

THE LACK OF INTERACTIVITY AND HYPERTEXTUALITY IN ONLINE MEDIA

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Abstract / The main focus of this article is related to the forms of mediated content that are offered in online space. Two specific aspects of new cyber-textuality are discussed – the notion of hypertextuality and the potential of interactivity. Both characteristics are understood as new challenges that reflect specific communication potentials of the internet. In an empirical sense, the article tries to show the extent these significant forms of mediation are used in online media news. For this reason a comparison between media content in print and online media has been made. The findings reveal the lack of interactivity in practice and explore its diversity as a communication form between media producers and reader. Regarding the hypertextuality, the analysis shows the complexity of this concept, which in the realm of news media online is still maturing.

Keywords / hypertextuality / interactivity / internet / newspapers / Slovenia

Introduction

With the popularization of the internet and expansion of the web, the traditional mass media encountered a new and complex mediated world with specific features, different contents and diverse audiences. In popular discourse and everyday life, it soon became quite obvious that ‘if you are not online, you don’t exist at all’, and television producers, newspaper editors, journalists and internet providers had to react to these new challenges. Terms like ‘digital convergence’, ‘online media’ and ‘new media’ began to spread both in practice and also in scientific research. As a consequence, the question of the impact of the internet on classical mass media has developed in a number of fruitful empirical studies and theoretical discussions (Dahlgren, 1996; Hardt, 1996; Sparks, 1996).

This article discusses a very specific dilemma that is emerging from recent research on new media. The main focus is related to the forms of mediated content that are offered in this online space. Two specific aspects of new cyber-textuality are discussed in more detail – the notion of hypertextuality and the potential of interactivity. Both characteristics are understood as new challenges that reflect specific communication potentials of the internet. The question the article addresses is to what extent and in what ways are these significant forms of mediation used in online media.

In an empirical sense the answers provided to this question are based on findings in a recent case study that was developed within an international group of researchers.¹ We made a content analysis of four national printed dailies, their online versions and a few selected online-only news services. This article provides data on the Slovenian media market and, in particular, pays attention to the comparison of hypertextuality in printed and online news media and to the interactivity in online media only. The article is thus divided in four main parts. First, the advantages of the internet as a new communication medium and its impacts are exposed and, second, the idea of a new online media logic is presented. Third, we present a more extended discussion on hypertextuality and interactivity. This part of the article includes the empirical results of the study. The article concludes with a short reflection on the main findings, their significance for Slovenia and suggestions for further research.

Communication Potentials in the Online World

The internet, currently the most popular network of computer networks, offers a rich and complex communication environment that it is still rapidly developing. Compared to the broadcast media, which transferred immediate dialogic exchanges to the narrow format of staged confrontations or broadcast conventions, the internet leaves a much wider range of possibilities for carrying out debates on public issues. Although participants do not share a common space, the internet clearly creates 'dialogical spaces', where participants can come together to discuss issues of common concern. Accordingly, the idea of a new democratization of communication lies primarily in the new potentials for dialogical computer-mediated communication.

It seems, however, that the question of new communication practices being formed by internet users and their probable effects on enlarging the conditions of public expression, publicity and public opinion, entered the field of mass communication research relatively late (Boczkowski, 1999; Rice, 1999). The characteristics of computer-mediated communication have been mostly studied within social sciences (psychology, sociology and also anthropology), which might have substantial consequences also for the development of mass communication studies:

If mass communication researchers continue to largely disregard the research potential of the Internet, their theories of communication will become less useful. Not only will the discipline be left behind, it will also miss an opportunity to explore and rethink answers to some of the central questions of mass communication research, questions that go to the heart of the model of source-message-receiver with which the field has struggled. (Morris and Ogan, 1996: 39)

Different Modes of Computer-Mediated Communication

One of the central characteristics of the internet is that it converges different media forms into networks and enables *different* modes of communication. Taking into account the criteria of audience size and the type of enabled reciprocity between communicators, it is often argued that computer-mediated communication provides one-to-one, one-to-many and many-to-many models

of communication. In this way, the internet plays with the boundaries that have traditionally delineated personal, interpersonal and mass communication (Burnett and Marshall, 2003: 48; Rice, 1999: 26).

Several studies on the nature and characteristic of computer-mediated communication have provided many different communication models and typologies of computer interactions (see Rafaeli and Sudweeks, 1997; Rice, 1987; Rogers, 1986).² A brief presentation of leading approaches to computer-mediated communication offered by Burnett and Marshall (2003) provides a useful insight into the main findings within this research field. The approach developed by Rogers (1986), who distinguished between face-to-face interpersonal communication, interactive machine-assisted interpersonal communication and mass media, has been enriched by Littlejohn's (1996) categorization of four different levels of communication – interpersonal, group, organizational and mass communication. According to his typology, email offers interpersonal communication through mediated channels; listserves, discussion groups and IRC (internet relay chat) enable group communication between one sender and few receivers; whereas web portals belong to a group together with other mass media, where one sender maintains control over a mass audience through a mediated channel of communication.

The second approach for comparing internet interactions is offered by Shank's analysis of conversational types (Shank, 1993). In his opinion, the traditional types of conversation – monologue, dialogue and discussion – have extended with a new category of 'multilogue internet conversation': with an initial sender, multiple receivers who take turns as senders, but with loss of control of the conversation. A third model uses a taxonomy of time and place (see Ellis et al., 1993) and emphasizes the importance of messages and people involved in interaction; this model therefore distinguishes between four types of communication: synchronous (face-to-face), asynchronous (note), synchronous distributed (telephone) and asynchronous distributed communication (letter). A fourth approach is a sociovisibility taxonomy that looks at the number of senders and receivers on one side and the public/private nature of interaction on the other (Paterson, 1996). Here, a type of public or private interaction is divided according to a socio-scale into dialogue, broadcast and multicast forms of communication. However, as Burnett and Marshall suggest, 'none of the above models fully describe the differences among the interactions in Internet-based communication' (Burnett and Marshall, 2003: 52).

From Communication to Representation on the Web

This complex communication platform, which is being constantly formed and transformed within different contexts, shows that the problem of media convergence far exceeds the simple question of technological integration of different media formats. In contrast, one dimension that should be taken into account is the question of 'communicative convergence', which can be illustrated at two levels – at the level of production of media contents and at the level of reception. Convergence is therefore not just the question of 'coming together of all forms of mediated communication in an electronic, digital form,

driven by computers' (Pavlik, 1996: 132), but can be understood as *a reflection of merging media practices*. Members of the audience can at the same time act as the producers of new content. It is not just the emergence of a new digital form that explains a new stage in media convergence. The internet is primarily a very complex communication platform, where new forms of media are emerging and one dilemma that remains to be studied is the question of the specific characteristics that make them both different and very similar to the classical mass media:

The web blurs the boundaries that traditionally distinguish one medium from another. Text, graphics, video and audio can be presented via the web. Some Internet resources are asynchronous, while others are synchronous. We argue that the web has evolved into a new interactive medium. It is the convergence of many of the features of traditional media merged together into something new, a unique medium for communication. (Burnett and Marshall, 2003: 57; emphasis added)

Compared to the electronic mass media, especially television, which in Habermas's account brought about the refeudalization of the public sphere, new communication technologies offer resources for its revitalization. Two characteristics of communication processes are especially relevant in this context: *reciprocity* and *connectedness*. These are clearly present in computer-mediated communication, whereas they were mostly absent in the context of mass communication. As argued by Slevin, mediated publicness created by the internet is clearly 'a dialogical space' (Slevin, 2000: 184), where symbolic forms circulate from various participants as authors of individual messages. According to Slevin, 'unlike the mass media, the Internet cannot so easily be dismissed as being non-dialogical', because the interactive qualities of internet create new possibilities for participatory opinion formation (Slevin, 2000: 78). Moreover, the internet brings together and combines many phases of the communication process, for instance storage, exchange and interaction, reproduction and changing communication channels, to an extent which thus far has no comparison. The internet is a register of information and a means for communication, and is specific also for its capacity to connect various agents effectively, quickly and reciprocally.

However, some authors argue in this respect that the earlier predominance of conversational and more interactive forms of communication, characteristic of newsgroups, mailing lists, bulletin boards and other electronic conferences, have been recently supplemented by the paradigm of representations that are embodied in the hypertext system of web pages (Resnick, 1998). The website is now the typical element of contemporary cyberspace, although its function is not to replace the status of computer-mediated discussion forums. Web representations function primarily as new sites for information dissemination. The basic structure of representations is in general very different from the logic behind the more dialogical spaces. Creating and maintaining a successful, sophisticated website, which attracts a significant number of visits by other internet users, requires both substantial dedication and distinctive technical skills. Networks of interconnected computer technologies clearly invite more graphic, expressive and monological means of expression, and open different ways of interaction and service.

Applying these specifics of the internet communication structure to the media landscape online means that with the interactive features³ of online newspapers, readers receive opportunity to express their opinion, to exchange viewpoints and to participate in public life. Daily newspapers therefore not only *structure collective reflection* on the issues of the day, but also *extend the forum for discussion* about these issues. The significance of the internet representations is that they simultaneously enable passive reception as well as active and interactive exchange over them. The question therefore remains, to what extent do web representations, which are constitutive for online versions of printed media, provide the dialogic, interactive forms of communication for their readers? One of the interesting novelties within the field of communication research is therefore to study the way new online media present themselves and their contents in this multiple communication platform.

The Look of the News Online: Emergence of a New Media Logic?

These changes in the nature and potential effects of new communication flows that are becoming specific for the online world are not flowering in a somehow static social environment. The way we communicate and the practices in which we consume media contents should be explored within a larger social and cultural context. For the purpose of our discussion, where the focus is given especially to the comparison of classical media formats with the presentation of news content on a computer-mediated platform, one of the most challenging and effective contexts that drives the current development of 'cyber-media logic' can be traced in a set of different trends manifested in mass media journalism.

In his study of the main features that are salient in cyber-journalism today, Dahlgren (1996) explored five crucial changes that should be taken into account in analyses of a new media logic: (1) the increase of the sheer amount of available information and of its density; (2) the blurring distinction between journalism and non-journalism; (3) the increased heterogeneity of journalism as a professional culture and professional identity of journalists; (4) the rise of a self-referential symbolic world within the mass media; and (5) a general, even internationally spread, decline in 'reading publics' among mass media audiences (Dahlgren, 1996: 62–3). All these five trends lead to the decline of the classic notion of journalism, which was based on traditional liberal ideas of democracy and citizenship, where citizens used journalism as a resource for participation in the politics and culture of society. Classic journalism in this mode served not just as an integrative force but also as a common forum for debate. However, Dahlgren's thesis on the waning of the classic paradigm of journalism should not be understood as a sign of real experiences that are recently emerging or will emerge in practice. Instead, he continues, what is changing is 'the ensemble of historical factors on which it [the classic paradigm of journalism] has been predicated' (Dahlgren, 1996: 62), moving the notion of journalism to a kind of incomplete portrait of 'classical journalism in transition'.

Along with these new historical factors that help to produce the new media logic, another set of changes deserves special attention. According to Livingstone (1999), the rise of new media reflects many significant conditions: a significant multiplication of personally owned media, a diversification of both 'old' and 'current' media in form and content, a shift towards convergent forms of information services, and finally a shift from one-way mass communication towards more interactive communication between medium and user (Livingstone, 1999: 62). Although she identified these changes primarily for explaining what the emergence of new media means for a concept of 'new audience', their relevance can be equally accepted for the observation of the changing forms of media contents. In this sense, especially the idea of *content convergence* and the notion of *interactivity* open up new possibilities for the construction of media texts. From a more technological view, it was the rise of the World Wide Web (WWW) that enabled the composition of flexible, impermanent, non-linear, hypertextual data structures, to use Livingstone's description, that have easily developed new 'web site genres' (Burnett and Marshall, 2003).

Although in history the development of the 'logic of the web' goes back to the early 1960s, it can be said that this new transformation of news content has really only just begun.⁴ As Pavlik notes, 'online news today is largely repackaged content developed initially for other media, including newspapers and television' (Pavlik, 1999: 56), yet some forms of online news unique to the online world are beginning to emerge. And if we add data taken from the database Media Links, showing that compared with 1993, when there were only 20 registered online news entities, in 2001 this number had risen to 14,000 online media news entities, then the spread of the new media online format becomes a much more vivid phenomenon. To some extent these new genres still continue to develop. Nevertheless, it is already possible to group different websites together by analysing their similar patterns.

For Burnett and Marshall, the key distinction between the web and other mass media forms (like television, film or radio) is that 'the web is much more continuous than discontinuous from different domains of activity. One moves relatively easy from commercial to non-commercial sites; likewise information and entertainment are also connected and not made discontinuous' (Burnett and Marshall, 2003: 91). Despite this new challenge that is primarily offered to new media audiences and their changed patterns of media reception, the web has produced some 'comfort zones', where users know how to work with them. Burnett and Marshall thus differentiate between four new web genres: web portals, the media sites, the commercial sites and personal websites.

This categorization of web genres can be further extended with Deuze's typology of online news media (Deuze, 2001). By constructing a model of 'online journalism', Deuze distinguishes between mainstream news sites, index and categories sites, meta- and comment sites, and finally share and discussion sites. These four types of news sites present a subgroup of the media sites genre. Which typology is more suitable for analysing the online world still remains to be answered, but this is not the aim of this study. It seems, however, that researchers are trying to grasp the diversity of online content production and to develop a kind of typography of these diverse and changing communication

platforms. Several authors have pointed out that online media have their own logic, which is at several points different from the existing ways of media production, distribution and consumption (Dahlgren, 1996; Heeter, 1989; Jankowski and van Selm, 2000; Massey and Levy, 1999; Sparks, 1996). These differences are mostly related to the specific characteristics of the internet itself. The internet, as a new communication tool, provides and stimulates *reciprocity* in communication process and *connectivity* of different actors involved in this process. Even more, the internet enables different communication relationships – one-way, two-way and mass communication forms – and integrates several types of services: information storing and distribution, reproduction of messages, advertising, shopping.

But how should we understand ‘online media’ in the first place? Dahlgren (1996: 64), for instance, revealed a set of aspects of computer-mediated communication that are crucial in the development of an ‘online media logic’: multimediality, hypertextuality, interactivity and archivality. As a term, multimediality describes the convergence on the level of media formats or media forms, through which media transmit their contents. It is related to integration of texts with images, voices and sounds, which are increasingly translated into a common digital form. The next element, archivality, represents another advantage of internet networks, which allows the access to numerous databases and archives. The users therefore are not so bounded to the present information, but they can rather search in previous stories and background material. This characteristic is enabled by the third element – hypertextuality – which in general refers to the degree of interconnectivity of individual parts of the message in an extended chain of integrated content, and represents a crucial novelty in the sense of media production and media consumption. The last but not least element is interactivity, which in a technical sense represents a special characteristic of computer-mediated communication, where sending and receiving are in principle equal functions. These last two dimensions of cyber-textuality – hypertextuality and interactivity – are explored in more detail in the next sections of the article. The question that we try to address here is: how interactive and hypertextual are old and new media? Or in other words: is it true, that new media are more dialogical than monological?

News Online vs Printed News: Presentation of a Case Study

In order to investigate in more detail what kind of news practices are emerging in the online world and to what extent new communication forms are being fruitfully used in online media formats, a broader research project, titled ‘Media Convergence: Characteristic of Media Space Online and its Impacts’, was developed at the Centre for Communication Research at the University of Ljubljana. The project addresses a number of different research questions, but for the purpose of this article the most relevant question is, to what extent online media differ from the traditional versions of mass media and, in particular, whether online media really work in a more interactive and, from a user’s point of view, more functional way. These questions are put in a broad sense; actually, they do not exactly differentiate between ‘mass’ media on the one hand and ‘online’

media on the other. This difference was identified at the analytical level only, when the research framework was focused towards the comparison of printed daily newspapers with their online versions and some selected 'pure' online news services. In this sense, the primary focus is given to the potentials of new 'cyber-textuality', which seems to be one of the significant changes within the production and also reception processes of new media.

According to the most recent official records maintained by the Office of Slovenian Government for Information (UVI, 2001), there are 900 media units presently available in Slovenia; this number includes both print and broadcast media. The same records report that 390 media units are in some form or another present on the internet; some media are merely presented online or perhaps offer detailed contact information, whereas others, such as the Slovenian national radio and television stations, and five commercial television and radio stations, broadcast their current programmes over the internet. Dailies represent a 6 percent share of the whole corpus of printed media online. The case study presented here is primarily conducted for Slovenian news media and includes a selection of four main Slovenian dailies published both in print and presented online (*Delo*, *Dnevnik*, *Vecer* and *Finance*). The main intention was first to compare the 'printed media logic' with the new 'online logic' of daily news.⁵ However, due to the assumed importance of two specific forms of the new media logic – hypertextuality and interactivity – a comparison of *different news items* published on front pages was also made.⁶ Additionally, in order to evaluate to what extent online news really uses those computer-mediated potentials that in their technical sense are new and different from the classic media formats, the initial sample of four dailies was extended with a number of selected online-only news editions.⁷ The aim of this case study was not to generalize the findings as representative for the Slovenian media market, or to explore the differences within the same media formats in order to compare the Slovenian dailies in their battle on the online landscape. The intent was not to provide any conclusions within these lines, but rather to reveal the nature of interactivity and hypertextuality and their current extension within the online world. For this reason, the article presents only the most telling findings that might in our opinion provide some insights into the nature of hypertextuality and interactivity in online news. The data collected were explored by quantitative methods, using cross-tabulation for comparisons between different media formats (print, their online versions and online-only news) and factor analysis for explaining different dimensions within the concept of interactivity.

Hypertextuality: Theory and Findings

According to Burnett, we can understand hypertext as a term that describes 'the extension of an existing text into other areas and other domains' (Burnett and Marshall, 2003: 83–4). In this way, a number of related texts are embedded in one text. At the conceptual level, this 'intertextual quality of hypertext' implies a link to poststructuralist thought, which stresses that it is more accurate to think of various interconnections that are embedded in a text than thinking of authorial origins of texts. However, some researchers are quite

reserved in relation to this assumed novelty of 'non-linear style of writing'. Ess, for example, stressed that there is still a considerable dispute as to whether non-linearity so clearly distinguishes hypertext from printed text (Ess, 1994: 226).⁸ A more thorough discussion of this dilemma would probably lead us far away from our general research focus. Nevertheless, such questions represent an important further step in conceptualizing the relation between content producers (journalists), their informational sources (origins of stories) and connected narratives that result from this new writing process.

Hypertext, however, is itself a fluid concept. For Bolter, a hypertext is closely related to global communication networks in which no one writer or reader has substantial control and consequently no one has substantial responsibility (Bolter, 1991: 29). On the other hand, some authors define hypertext in the context of non-linearity that is based on an isolated reader (as Spiro and Jehng, 1990). In between these two lines there are those definitions that according to Ess insist on a division between hypertext and collaborative dimensions of electronic networks. In Burnett and Marshall's conceptualization of the 'theory of the web', hypertext is actually understood both as a technology of connection and as a transformative aesthetic form of expression (Burnett and Marshall, 2003: 81).

It seems that within communication theory, and more precisely within the debate on changing features of online journalism, Dahlgren's notion on 'hypertextual qualities' of new media has received much credit.⁹ Dahlgren's definition of hypertext is contextualized within the larger sphere of cyberspace. As a textual domain, he claims, cyberspace operates via associational linkages. In line with the original notions of hypertext – as it appears in practice – this means that hypertext 'disperses the fundamental linearity which has characterized written and printed texts from the very beginning. One need no longer simply follow a text from its beginning to its end, but can now use key words within it as jumping off points to look at other texts or sources' (Dahlgren, 1996: 64). This novel moment of 'cyber-textuality' has further implications that may signal a new period in communications history. Texts and images, argues Dahlgren (1996: 65), and the modes of apprehensions associated with each, may be moved another few notches closer to each other. Hypertext may in this sense combine the textual tradition with the non-linearity associated with visual thinking. There is, however, one slightly negative consequence that hypertext might bring into practice. Dahlgren calls it 'a bias toward terseness', which fosters the trend 'to shorter texts that we see in the press, and the faster cuts and sound bites associated with television news in recent years' (Dahlgren, 1996: 65). The terse texts of hypertext are in this sense congruent with another quality feature of a new media logic – multimediality.

Deuze (2001) has explored the notion of hypertextuality that to some extent utilizes the key characteristics of the networked computer environment. By trying to identify different types of 'online journalism production', Deuze distinguishes three paradigms that have their own types and current status – hypertextuality, multimediality and interactivity – and in this sense he follows the idea of the new media logic explored already by Dahlgren. However, within the concept of hypertext, Deuze stresses an important distinction between

internal and external dimensions of hypertextuality. The first dimension, interconnectedness, through links can refer internally to other texts within a single text's domain, whereas the second – external dimension – points to the texts located elsewhere in cyberspace. 'These are two quite different types of hypertextuality, as one opens up new content, the other in fact leads to a spiralling down of content' (Deuze, 2001: 5).

Hypertextuality of News

In general, hypertextuality is a matter of interconnection between different sets of text in a more or less coherent way. The extent of hypertextuality can thus be studied at the level of the first page of news and also at the level of a single content item. In a more specific sense, the question of hypertextuality on the level of first pages can be presented as a result of 'content fragmentation'. The space reserved for short links or bullets that enable one to select different kinds of news and services is enlarged in online versions of news. The moment of hypertextualization of news can thus be viewed as an effect of shortening stories that are accessed from the front page only.

For this reason, the analysis of online versions of news focused additionally on the identification of different *groups of links* that are offered at the level of front pages. For each page, we identified a possibility for having a link to information on printed editions, to other broadcast media (radio or television sites), to other public institutions (government, parliament, etc.) and to community sites. The results show that 38 percent of all front pages offer a link to some other media, 25 percent of sites have a link to information on printed editions and 13 percent are linked to some other public institutions, whereas none of them have a single link to community sites. Judging just from these very broad numbers we could argue that online media sites are more connected to similar types of institutions, namely to other media, than to other public institutions. The results show that this holds true just for the online-only news: 67 percent of them offer links to other media sites. In the case of the online versions of daily newspapers only 20 percent of front pages offer a link to another mass media site. However, no other 'external link' is provided from online-only news. On the other hand, online versions of printed dailies do offer links to public institution sites, although only 20 percent of them.

Internal and External Hypertextuality

However, much more detailed analysis is offered at the level of content items. Here, the comparison between all three types of media was enabled. Namely, for each content item the difference between internal and external hypertextuality was measured. First, we checked whether the content item has any link to any other page in the same news edition, a link to some other content in the same edition or a link to the content in the same media (but in some other edition). According to our data, 84 percent of all content items are linked to some other site in the same daily, 26 percent of them are connected to the content in the same media in some other edition, and just 7 percent of them

are linked to some other content in the same daily edition. A more detailed comparison of the linkage of content news to other sites in a single daily showed some interesting differences between different types of media: 9 percent of printed media have news items on the first page connected to some other page; 'pure' online news media have 27 percent of news items connected to some other site, whereas 64 percent of news content in online versions of printed dailies is linked to other sites in a single edition.

Judging from these findings, we could argue that internal hypertextuality has been mostly used in online versions of news. Due to these differences, the notion of internal hypertextuality was further explored. The next step was to generate an index of internal hypertextuality and to test the interdependence between the type of media and the size of a single content item. As the data show, the extent of internal hypertextuality depends both on the size of the item and on the type of media. The smaller a news content is, the more probable that it is connected to some other content, either within the same edition of news or with another edition in the same daily. Internal hypertextuality is thus a function of smaller news. On the other hand, the effect of the type of media is quite surprising – internal hypertextuality seems to be more usual in print than in online media. Interconnectedness through links that refer internally to other texts within a single text's domain, or in this case within a single daily, is thus more representative for the classic mode of news production; the news items that appear on the first page (or screen) are more connected within a printed version of a daily newspaper and their online versions than in online-only news. Here, the online news obviously does have a special logic in relation to internal hypertextuality.

Along with the interconnectedness of news items, we also analysed the external dimension of hypertextuality: that is, links that point to texts or sites outside the printed or online newspaper or site. Two measures were used at this point: whether a text is connected to content in similar media (another daily or magazine), and whether a text is linked to content in another medium (e.g. a television report). As expected, in both cases the percentage of all hyperlinks referring to external content is very low: just 3 percent of news items are linked to content in a similar medium, whereas just 1 percent of them (24 out of 3060 content items) are connected with content in other types of media. The content convergence between different media formats is thus more the exception than the rule. Although the index of external hypertextuality generated has more than 96 percent items with zero value (the higher the index value, the bigger the external hypertextuality), the analysis offers two conclusions: the size of the content item has no significant effect on it, whereas the type of media has. It can be said that the external hypertextuality is a significant characteristic for online-only news media. Another finding then that supports the different logic of online textuality.

Interactivity: Theory and Findings

The second concept included in our study was the idea related to the emergence of new communication practices in the online world. As the previous

discussion revealed, several studies of computer-mediated communication give much credit to its implied potential for interaction building. And recently also, these highly valued expectations of the internet are still taken into account: 'what's new about the Internet may be the combination of interactivity with those features which were innovative for mass communication – the unlimited range of content, the scope of the audience reach, the global nature of communication' (Livingstone, 1999: 65).

The concept of interactivity has been taken as an implied feature of computer-mediated communication from the very beginning. However, following the history of this research field, we could agree with the point formed by Jensen, namely, that the term refers to several distinct phenomena and should thus be studied in plural (see Jensen, 2002: 184). Interactivity as defining characteristic of computer media reflects itself at three different levels of analysis: (1) at the medium–user relation of communication; (2) at a broader relation between media and the rest of the social structure; and finally (3) at the individual–society nexus, as mediated by computer media (Jensen, 2002: 184–6). In Dahlgren's opinion, where interactivity is understood in reference to new technical relations between production and reception of mediated contents, the interactivity potential is especially relevant in the context of its probable effects: the greater chance for interactivity offers the audience free choice in selecting the media content they want and thus limiting the productive power and its impact on selecting the news. On the other side, the notion of interactivity enables also new possibilities for a more direct connection between media producers or journalists and their publics.

In our case study, we first tried to trace some main differences between different media formats in relation to this last issue. For this reason, the question of a more direct relationship between producers and readers was measured at different levels. One way of interpreting the amount of interactivity offered through different types of news media is to compare the 'editorial distance' between them. Usually the argument would be that online media enable the distance between readers and professionals to shrink due to the new technical potentials of the online media format. Relevant indicators of editorial distance are seen in the provision of a general email address, general editorial information and the email address of the editor, all to be found on the first pages of the newspaper or sites. The availability of these practices in relation to a specific medium type is presented in Table 1. A general observation is that the editorial distance is quite wide in all three media formats. The amount of the available editorial information, however, rises in pure online news: 33 percent of the online news samples offer editorial email addresses and general email addresses; in printed media this information is offered on just 25 percent of first pages.

Kenney et al. (1999), following a study by McMillan (1998), found that there are at least six conditions that influence the differences in interactivity of media. In their opinion, the interactivity increases (1) when the goal of communication is more to exchange information than to persuade; (2) when participants have greater control of the communication environment; (3) when they take an active role to benefit fully from the communication; (4) when they act

TABLE 1

Comparison of Editorial Distance from the First Page per Medium Type (Printed Dailies, Dailies Online, and Online-Only News)

	Printed Dailies		Dailies Online			Online-Only News		
	Doesn't Exist	Exists	Doesn't Exist	Just a Link	Exists	Doesn't Exist	Just a Link	Exists
General email address	15	–	40	10	–	20	–	10
	100.0		80.0	20.0		66.7		33.3
General editorial information	15	5	40	10	–	30	–	–
	75.0	25.0	80.0	20.0		100.0		
Editorial email address	15	5	40	10	–	20	–	10
	75.0	25.0	80.0	20.0		66.7		33.3

and react to messages via two-way communication; (5) when timing of communication is flexible and responsive to demands of participants; and finally (6) when the communication environment creates a sense of place (Kenney et al., 1999: 4). These six conditions should be thus understood as stimulating factors that consequently differentiate online platforms in their amount of interactivity. The question of interactivity is thus very complex – it is not just a question of technical implementation of specific interactive mechanisms but it also implies important effects of more general communication aims and preferences on the side of producers and also between their users. These contextual dimensions therefore play an important part in the construction of the interactive image of the web.

The question of how to trace the interactive communication within a specific website still remains open. Several authors offer quite different ways for analysing interactivity. Rafaeli and Sudweeks (1997), who investigated the degree of interaction among participants in computer-mediated newsgroups, analysed interactivity as the dependency among sent messages in threads. This kind of research is primarily useful when the intent is concentrated in specific communication practices between those internet users who actively debate in chat rooms or discussion forums. However, when the aim is more generally related to the comparison of some specific media formats and their degree of interactivity, the concept itself is understood much more broadly.

Empirical studies of the interactive features of online news have extended in a vivid and dynamic field of research. Neuberger et al. (1998) together with his research team made an interesting comparison between offline and online daily news in Germany. Their comparative analysis of the contents of the daily news presented by each publisher in the online and offline version included two separate levels of analysis. First, the content analysis was done on the complete online or print edition of a single daily, and then the articles appearing in both editions were analysed in more detail. However, their focus was not on the question of interactivity alone. Schultz (1999), in contrast, in her content analysis of 100 US online newspapers focused primarily on the interactive options of online newspapers. She observed newspapers' sites on a daily basis

for three weeks and included both quantitative and qualitative notes in coding the interactivity as a conversational concept.

Heeter (1989) identified six dimensions of interactivity: complexity of choice available, effort users must exert, responsiveness to the user, monitoring information use, ease of adding information and facilitation of interpersonal communication (see also Kenney et al., 1999). Kenney et al. adapted this structure to their study of 100 online newspapers. Complexity of choice was constructed as an index measure of choice of language, choice of frames, search engines, news stories placed on the home page, links within news stories and hyperlinks. Responsiveness to the user was a result of available reporters' email addresses and webmasters' emails. Facilitation of interpersonal communication was composed out of available chat rooms, discussion groups, feedback mechanisms and at least one email address on the home page. In a limited sense, this multidimensional operationalization of interactivity was adopted also in the case of our empirical research.

At first, the availability of different interactivity mechanisms was analysed on the level of a single front page. In a selected set of possible communicative potentials, we checked whether each exists on the first page or at least a link is offered. The aim was to identify some crucial differences and probable similarities between online versions of daily newspapers and pure online news. At this point, the printed dailies were excluded from the analysis.

As the data in Table 2 show, the only possibility that is not available is a moderated discussion forum. More indicative, however, is a quite diversified set of communication possibilities offered in online versions of daily news and their relatively low presence in online news. In 67 percent of online-only news sites users are enabled to express opinions in a public opinion poll and this is the only service that actually exists on these front pages. There are, however, four more services available through links: list of editorial emails (33 percent), chat rooms (33 percent), discussion forums (33 percent) and poll results (with 67 percent of sites). Nevertheless, the data reveal that in the context of communicative potentials online versions of daily newspapers far exceed the other type of online media formats: 30 percent of their websites have letters to editor, 40 percent have message boards, 42 percent have discussion forums, 40 percent polls and 60 percent offer also poll results. Statistically significant differences between media formats thus exist in the case of letters to the editor, message boards, discussion forums, polls with additional explanation and poll results. Only in relation to polls does pure online news seem to outrun the online versions of daily news.

The next step was to test the connectivity and possible interdependence of these different communication potentials. Is it possible to say that some communication services exclude others? Is it probable that in some cases certain communication forms are more connected than the others? The statistically significant values of Pearson's correlations are presented in Table 3.

The most surprising and telling result is found in the way discussion forums relate to a set of other communication potentials. Namely, high correlations exist between discussion forums and editorial emails (.53), polls with additional information (.62), and poll results (.52). According to these findings, it can be

TABLE 2

Availability of Communication Potentials on the First Page in Dailies Online and Online-Only News

Communication Potential	Dailies Online			Online-Only News		
	Doesn't Exist	Just a Link	Exists	Doesn't Exist	Just a Link	Exists
	List of editors' emails	30 60.0%	20 40.0%	–	20 66.7%	10 33.3%
Letters to editor	35 70.0%	10 20.0%	5 10.0%	30 100.0%	–	–
Message board	30 60.0%	–	20 40.0%	30 100.0%	–	–
Chat room	40 80.0%	10 20.0%	–	20 66.7%	10 33.3%	–
Moderated chat room	40 80.0%	10 20.0%	–	20 66.7%	10 33.3%	–
Discussion forum	29 58.0%	11 22.0%	10 20.0%	20 66.7%	10 33.3%	–
Moderated discussion forum	50 100.0%	–	–	30 100.0%	–	–
Poll	30 60.0%	10 20.0%	10 20.0%	10 33.3%	–	20 66.7%
Poll with additional information	30 60.0%	10 20.0%	10 20.0%	30 100.0%	–	–
Poll results	20 40.0%	20 40.0%	10 20.0%	10 33.3%	20 66.7%	–

said that those media sites that do offer access to discussion forums more likely include emails of editors and sophisticated presentation of polls, too. On the other hand, discussion forums correlate negatively with almost all other communication potentials: with polls (-0.49), moderated chat rooms and chat rooms ($-.42$) and letters to the editor ($-.32$). For sites that have chat rooms and polls it is therefore unlikely that they will equally enable participation in discussion forums.

This finding implies that different interactive options on websites can be subdivided into some specific subgroups and should not be taken as an aggregation of one single measure. A similar idea has already been shown by Deuze (2001: 6), who suggested dividing interactive forms into three types or forms: (1) navigational interactivity; (2) functional interactivity; and (3) adaptive interactivity. The first type is identified through navigation buttons or scrolling menu bars, the second one includes direct mail and discussion lists, and the third type of interactivity involves chat rooms and personal customization of sites. In the case of our data, we tried to identify a probable division of communication practices included by using factor analysis (see Table 4).

The method proposes three different components that together explain 80

TABLE 3

Correlations between Different Communication Potentials

Communication Potential	Editors' Emails	Letters to Editor	Message Board	Chat Room	Moderated Chat Room	Forum	Polls	Poll With Info	Poll Results
Editors' emails							+++	+++	++
Letters to editor			+	+	+		--		
Message board		+		++	++		++		
Chat room		+	++		++		--	++	
Moderated chat room		+	++	++			--	++	
Discussion forum	+++	--	-	--	--		--	++	++
Poll			++	++	++		--		++
Poll with additional information	+++						++		++
Poll results	++						++	++	++

TABLE 4

Factor Analysis on a Set of Indicators for Communication Potentials of Online Web Sites

	Factor 1 Anonymus Practices	Factor 2 Responsible Practices	Factor 3 Not Anonymus Practices
Editors' emails		+++	
Letters to editor			+++
Message board	+++		
Chat room	+++		
Moderated chat room	+++		
Discussion forum		+++	
Poll	+++		
Poll with additional information		+++	
Poll results		+++	

percent of total variance. In the first factor the highest eigenvalues are for chat room, moderated chat room, public opinion polls and message boards. The second component includes polls with additional information, poll results, discussion forums and list of editorial email addresses. The last one has only one indicator: letters to the editor. Judging from these findings it is quite difficult to interpret the three factors in a very coherent sense. However, one possible explanation would be that the first factor includes more 'popular, anonymous practices', which in the eyes of readers do not require much active or serious action and usually enable them to remain anonymous; the second one, in contrast, does imply a more 'responsible attitude' on the readers' part: participation in discussion forums and sending emails to the editor or journalist often

require more active involvement. The most exposed and less unanimous is the practice that falls in the last factor: writing letters to the editor usually means signing the letter with your full name and address.

Conclusion

What can be said, according to these findings, about the logic of new 'cyber-textuality'? At the level of hypertextuality, it seems that printed news and their online versions have much more in common and that online-only news presents a kind of new media logic in mediating the content. External hypertextuality, although in general a quite unusual feature for all media formats, is significant especially for online-only news. Internal hypertextuality, on the other hand, is more present in printed dailies and in their online versions. Here, additional research is needed to explain more thoroughly the conditions and factors that delineate these different trends. The practice revealed, in a limited sense, certainly reflects the technological potentials that are inscribed in new communication technologies and the web. However, the provision of media content and its interconnectedness are primarily a matter of editorial policy. One way to approach this difference in media logic is to identify the main structural conditions that provide, on the one hand, internal hypertextuality and external hypertextuality in new media formats. What limits the content convergence between different media outlets and what stimulates a linkage between a single media and other types of institution? Are the main reasons competitiveness, commercialization and tabloidization of news?

At the level of interactivity, the impact of the main factors that influence the differences in interactivity of media should be contextualized and included in the analysis. At first, this implies measuring the goal of communication on the side of producers and also of the readers. It seems that more attention should be devoted to the relation between media producers and their understanding of online interactivity. How do journalists and editors perceive potential feedback to their work; do they take it seriously? How do these novelties change and structure the production side of media culture? It might be that there is a gap between the expectations that are inscribed in the mediated communication and the expectations that audiences have in relation to new online media. Is it possible to infer that dailies online are indicative extensions of the offline newspapers or are they targeting an entirely different group of audience? Audience fragmentation on the one hand and content homogenization on the other can together function in the same way: the audience can be discouraged from more active involvement as interactive communication vanishes, whereas online media producers began to behave like the traditional mass media, which in consequence leads to the abandonment of the specific potentials that the internet offers.

Notes

1. At this point I would like to thank Richard van der Wurff, John O'Sullivan, Gustavo Cardoso, Ivan Rimac, Gary Quinn, and Leopoldina Fortunati for their fruitful suggestions on our common

- research project in both two COST meetings, first in Ljubljana and later in Lisbon. Special thanks go to Richard, who initiated the case study and motivated all members of the group when most needed. And finally, thanks to Colin Sparks, who inspired me for organizing a meeting in Ljubljana, without which probably these common efforts would have never been made.
2. A more detailed conceptualization of main differences and similarities between these communication models would be useful. However, this would enlarge the scope of this article and move the empirical research presented here in a quite different direction.
 3. Interactivity, as is elaborated in this article, refers in general to the relation between the users and media, or more specifically to the creative feedback of the users on the content available on web pages of daily newspapers.
 4. For a more detailed insight into the technical aspects of this development, see Burnett and Marshall (2003).
 5. At this point the unit of analysis was a single front page of a newspaper. The main aim was simply to compare the size of first pages, the space available for advertisements on both pages, the space available for daily news (articles, short news, photos) and for short announcements or bulletins.
 6. Here, analysis of some more specific features of media content was possible: the type of news genre (informative, interpretative, advertisement, etc.), the type of content (headline, short story, news, opinion poll, etc.), type of advertisement (for its own media, for other media or other services), the use of graphic presentation elements (pictures, graphs, illustrations, sound, etc.), the local vs global dimension of the news content, the main topic of the news (politics, health, economy, commerce, etc.), the visibility and type of news sources, etc.
 7. The final sample of media outlets was thus composed by four Slovenian dailies (*Delo*, *Dnevnik*, *Vecer* and *Finance*), their online versions (*Delo online*, *Dnevnik.si*, *Vecer online*, *Finance on net*), and four online-only news (Slovenian news portal <con.si> and commercial television site <www.24ur.com>), and two foreign online news versions *BBC online* and *NYT online*). We selected and saved news front pages and content items for one week from 31 March to 4 April 2003 twice a day (morning and evening editions). The sample on the first level thus consists of 100 front pages; the sample of content items consists of 3060 units.
 8. There is another more important issue that derives from Ess's theoretical thinking about hypertext potential, namely his idea that the original notion of hypertext – as it was reinforced by Bush, Nelson and Landow – implies a strong democratic potential. Following the Frankfurt School critical theory and Habermas's theory of communicative action, Ess suggested what a hypertext system would look like if it were constructed according to the rules of Habermas's discourse ethic (Ess, 1994: 225). In his opinion Habermas's theory of communicative action provides a powerful theoretical framework in support of the democratic claim and at the same time it offers an important guideline for hypertext practitioners.
 9. In very broad terms, Dahlgren (1996) questions what kind of new media logic is appropriate for a notion of 'cyber-journalism'. Following on from this dilemma, he asserts that it is possible to identify a number of primary and highly interrelated aspects of cyber-communication, which are at the core of this new logic and will continue to give shape to the formats of cyber-journalism in the future also (Dahlgren, 1996: 64). One of these key qualities represents the element of hypertextuality.

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