, as evidenced by much commercial hyperbole as well as by an expanding field of scholarly internet studies (Consalvo et al., 2004). For empirical studies of the web, medium theory can serve as a middle ground. In addition to joining agency and structure, the medium perspective accommodates the two main strands of previous media and communication research. The textual or discursive focus of the humanities, for one, is witnessed in the attention of medium theory to the specific forms of expression and interaction also on the web – images, graphics, streaming audio and video, chat, communities, etc. The focus of the social sciences on the institutions and practices of mediated communication, for another, is recognized by the emphasis that medium theory places on communication as social action. In combination, structuration theory and medium theory are in a position to build on an interdisciplinary lineage of previous media studies in order to address research questions which are associated with the currently ‘new’ medium of the web. Compared to the ‘grand’ claims of much medium theory, the present set of articles provide micro-level analyses of how websites mediate between agency and structure in different social contexts.

Communicating politics

The early history of the web, to an extent, coincided in time with a redefinition of ‘politics’ that has affected many institutions of modern society, parties and non-governmental organizations (NGOs), businesses as well as cultural movements. If politics was traditionally understood as the practices serving to negotiate, legitimate, and authoritatively allocate values for a whole society (Easton, 1953: 131) – centered on, but not confined to the institutions of parliamentary democracy – such practices have come to be associated with a growing range of ends, means, actors, and contexts. This dispersal of poli-

tics has been facilitated by mediated forms of interaction that support the activities of established as well as emergent social interests. Communicating about politics increasingly is a way of *doing* politics (for an overview of different approaches to democracy via the internet, see Dahlberg, 2001).

The redefinition of politics is sometimes indicated by a terminological shift from 'government' to 'governance' (for an overview, see Bang, 2004), including corporate governance, business-state alliances, and partnerships for 'good governance' across social sectors. To exemplify, corporations increasingly seek to affirm their legitimacy by approaching the public not merely as customers or clients, but as citizens, through ethical accounting and other external communications. Conversely, state agencies justify themselves to the public in the vocabulary of customer service. And, parties and NGOs alike must build and maintain constituencies whose members conceive of themselves in a hybrid of economic, cultural, ethnic, and gender identities. While such a redefinition could be understood as a 'culturalization' of politics, reemphasizing its informal, discursive, and everyday aspects, a corresponding 'politicization' can be witnessed in the extension of political categories to debates about, and studies of, culture, aesthetics, and the everyday. Politics also concerns the very constitution of those subjects that may qualify as legitimate actors – the 'who' of political agency.

Studies of the web as a political resource and as an aesthetic form, thus, are conducted against the background of a particular historical and institutional setting. An interpenetration of politics and aesthetics has, in fact, been a characteristic feature of modern culture more generally, as argued by, among others, David Harvey (1989). "The aestheticization of politics" could be conceived of as an attempt by the state to legitimize itself in terms of a "sense of community" as well as of "public interests over and above [...] class and sectarian interests" (p. 108). Accordingly, politics comes to imply a struggle over meaning and identity in whatever media of expression and communication are available to different segments of the population. Drawing on Marx's 1852 publication, already cited, Harvey notes that such meaning has

often taken the form of myth and of “the tradition of all the dead generations,” stifling genuine social change. In any event, aestheticization is best understood as a general condition and constituent of modern politics, rather than a recent, ‘postmodern’ dissolution of political interests into lifestyles and labile identities.

In the medium-long term, Harvey (1989: 38) identifies the events of ‘1968’ as a messenger about a new phase of modernity, which is still working itself out in politics and culture (for an early assessment, see Roszak, 1969). Redrawing the lines of division between the ‘political’ and the ‘cultural,’ and between ‘public’ and ‘private’ domains, this complex of events also contributed to alternative conceptions of agency and structure. The very notions of a ‘counter-culture’ and of ‘anti-authoritarian’ organizations implied opposition to the present ‘structure’ of society in a much expanded sense, just as oppositional ‘agency’ came to be exercised in a greater variety of contexts and formats, from issue-centered ‘movements’ to ‘happenings’ with open-ended meanings. Feminist movements, in particular, illustrated how previously private concerns could be rearticulated as public projects. Again, the media served as arenas of struggle over the meaning of events, from gender relations (Press, 2000; Tuchman, Daniels, & Benet, 1978; van Zoonen, 1992) to international conflict and war (Gitlin, 1980; Hallin, 1986). A number of prototypical 1960s themes – for instance, social responsibility and environmental sustainability, acting locally and thinking globally – can be retraced in the self-presentation and self-legitimation by different social interests on the web, as examined in several articles of this volume.

A further specification of the shifting conceptions of politics and their relation to aesthetics, may be derived from Habermas’ (1989 [1962]) classic work on the public sphere. One distinction that is commonly overlooked in the Anglo-American literature on Habermas, has to do with the difference between a political and a cultural public sphere. Habermas showed, for example, that the cultural public sphere of literary journals and *salons* served as a precursor and ‘training field’ for political deliberation in the modern sense. He further suggested that, in its mature form, the public sphere came to address

two relatively separate agendas through different media and genres: crudely, the 'eternal' issues of culture and arts through fiction, and the 'mundane' issues of politics and economy through factual genres. It may be argued that it is this divide between the political and cultural public spheres that is, once again, shifting, or at least being challenged, simultaneously by ongoing changes in politics and economy, and by media that bring together issues and actors from both sides of the divide in a common communicative infrastructure.

Since the 1990s, the understanding of politics as a distributed and mediated practice has become more explicit in interdisciplinary research on political communication. The longterm aestheticization of politics has been recognized, for example, in work on the narratives and other discourses by which the subjectivity and identity of citizens are negotiated and constructed (for an overview, see Phillips & Winther Jørgensen, 2002). The medium-term culturalization of politics since '1968,' as well as the tendential shift from government to governance, similarly, have been addressed by a research agenda emphasizing how individual social agents themselves participate in enacting "power and rule in modern society" (Dean, 1999), sometimes against their own best interests. In a media perspective, the web has provided one more resource for such distributed political practices, and one that has been claimed, at different times and with varying success, by both corporations and popular movements, spin doctors and activists, business and civil society, '.com' and '.org' (see Abbate, 1999: chap. 6). The copresence on the web of a broad spectrum of traditional adversaries within contemporary political and cultural life, suggests its widely perceived participatory and expressive potential, and makes it a natural candidate for empirical study.

Interdisciplinary studies and methodologies

The remarkable growth of the web since the mid-1990s has generated both basic and applied research across many disciplines and fields. Like other media, the internet and its constituents invite interdisciplinary

narity, being commodities, political venues, as well as forms of creative and cultural expression. The emerging field of 'new,' digital, or computer media studies already has a number of standard reference works (e.g., Lievrouw & Livingstone, 2002), and the web has been covered by dedicated volumes (e.g., Gauntlett & Horsley, 2004). For present purposes, research on websites and their social uses can be summarized with reference to three aspects of the web – as technology, text, and institution. Each area of research, moreover, has contributed elements toward interdisciplinary methodologies of web studies.

First, a large body of evidence has been produced on the design, navigability, and comprehensibility of computer interfaces as a *technology*. Rooted in cognitive and ergonomic research questions, the broad field of human-computer interaction (HCI) (Jacko & Shears, 2003) has, in a sense, stayed close to the interface, emphasizing immediate or technical usability (Nielsen, 2000) over the diverse contexts in which information and communication technologies are used daily in the wild (Hutchins, 1995). Nevertheless, a detailed understanding of particular technological options and potentials is crucial for assessing the further social relevance of the web. Moreover, such potentials mature over time, in part as an outcome of experiments in both engineering and creative writing (Bernstein, 1998). For one thing, the formal structure and complexity of websites help to explain how many visitors they attract in the first place (Bucy, Lang, F., & Grabe, 1999). For another thing, their multimodal and other aesthetic qualities can serve to persuade users that 'this is for me.' As noted by Barbatsis et al. (2004) in a qualitative study of how specific design choices affect whether disadvantaged user groups perceive information online as relevant, the digital divide (Compaine, 2001) is also, in part, a design issue.

One subgroup of publications, which may be located at the intersection of 'technology' and 'medium theory,' has examined the computer as a medium. While recognizing its technological substratum and macrosocial implications, such studies have devoted particular attention to the culturally variable and socially embedded aspects of

the computer as a means of communication (for representative collections, see Andersen, Holmqvist, & Jensen, 1993; Mayer, 1999). The contributions have variously emphasized the complex relationship between the invariant and variable features of computer media (Finnemann, 1999b), and their adaptation of means of expression from earlier media such as film (Manovich, 2001).

The second group of publications have explored websites as *texts*, i.e., as discursively and aesthetically structured vehicles of communication. Early studies of hypertexts and hypermedia drew on literary research about intertextuality to indicate how no text is an island, but always carries the traces of cultural history as well as of the contemporary media environment (Bolter, 1991). Some of this work argued from a poststructuralist position, suggesting that ‘readers’ are thus empowered on a par with ‘authors’ to coproduce, enrich, and multiply meshes of meaning (e.g., Landow, 1997). Later interventions have noted that, on the web, hypertextuality more typically serves as an efficient instrument that enables users to navigate the hierarchies of websites (e.g., Finnemann, 1999a; Tosca, 2000). Hyperlinks within and between websites can be understood as a form of operationalized intertextuality, as enhanced by images, archives, discussion groups, etc., which supports additional information-gathering, communication, and action by users (Harrison, 2002; Lemke, 2002). Beyond the literary potential (Aarseth, 1997), research has addressed the challenge that hypertextuality may pose to education and literacy (e.g., Snyder, 1998, 2002), perhaps requiring new forms of “hyperreading and critical literacy” of users (Burbules, 1998), if they are to realize any participatory potential.

Third, along with other media, the web constitutes an *institution* in society. Whereas the press and television have been described variously as a Fourth Estate of politics (Cater, 1959) and as a cultural forum (Newcomb & Hirsch, 1984), the media can also be considered ‘institutions-to-think-with’ (Jensen, 2002: 6), enabling reflexivity and dialogue about the ends and means of other institutions, notably those of political democracy. A common conclusion of political science and media studies alike is that the political process is increas-

ingly conducted in and through the media (for an overview, see Bennett & Entman, 2001). This is in spite of the fact that the specific implications of the internet, for example, for political parties, their internal organization, and their external communications, still seem undecided (Gibson, Nixon, & Ward, 2003). During this relatively early phase, one aspect of the aestheticization and symbolism of politics is the importance of “being online” (p. 234): a second-order message of websites is that the party, candidate, or movement in question thus addresses the public as well as its adversaries through a state-of-the-art medium.

Methodology presents a special challenge for interdisciplinary studies of the web simultaneously as technology, text, and institution. The articles of this volume share a broadly hermeneutic approach, departing from the premise that the web carries contested technological capacities and textual meanings, whose implementation, interpretation, and implications will depend on their social contexts of use. In order to explore the process by which the web contributes to the social production of meaning, the articles rely on a variety of methods – from discourse analysis and case study, to historical research and theoretical modeling – which are applied with reference to several disciplinary and interdisciplinary theoretical frameworks. The shared focus of analysis is the web as infrastructure, aesthetic form, as well as political resource. The chapters, moreover, outline additional research questions concerning the primarily institutional ‘senders’ on the web, the individual ‘receivers,’ and the extent to which these enter into new configurations as ‘users.’

The interrelation between a hermeneutics of social life and a hermeneutics of research has been noted by, among others, Giddens (1979), who referred to a ‘double hermeneutic.’ Lay actors, first, interpret the events and circumstances of their lives. Second, research, specifically the social sciences, interpret those interpretations. Like the media, researchers offer second-order interpretations of what people are up to, or think they are up to (Geertz, 1983: 58). In a third stage, research feeds these reinterpretations back into society, and may, in the process, make a difference for how people act in the future.

Among the more momentous examples of the double hermeneutic are the works of Marx and Freud, but the more mundane reports of government commissions and consultancies, similarly, contribute to the continuous monitoring and interpretation of social actions past, present, and future.

The web presents interpretations of contemporary politics and culture, as well as providing resources for users to reinterpret these. The web also lends itself to being reshaped, to a degree, according to interpretations as advanced on the web and in other media. This book and the further communications that readers may wish to have about it, in a modest way, participate in a double hermeneutics of the web.

Overview of the volume

Through the interface

Part I examines the web as a technological and institutional framework for political participation and aesthetic expression, asking how users may move ‘through the interface’ to engage with current issues and agendas. The two articles address, on the one hand, the web interface as a *technology* with a particular cultural history and, on the other hand, the internet as an *institution* being shaped by cultural practices that realize (some of) the potentials of the technology.

In the first article – “From calculation to culture” – Anker Helms Jørgensen and Lars Erik Udsen trace the origins of the currently familiar interface of the web browser in the *history of computers*. It is only since the 1960s that computer scientists have been centrally concerned with the interface as a complex site of interaction between human and machine; and it is only since the 1980s that graphical user interfaces have made computers accessible for ordinary users as a cultural as well as political resource. Following a short overview of pre-digital computing, the article gives special attention to the switches, signs, and symbols by which users have operated different generations of digital computers and their interfaces. The analysis brings out the great variety of solutions that have been developed in order to lend

meaningful forms to a technology which has itself been changing at a rapid pace. Over the six decades covered in the article, the computer came into its own as a medium and as a key constituent of the communicative infrastructure of contemporary society.

The second article in Part I examines the internet as an institution that is being shaped by a number of *cultural practices*. In “The cultural grammar of the internet,” Niels Ole Finnemann outlines six dimensions of the internet which – through a ‘grammar’ of selections and combinations – help to explain why certain of its technological potentials, and not others, are being realized, and why these realizations may differ across national and cultural settings. The ongoing social structuration of the internet derives, in part, from a particular property of digital media, namely, that individual messages may change the basic structure of the medium and, hence, its ways of operating in the future. A wide range of actors from business, government, and civil society participate in this process of embedding the internet in society, across public and private realms, and from the local to the transnational level. Despite the high economic and technological stakes, then, the internet is also a product of culture, as witnessed by different prototypes of a ‘network society’ evolving in, for example, the Nordic countries and the US.

The two articles of Part I look through the interface – into the technology and further into the prehistory and contexts of the web. The technology has been given cultural and institutional form through several iterations or stages. The articles in Part II focus on subsequent stages of how various political, economic, and cultural actors have developed and adapted their websites to communicate their concerns to different audiences. The discourses of a given website can be said to weave politics and aesthetics into a cultural pattern with a dual message, articulating an identity and addressing anticipated users. Whereas Part I examines *technologies* and *institutions*, then, Part II turns to the concrete *texts* of the World Wide Web.

Weaving politics and culture

The first article in Part II, “Who do you think we are?”, presents a con-

tent analysis of a broad sample of websites originating in different regions of the world and in five different sectors of society: *parliaments, parties, corporations, NGOs, and personal homepages*. Asking how, and to what extent, the interactive features of these websites may enable users to involve themselves in political and public life, Klaus Bruhn Jensen and Rasmus Helles identify a variety of functionalities and document their distribution across social domains. Contrary to a common assumption, the findings bear witness to a comparatively limited participatory potential, even in the websites of such key political institutions as parliaments and parties. Whereas websites may thus represent missing links of political participation and agency, the article goes on to outline a ‘politics of interactivity’ that would assess what websites promise, and what they deliver.

Business websites are the focus of the contribution by Anne Ellerup Nielsen in “The ‘caring’ corporation.” While the preceding article worked from an international sample, this article presents a case study of the websites of two Danish companies in order to explore their ‘presentation of self’ as social actors in further detail. Special attention is given to what the article identifies as the companies’ ‘ethical discourse’ – their account of a commitment to social responsibility, employee safety, environmental sustainability, etc. Compared to the specialized vocabularies of finance or politics, the more generally familiar or lay categories of morality can serve as a common denominator when businesses (and other organizations) present themselves to a growing diversity of stakeholders in society at large, on the web as well as in other media. Through a discourse analysis, the article shows how the two companies, while both highlighting their ethical concerns, each articulate their commitment in distinctive ways with a view to their particular configuration of stakeholders.

The article by Lene Hansen – “The politics of digital autobiography” – while turning to politics in the more traditional sense of electoral processes, finds that the websites of US *presidential candidates* may suggest ongoing changes in the understanding of ‘politics’ as an institution. The web serves as a resource of political agency, not just for citizens and voters, but as importantly for politicians and candi-

dates for office. The article presents a detailed qualitative analysis of the website of John Kerry, the 2004 Democratic candidate, and refers to the Kerry site as a trendsetter. Analyzing the site as a digital form of autobiography, the article argues that www.johnkerry.com powerfully employs a construction of Vietnam as a formative experience that built the character of the young and contemporary Kerry. In a further 'personalization' of politics, Kerry mobilizes his identity as a father to constitute himself as a caring and emotional individual. Like ethics in the public self-presentation of businesses, private accomplishments and integrity are communicable touchstones of a political candidate's public service, past and future.

In "From Image Archive to Interarchive," Dag Petersson addresses *libraries and archives* as established, publicly accessible sources of knowledge about the past and of instrumental information for the future. Noting the growing importance of the web as a user interface with archives, the essay describes a recent initiative by the Royal Library in Denmark to collect information about historical photographs from the general public through a web interface, inviting, in principle, the entire population to exercise political and cultural agency in documenting their own past. Moving beyond the practical and organizational difficulties of such an untraditional enterprise, the article discusses the conceptual challenges of developing an alternative model of the archive as an 'interarchive,' a collaborative resource for writing history. In addition to issues of how to verify contributions from the public, if they are to be trusted and, perhaps, acted upon, an interarchive raises significant questions of who may benefit from the resulting 'surplus profit' of knowledge – financially and culturally.

The concluding article – "A hard day's work" – shifts the focus to the web as a *representation of contemporary politics and society*. Bo Kampmann Walther presents an analysis of the official website of *24*, the television series, both of which are interwoven – or 'transmedialized' – with a whole range of media formats. The website as well as the series address major geopolitical issues, including international security and terrorism. Examining the presence of both fictional and factual elements in the treatment of such issues on the website, the

analysis finds that viewers and web users may be suspended, accordingly, between 'imagined' and 'real' politics. They are addressed, furthermore, within a logic of games, not just by the gaming elements of the website, but by the television series itself. And the name of the game is speed: the structuring principle of *24* is the frenzied pace with which the main character plays the game on behalf of the public. As such, *24* can be read as a representation of the conditions under which media users and publics are currently at pains to keep up, to distinguish fact from fiction, and to perform, not as secret but as social agents.

The contributions to the volume, in sum, take the concrete texts, images, sounds, and functionalities of the web as their analytical point of departure. While the different websites are contextualized with reference to technology, history, and society, then, the analyses do not go beyond the interface to interview, observe, or otherwise examine web users. Further empirical studies focusing on the institutions and practices, cultures and societies, in which interfaces and their users are embedded, will be important for a better understanding of the World Wide Web.

In 1997, Steven Johnson published *Interface Culture*, which was one of the first book-length attempts to address the cultural implications of computing after the advent of the web (Johnson, 1997). While duly noting the dialectic of new technologies and old cultural practices, Johnson's essay certainly overstated the point that "new technologies are always *misunderstood* at their birth, often by the people closest to them" (p. 145, emphasis added), citing Edison's notion of his phonograph as a device for recording telephone conversations. The present collection of articles rather suggests that new technologies come to be *understood*, in the first place, as they acquire discursive meaning within particular historical and cultural contexts. 'Old' media, as well, were subject to actualization and acculturation when they were 'new' (Marvin, 1988). And, in retrospect, new media can facilitate a reinterpretation of old media: the telegraph might qualify as 'the Victorian internet' (Standage, 1998). This volume offers one contribution to the

understanding of the World Wide Web as an interface with contemporary politics and culture.

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