

## Chapter 4

---

### **Online and Print Newspapers: Their Impact on the Extent of the Perceived Public Agenda**

Klaus Schönbach, Ester de Waal and Edmund Lauf

*European Journal of Communication, 20 (2005), 245-258*

#### **Abstract**

Printed newspapers are known to widen the range of public topics, events and issues their audience is aware of. There are reasons to assume that their online counterparts help increase their audience's perceived agenda to a lesser extent. The way print newspapers are structured and used is supposed to lure readers into reading stories they may not have been interested in beforehand. Online papers support more activity and control by their users; becoming aware of a narrower range of topics according to one's individual interests is more plausible. A representative survey of almost 1000 respondents shows it is more complicated than that. Both channels in fact contribute to widening the audience agenda. But whereas online newspapers show this effect only in the highest educated group of society, print newspapers are able to expand the horizon of those whose range of interests is at most average.

#### **Introduction**

Research shows that printed newspapers improve their readers' knowledge of what is going on around them (see e.g., Guo and Moy, 1998; McLeod et al., 1999; Schulz, 2003). In general, newspaper reading raises awareness of a

greater number of public-affairs topics as compared to using other information channels, like for example television (Ferguson and Weigold, 1986; Allen and Izcaray, 1988; Culbertson et al., 1994; Peter and de Vreese, 2003). Participation in social life, integration into one's community and ultimately democracy are said to profit from this (e.g., Rothenbuhler et al., 1996; McLeod et al., 1999; Schoenbach et al., 1999; Norris, 2001).

But what if the slow but steady decline of printed newspapers in western countries continues (e.g., Lauf, 2001; Crosbie, 2004)? Some, particularly in the newspaper industry, hope that online newspapers will replace printed dailies, especially among young people not particularly attracted to the printed version (e.g., Morris and Ogan, 1996; Peng et al., 1999; Paimans, cited in Jankowski and van Selm, 2000). Indeed, the prospects for online papers look good: virtually all newspapers in western developed countries have an online edition (see e.g., Peng et al., 1999). And there are some advantages of online newspapers for their users: online papers are still mostly free of charge, often updated throughout the day, easily accessible for everyone with an Internet connection; and they can be visited while working at one's PC. No surprise, then, that as early as 2002, 23 percent of US web users also visited newspapers online at least once a week (Runett, 2002).

As far as the impact of the Internet in general (thus not specifically of online newspapers) on civic engagement is concerned, studies so far have not revealed a consistent pattern. Some suggest that using the Internet extensively hinders building social networks and attending social events (Kraut et al., 1998; Putnam, 2000; Nie and Erbring, 2000), whereas others argue that Internet usage is positively related to community engagement and political activity (Katz et al., 2001; Wellman et al., 2001; Shah et al., 2002). But again, the focus of these studies is on the Internet in general, not on online newspapers in particular.

In this study, we hypothesize that using online newspapers makes their audience aware of a smaller range of public events and topics than reading their printed counterparts does. Several (sometimes more, sometimes less) distinctive features of the two channels lead us to this assumption:

- The non-linear, layered format of online newspapers entails that large parts of them consist of teasers and tables of contents. To access full articles one has to click and/or scroll. As long as users only scroll down an online newspaper, they encounter fewer, and certainly fewer *complete*, stories than by thumbing through a printed paper. Surely the offer of online papers becomes more extensive once one uses links, but this does not necessarily mean access to the wealth of articles that printed newspapers provide daily (Zürn, 2000). D’Haenens et al. (2004) compared, among other things, the news provision of the print and online edition of two Dutch newspapers, a national and a regional one. They found more (brief) stories on the front pages of the online editions, but the print editions offered more articles than their online counterparts in all the news sections under scrutiny: national, international, sports, business and regional. Of course, online newspapers also offer links to internal archives, but these archives merely store old articles. Remarkably, web editions in the Netherlands (the country of our study) hardly ever offer links to external pages (Jankowski and van Selm, 2000). So, it is unlikely that visiting newspapers online furthers unintended encounters with stories on public issues located elsewhere on the Internet. In addition, clicking and scrolling may draw readers away from the other topics in the online paper, whereas reading an article in a printed edition does not make the surrounding stories on that page or spread invisible. Therefore, print newspaper readers should be more often surprised by articles they would probably overlook in an online paper. In fact, the online configuration encourages users to control the flow of information by selecting stories of particular interest (Cameron and Curtin, 1995; Peng et al., 1999; Tewksbury and Althaus, 2000; d’Haenens et al., 2004; see also Boczkowski, 2001). Moreover, orienting to the content and structure of the web takes extra time and effort (van Oostendorp and van Nimwegen, 1998; Eveland and Dunwoody, 2000). This will also decrease the chance of encounters with a large variety of information.
- In addition, printed papers, more than online ones, are constructed to guide their audience through the offer as a whole, in an attempt to serve as a generic community agenda or “Daily *Us*” (see e.g., Mueller and

Kamerer, 1995; Fallows, 1996; Zürn, 2000) - as opposed to Negroponte's (1995) vision of a customized "Daily Me," an (electronic) newspaper that would not 'bother' its users with topics they are not interested in. Readers of the traditional print editions are invited to follow the linear structure and to be led by the newspaper's priorities, translated in *cues* - such as the position of an article within the paper, within a section and on a page; the use of pictures and graphs; size (of stories, headlines, pictures); the use of paragraphs, typographical elements, colours, and so forth. Eye-movement experiments have shown that those cues are very effective in directing and structuring attention (Garcia and Stark, 1991). This means that readers can be lured into looking at stories that they would not select for reading if they only saw the topic of that story (Schoenbach, 1995). Cues also exist online, but, on average, online newspaper users are exposed to a smaller amount of cues compared to their print counterparts (see e.g., Tewksbury and Althaus, 2000; Eveland et al., 2004). And, according to Tewksbury (2003, p. 694), "it appears online users are particularly likely to pursue their own interests, and they are less likely to follow the cues of news editors and producers."

So, all in all, online newspapers encourage their users to follow their own path much more than their offline counterparts. Is this something to worry about? This should decrease the chance of online users being confronted with topics of public life they are either not interested in beforehand (Sunstein, 2002) or that are not immediately of great news value. Instead, online papers lend themselves to use as a "research" (Schoenbach and Lauf, 2004) or *pull* medium for updated or in-depth information for those who are motivated to process it (Jankowski and van Selm, 2000). In addition, online newspapers may be useful as an "alarm medium," for learning about breaking news at one quick glance throughout the day (see also Sparks, 2000). In contrast, print newspapers may be better at surprising their audience with topics beyond their particular interests. Their "display" (Schoenbach and Lauf, 2004) or *push* character should make it easier to come across a variety of events and topics without much effort.

So far, few studies have compared the actual impact of using online and printed newspapers on awareness of public issues. An experiment by

Tewksbury and Althaus (2000) revealed that those who read printed newspapers recalled relatively more public affairs stories and more details than those who were exposed to the online editions. In another experiment by d'Haenens et al. (2004), there was no clear pattern as far as recalling the news in both outlets was concerned.

Our study investigates the impact of online and print newspapers on awareness of public events and issues in an everyday setting. More specifically, we look at the effect of online and print newspapers on the extent of their audience's *perceived issue salience*. This is the first of three levels of agenda measurement in a typology of McLeod et al. (1974), and it represents awareness of issues 'out there' in society. Our central hypothesis is:

H1: More than using online newspapers, reading printed dailies contributes to a more extensive perceived public agenda.

It is clear, of course, that in a non-controlled setting, online (and print) newspaper readers also use other sources of information that certainly contribute to their agenda of the world around them. This is why we also control for the effect of other information channels on perceived issue salience - both display and research ones, and not only media, but also personal conversations. In addition, two plausible contingent conditions are taken into account: one's range of interests and the level of education. We assume that the wider the variety of areas one is interested in, the more likely one is to be aware of many topics in one's community. Education is an indicator of cognitive complexity and thus affects information processing: the higher one is educated, the faster and easier even brief information on a topic can be perceived, understood and stored (see e.g., Schroder et al., 1975). So, our next hypotheses are:

H2: The more areas of the public sphere one is interested in, the easier it is for both online and print newspapers to generate a wider perceived public agenda.

H3: The higher one's education, the easier it is for both online and print newspapers to generate a wider perceived public agenda.

### Method and measurement

The basis of our analysis is a representative telephone survey of the Dutch adult population. As early as 2001, more than half (55 percent) of the Dutch population (16 years and older) had access to the Internet, and as many as 90 percent of the 16- to 24-year-olds. More than 40 percent of the Dutch population went online at least once a week (NFO Trendbox, 2001). According to our own survey (see later) by the end of 2002, 18 percent of Dutch adults claimed to have visited an online newspaper at least once during the last couple of weeks.

The fieldwork of our survey was conducted in December 2002 by TNS NIPO (at the time NIPO), a market research institute. A sample of 986 respondents was randomly selected for that purpose. Online newspaper users were oversampled 2.22 times, to achieve a proportion of about 40 percent of the sample instead of the actual 18 percent of the Dutch adult population. For this purpose, 6725 people were screened first within a daily representative telephone omnibus survey. The criterion for adding a person to the online newspaper portion of our sample was having visited the website of a Dutch national or local newspaper at least once in the two weeks prior to the interview. The telephone interviews lasted an average of 16 minutes. The response rate was 41 percent of all persons randomly selected for the final interview.

Perceived issue salience was derived from the answers to the question: "What topics are presently the order of the day in the Netherlands and in the world?" This question opened the interview. Subsequently, respondents were asked: "Can you name more topics? It does not matter in which area." and "Does anything else come to mind?" until they stopped mentioning anything. Thus, respondents could name a potentially infinite number of subjects. In reality, it ranged from one to 17. The average number of responses was 4.1, with a standard deviation of 2.2.

The dependent variable of our analysis is the total number of all responses to the three questions. Only mere repetitions of the same answer and synonyms were excluded. In other words, we analyse the extent of the agenda one perceives to be of importance in the Netherlands (at the time) - or what Allen and Izcaray (1988) call the *nominal agenda diversity* of our respondents (see also Peter and de Vreese, 2003).

Exposure to online and print newspapers, as well as to other media channels (other news sites, television, teletext, radio, free sheets, magazines), was measured in terms of frequency and duration of use (see Appendix for detailed formulation of the survey questions). For personal conversations, the frequency and whom one talks to (family, friends, colleagues and people one meets by chance) were measured (again, see Appendix for wording).

We used multiple regressions, with nominal agenda diversity as the dependent variable and both frequency and duration of online and print newspaper reading as independent ones. We combined the frequency of use per week and day by multiplying the two answers. Exposure to all other communication channels (i.e. media channels and conversations) was controlled for.

In addition, we analysed the impact of two contingent conditions. For the range of interests, we counted the number of areas (up to seven) a respondent reported being at least somewhat interested in: politics; sports; theatre, films and literature; finance and economy; reports on celebrities; reports on accidents and crime; local news (see Appendix). The average number of interests was 5.1 with a standard deviation of 1.3. To compare the impact of online and print newspapers on agenda diversity between those with few, some and many interests, we split the sample into three relatively equal portions: those with up to four areas they were at least somewhat interested in; those with five; and finally the group with the most interests: six and seven areas. Education was gauged in our survey as one's highest school or university degree. For our analysis, we divided it into three relatively equal groups: (1) elementary school or a school preparing for simple clerical tasks or for learning a craft, (2) a high school degree or a lower professional and vocational education, (3) a university degree or a higher professional and vocational education.

Education and the range of interests are used as *contingent conditions* in our analysis, not as *controls*. Being interested in many topics or a good education alone do not plausibly tell our respondents what is going on in the world right now. Only their exposure to *information* can do that. But higher scores on these characteristics should help information to be perceived, processed and remembered: the typical function of mediating factors or contingent conditions. Of course, education and range of interests may explain media use as such, and demographics like age and

gender certainly relate to interests and schooling, which in turn may then modify media effects. However, we do not expect these variables to *compete* with information behaviours, and thus to be taken into account as control variables.

## Results

Table 4.1 shows that, for the total sample, printed newspapers indeed contribute to nominal agenda diversity, even after the impact of all other communication channels is controlled for. The more frequently one grabs a printed newspaper per week, the richer one's agenda. With a beta as low as .07 (albeit significant), this impact is not very impressive. But still, if we also compare the respective unstandardized betas, using their error ranges, Hypothesis 1 is not refuted, as far as the effect of frequently using the two channels is concerned.

The next step of our analysis shows that this (weak) impact of print is not a general one. Surprisingly, it is limited to those who are not interested in very many topical areas (fewer than average). Similarly restricted, a significant influence of spending more *time* with a print paper shows only among those with an average range of interests. For the impact of online newspaper reading, the diversity of one's interests simply does not matter. One could assume that both, somewhat puzzling, results for print newspaper reading are due to a ceiling effect: those with a lot of different interests have already learned about so many societal topics before that it is hard to expand their range further. The average number of perceived issues in that group is indeed higher - 4.5, as compared to 4.1 and 3.5 in the two groups with fewer interests - but its standard deviation is a little greater too, thus leaving enough room for improvement (see Table 4.1). So Hypothesis 2 is not supported, neither for online nor print newspaper reading.

Once we discern respondents according to their *education*, spending more time with an *online* newspaper is related to a wider variety of public topics mentioned, but only in the highest-educated group: those with at least a higher vocational training or even a university degree. For print newspaper exposure, the level of education does not matter. In sum, hypothesis 3 is supported, but only partly and only for online newspaper reading.

Table 4.1: The Impact of Print and Online Newspaper Reading on the Number of Perceived Societal Topics

<i>Reading measures</i>	<i>All respondents</i>	<i>Range of interests (areas at least somewhat interested in)</i>			<i>Education</i>		
		<i>Below average (0-4)</i>	<i>Average (5)</i>	<i>Above average (6-7)</i>	<i>Low</i>	<i>Medium</i>	<i>High</i>
<hr/>							
Print newspapers							
Frequency (days per week)	.07*	.15*	.01	.03	.10	.05	.08
Duration per time	.01	-.02	.23**	-.09	.03	.01	-.03
Online newspapers							
Frequency (days per week)	.01	.02	-.05	.01	.09	.07	-.03
Duration per time	.06	.03	.08	.07	-.04	-.07	.17**
<hr/>							
N	890	260	256	371	229	299	362
Mean number of topics mentioned	4.1	3.5	4.1	4.5	3.5	4.0	4.6
SD	2.2	2.0	2.2	2.3	2.1	2.3	2.2

*Note.* Cell entries are beta's from linear multiple regressions, controlled for other communication channels: other news sites, television, teletext, radio, free sheets, magazines, and conversations with family, friends, colleagues, and people one meets incidentally. \* $p < .05$ . \*\* $p < .01$

## Conclusion

Our results in general support the idea that reading print newspapers contributes to awareness of more public events and issues than using online newspapers does. *Frequent* print newspaper use increases nominal agenda diversity, at least somewhat. So, it is not the time spent on a printed newspaper that widens one's horizon, but turning to it often, if only briefly. Reading for longer periods of time may further more selective in-depth reading and thus does not increase the number of topics one is aware of.

Frequently visiting an online newspaper, however, does not expand the range of perceived topics. In other words, using the online channel primarily for (brief) update - as an alarm medium for example - may further the awareness of the most important events, but does not really widen one's perceived agenda. Spending more *time* on an online newspaper does not expand the agenda either, at least for the general audience. Possibly, extra time spent online is used more for "research" or "in-depth" orientation, as Eveland and Dunwoody (2000) argue.

Our data show one interesting exception, however, where online newspaper use does have an effect: very highly educated respondents learn about more public events and issues by using online papers for longer periods of time. A possible explanation is that those with a higher vocational education or university degree may be experienced web users and thus more familiar with navigating techniques. They may not need much time to unravel the information offered online. Instead, they seem to use the extra time for encounters with a greater diversity of topics. In addition, this group may be able to restrict its selective information behaviour better and to consciously look for a comprehensive overview of what is going on in the world. In contrast, for the impact of printed newspapers on the diversity of one's perceived agenda, education does not matter. The subgroups that learn the most from print newspapers are frequent readers with a below average range of interests and those with a medium range of interests who spend more time on reading a print paper. We can only speculate on why a greater variety of interests does not also help *increase* the number of topics one is aware of. Maybe being interested in many different areas leads to a more in-depth processing of those fields instead of widening the (already wide) horizon any further? In any case, we may conclude that print newspapers are able to *trap* the less involved better than online papers

do. The concept of the “trap” effect (Schoenbach and Weaver, 1985; see also Schoenbach and Lauf, 2002) suggests that the uninterested members in the audience can be reached (and even influenced) by information they would not care to receive purposefully - if only there is information abundant and obtrusive enough to “overwhelm” them (see also Krugman and Hartley, 1970; Petty and Cacioppo, 1981).

In sum, then, printed newspapers serve an important function for the public agenda: they widen the horizon of those whose range of interests is rather small. Newspaper effects research has often confirmed the aptitude of print newspapers to integrate marginal groups into a community (see earlier). In our study, online newspapers serve an information-elite instead. Certainly, that may change once online newspapers become more widespread in society. So far, it appears that online and print newspapers shape the agenda of their audiences in different ways and are effective for different groups.

**Note**

The survey was funded by the Netherlands Press Fund (Bedrijfsfonds voor de Pers).

## References

- Allen, R. L. and F. Izcaray (1988) 'Nominal Agenda Diversity in a Media-Rich, Less-Developed Society', *Communication Research* 15: 29-50.
- Boczkowski, P.J. (2001) 'The Development and Use of Online Newspapers: What Research Tells Us and What We Might Want to Know', in L. Lievrouw and S. Livingstone (eds) *The Handbook of New Media: Social Shaping and Consequences of Information and Communication Technologies*; at: [skipper.gseis.ucla.edu/faculty/lievrou/html/HNMcontents.html](http://skipper.gseis.ucla.edu/faculty/lievrou/html/HNMcontents.html) (accessed 17 January 2002).
- Cameron, G.T. and P.A. Curtin (1995) 'Electronic Newspapers: Toward a Research Agenda', paper presented at the annual convention, Association for Education in Journalism and Mass Communication, Washington, DC, August.
- Crosbie, V. (2004) 'What Newspapers and Their Web Sites Must Do to Survive', USC Annenberg Online Journalism Review 4 March; at: [www.ojr.org/ojr/business/1078349998.php](http://www.ojr.org/ojr/business/1078349998.php) (accessed 10 July 2004).
- Culbertson, H.M., D. Evarts, P.B. Richard, K. Sandell and G.H. Stempel III (1994) 'Media Use, Attention to Mass Media and Agenda Richness', *Newspaper Research Journal* 15(1): 14-19.
- D'Haenens, L., N. Jankowski and A. Heuvelman (2004) 'News in Online and Print Newspapers: Differences in Reader Consumption and Recall', *New Media and Society* 6(3): 363-82.
- Eveland, W.P. Jr and S. Dunwoody (2000) 'Examining Information Processing on the World Wide Web Using Think Aloud Protocols', *Media Psychology* 2(3): 219-44.
- Eveland, W.P. Jr, K. Marton and M. Seo (2004) 'Moving Beyond "Just the Facts": The Influence of Online News on the Content and Structure of Public Affairs Knowledge', *Communication Research* 31(1): 82-108.
- Fallows, J. (1996) *Breaking the News: How the Media Undermine American Democracy*. New York: Pantheon Books.
- Ferguson, M.A. and M. Weigold (1986) 'Medium Source Diversity and Medium Reliance: In Search of Issue Diversity', paper presented at the annual conference, International Communication Division, Chicago, IL, May.
- Garcia, M.R. and P. Stark (1991) *Eyes on the News*. St Petersburg, FL: The Poynter Institute for Media Studies.

- Guo, Z. and P. Moy (1998) 'Medium or Message? Predicting Dimensions of Political Sophistication', *International Journal of Public Opinion Research* 10(1): 25-50.
- Jankowski, N.W. and M. van Selm (2000) 'Traditional News Media Online: An Examination of Added Values', *Communications: The European Journal of Communication Research* 25(1): 85-101.
- Katz, J.E., R.E. Rice and P. Aspden (2001) 'The Internet, 1995-2000: Access, Civic Involvement, and Social Interaction', *American Behavioral Scientist* 54(3): 405-19.
- Kraut, R., M. Patterson, V. Lundmark, S. Kiesler, T. Mukopadhyay and W. Scherlis (1998) 'Internet Paradox: A Social Technology that Reduces Social Involvement and Psychological Well-Being?', *American Psychologist* 53(9): 1017-31.
- Krugman, H.E. and E.L. Hartley (1970) 'Passive Learning from Television', *Public Opinion Quarterly* 34: 184-90.
- Lauf, E. (2001) 'The Vanishing Young Reader: Sociodemographic Determinants of Newspaper Use as a Source of Political Information in Europe, 1980-98', *European Journal of Communication* 16: 233-43.
- McLeod, J.M., L.B. Becker and J.E. Byrnes (1974) 'Another Look at the Agenda-Setting Function of the Press', *Communication Research* 1: 131-66.
- McLeod, J.M., D.A. Scheufele and P. Moy (1999) 'Community, Communication, and Participation: The Role of Mass Media and Interpersonal Discussion in Local Political Participation', *Political Communication* 16: 315-36.
- Morris, M. and C. Ogan (1996) 'The Internet as Mass Medium', *Journal of Communication* 46(1): 39-50.
- Mueller, J. and D. Kameron (1995) 'Reader Preference for Electronic Newspapers', *Newspaper Research Journal* 16(3): 2-13.
- Negroponte, N. (1995) *Being Digital*. New York: Knopf.
- NFO Trendbox (2001) 'Na de Dotcommers nu ook komkommertijd bij de internet gebruikers' [After the Dot-Commers Now Silence among Internet Users], *Internet Update* 24 (March); at: [www.trendbox.nl/eye/news/docs/internet01.doc](http://www.trendbox.nl/eye/news/docs/internet01.doc) (accessed 23 November 2001).

- Nie, N. and L. Erbring (2000) 'Internet and Society: A Preliminary Report';  
at:  
[www.stanford.edu/group/siqss/Press\\_Release/Preliminary\\_Report.pdf](http://www.stanford.edu/group/siqss/Press_Release/Preliminary_Report.pdf) (accessed 16 July 2004).
- Norris, P. (2001) *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge: Cambridge University Press.
- Peng, F.Y., N.I. Tham and H. Xiaoming (1999) 'Trends in Online Newspapers: A Look at the US Web', *Newspaper Research Journal* 20(2): 52-63.
- Peter, J. and C.H. de Vreese (2003) 'Agenda-Rich, Agenda-Poor: A Cross-National Comparative Investigation of Nominal and Thematic Public Agenda Diversity', *International Journal of Public Opinion Research* 15: 44-64.
- Petty, R.E. and J.T. Cacioppo (1981) *Attitudes and Persuasion: Classic and Contemporary Approaches*. Dubuque, IO: William C. Brown.
- Putnam, R.D. (2000) *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Rothensbuhler, E.W., L.J. Mullen, R. DeLaurell and C.R. Ryu (1996) 'Communication, Community Attachment, and Involvement', *Journalism and Mass Communication Quarterly* 73: 445-66.
- Runett, B. (2002) 'Reaching Out: Newspaper Sites Add Audience; Improve Stature as Net Marketplace' (News Paper Association of America), July; at: [www.naa.org/artpage.cfm?AID=4342&SID=109](http://www.naa.org/artpage.cfm?AID=4342&SID=109) (accessed 13 February 2004).
- Schoenbach, K. (1995) 'Zur Zukunft der Tageszeitung' [On the Future of Newspapers], pp. 337-47 in B. Schneider, K. Reumann and P. Schiwy (eds) *Publizistik: Beiträge zur Medienentwicklung*. Konstanz: UVK.
- Schoenbach, K. and E. Lauf (2002) 'The "Trap" Effect of Television and its Competitors', *Communication Research* 29: 564-83.
- Schoenbach, K. and E. Lauf (2004) 'Another Look at the "Trap" Effect of Television - and Beyond', *International Journal of Public Opinion Research* 1: 169-82.
- Schoenbach, K. and D.H. Weaver (1985) 'Finding the Unexpected: Cognitive Bonding in a Political Campaign', pp. 157-76 in S. Kraus

- and R. Perloff (eds) *Mass Media and Political Thought*. Beverly Hills, CA: Sage.
- Schoenbach, K., E. Lauf, J.M. McLeod and D. Scheufele (1999) 'Distinction and Integration: Socio-Demographic Determinants of Newspaper Reading in the USA and Germany, 1974-96', *European Journal of Communication* 14: 225-39.
- Schroder, H.M., M.J. Driver and S. Streufert (1975) *Menschliche Informationsverarbeitung: die Strukturen der Informationsverarbeitung bei Einzelpersonen und Gruppen in komplexen sozialen Situationen* [Human Information Processing: The Structure of Information Processing with Individuals and Groups in Complex Social Situations]. Weinheim: Beltz.
- Schulz, W. (2003) 'Mediennutzung und Umweltbewusstsein: Dependenz- und Priming-Effekte' [Media Use and Environmental Consciousness: Dependency and Priming Effects], *Publizistik* 48: 387-413.
- Shah, D., M. Schmierbach, J. Hawkins, R. Espino and J. Donovan (2002) 'Nonrecursive Models of Internet Use and Community Engagement: Questioning Whether Time Spent Online Erodes Social Capital', *Journalism and Mass Communication Quarterly* 79: 964-87.
- Sparks, C. (2000) 'From Dead Trees to Live Wires: The Internet's Challenge to the Traditional Newspaper', pp. 268-92 in J. Curran and M. Gurevitch (eds) *Mass Media and Society*, 3th edn. London: Arnold.
- Sunstein, C. (2002) *Republic.com*. Princeton, NJ: Princeton University Press.
- Tewksbury, D. (2003) 'What Do Americans Really Want to Know? Tracking the Behavior of News Readers on the Internet', *Journal of Communication* 53(4): 694-710.
- Tewksbury, D. and A.L. Althaus (2000) 'Differences in Knowledge Acquisition among Readers of the Paper and Online Versions of a National Newspaper', *Journalism and Mass Communication Quarterly* 77: 457-79.
- Van Oostendorp, H. and C. van Nimwegen (1998) 'Locating Information in an Online Newspaper', *Journal of Computer-Mediated Communication* 4(1); at: [www.ascusc.org/jcmc/vol4/issue1/oostendorp.html](http://www.ascusc.org/jcmc/vol4/issue1/oostendorp.html) (accessed 7 July 2004).

- Wellman, B., A.Q. Haase, J. Witte and K. Hampton (2001) 'Does the Internet Increase, Decrease or Supplement Social Capital?', *American Behavioral Scientist* 45(3): 436-55.
- Zürn, M. (2000) 'Print- und Onlinezeitungen im Vergleich' [Comparing Print and Online Newspapers], *Media Perspektiven* 7: 319-25.

## Appendix: survey questions

### Media use

#### *Frequency*

- On average, how many days a week do you read Dutch national or local printed daily newspapers/visit websites of Dutch national or local daily newspapers on the Internet/visit other news sites on the Internet?

For websites of newspapers and other news sites, questions about the frequency of their use were even more extensive:

- On average, how many times a day do you visit websites of Dutch national or local daily newspapers on the Internet/other news sites on the Internet?

#### *Duration*

- On average, for how long do you read Dutch national or local printed daily newspapers/visit websites of Dutch national or local printed daily newspapers/visit other news sites on the Internet at a time?
- On average, for how long do you watch television/read teletext on television or the Internet/listen to the radio a day?
- On average, for how long do you read free sheets (free weekly newspapers)/magazines a week?

### Personal conversations

- How often do you speak about topics that are the order of the day in the Netherlands and the world with your family/friends/people at your job or your school/people that you happen to meet, for instance on a tram or at the barber's: often, sometimes or never?

**Interests**

- In general, how much are you interested in politics/ sports/ theatre, films and literature/ finance and economy/ reports on celebrities/ reports on accidents and crime/ local news: very much, somewhat or not interested?

