



Is Print Really Dying? The State of Print Media Use in Europe

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The controversy concerning the future displacement of print media is an ongoing dispute among stakeholders and academic experts. Based on the model of displacement or resilience of a given medium, this study explores the print media audience, primarily by comparing the time spent reading print media with that allotted to consuming their digital equivalents and other media. The study compares nine European democratic countries that have undergone the same technological changes but that also manifest disparate cultures that may explain variance in consumption patterns. The study's main findings demonstrate that print media are still an important component of the new communications environment among European audiences. Reasons for print media's resilience are suggested in the discussion.

Keywords: books, magazines, newspapers, print media, reading

Introduction

"Print is dead!" "The printed book will disappear." "People do not read." Surveys continue to show a decline in print newspaper readership, and many newspapers in North America and Europe have ceased publication entirely or shifted to online-only editions because of a decline in advertising revenues (Franklin, 2008). Some magazines offer both print and digital versions while others are exclusively digital. The number of e-book readers appears to be increasing steadily, possibly threatening the future of the print medium.

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Date submitted: 2014–12–01

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Data published periodically reflect a steady decline in the production, distribution, and consumption of print newspapers in the Western world. Research from the mid-20th to the early 21st century displays a steady decline in time allotted to print media as a whole, noting that while newspaper and book reading rates decreased, magazine reading rates increased (Raeymaeckers, 2002; Vyas, Singh, & Bhabhra, 2007). Elsewhere, particularly in East Asia, print newspapers and magazines are flourishing (Vyas et al., 2007). This situation in East Asia may be the result of a delay in the onset of a dead-end syndrome because of the lower Internet penetration rate in these countries or the result of certain idiosyncratic political and cultural factors that enhance, delay, or preclude the displacement of print media.

What is the significance of the decline in print media consumption? Print journalism is considered a bulwark of democracy. Historically, it constituted a basic component of the public sphere in the United States and subsequently in Europe as partisan politics began to weaken (Habermas, 1989). Colin Sparks expressed one outstanding argument in favor of retaining print media as an essential tool for democratic deliberation:

Almost everyone who has seriously considered the possibilities of democracy, however defined, in the contemporary world has realized that the media, and in particular newspapers, have an indispensable role in political life. The nature and character of newspapers, their degree of freedom, their availability and their content, are central to the citizen's level of knowledge about the world of politics and economics. This aspect of newspapers I call their "public enlightenment function." Changes to newspapers are also changes to democracy. (Sparks, 1996, p. 43)

Sparks argues that online versions of newspapers cannot provide the same "public enlightenment function" as print media because of accessibility gaps between classes and differences in the content media offer.

The history of print media in postcommunist East Central Europe demonstrates that growth and changes in newspaper production, distribution, and consumption occurred simultaneously with democratization and the fall of the Iron Curtain in the Czech Republic, Poland, and Hungary. The number of national newspapers increased after 1990 and then declined slightly but remained higher than it had been during the Communist Era (Gulyás, 2003). These statistics invite cross-cultural comparisons and raise questions regarding the idiosyncrasies of different countries insofar as print media consumption is concerned.

Moreover, as elaborated below, research reveals that each type of print medium fulfills a different psychosocial function. Newspaper reading gratifies an interpretive purpose, according perspective to the previous week and offering general insights on local and world events. Entertainment and professional magazines are community integrators and national value builders, while book reading as a cultural behavior fulfills most personal psychosocial needs and enhances ethnocultural and national identities (Adoni & Nossek, 2007, 2013; Nossek & Adoni, 2007).

Theoretical Framework

Print media resilience or displacement in the new media environment may be explored from several points of view. In this article, we suggest the convergence of two approaches in communications research—technological and functional. The technological approach, conventionally associated with Harold Innis (1951) and Marshall McLuhan (1962, 2003), asserts that the dominant media technologies in a given historical era are replaced by new media if they stop fulfilling their societal functions. In his influential books, McLuhan predicted that television would displace the older print media and influence the social and political structures of nation-states. It would blur national borders, create a global village, and engender a revival of the tribalism that characterized the social and political systems before the invention of the printing press. Indicators of the displacement of print media would include a significant decrease in production and distribution of print material and a decline in the reading public's dimensions, the time allotted to reading, and the frequency of reading print media.

In his final works, McLuhan refined the original displacement theory and proposed four possible types of interaction among media: amplification, displacement, retrieval, and reversal (Levinson, 1999). The developments in computer technology and the Internet make it possible to claim that a final stage—synthesis—could also include *convergence* of two or more media (Adoni & Nossek, 2001).

The central approach to communication research, grounded in functionalist theory, is the *uses and gratifications* approach that addresses the different psychosocial functions of media use, including those of books and newspapers. The underlying assumption posits the existence of an active consumer audience attempting to satisfy its psychosocial needs through selective exposure to media and specific content (Blumler & Katz, 1974; Katz et al., 2000; Katz & Adoni, 1973; McQuail & Windahl, 1993; Rosengren, Palmgreen, & Wenner, 1985). Consequently, in contrast to the technological approach, which stresses competition among media, the functional approach emphasizes the possible division of labor among media that serves as their basis for coexistence.

Studies based on this approach found that each communications medium specializes in gratifying certain needs, resulting in a functional division of labor (Adoni, 1985) or synergy (Neuman, 1986, 1991) among them. Studies also demonstrated the displacement phenomenon among media, suggesting that functional exchangeability is the chief reason for displacement (Himmelweit & Swift, 1976; Katz, Gurevitch, & Hass, 1973; Rosengren & Windahl, 1972). Where functional equivalence exists, one medium may make another obsolete while creating optimum circumstances for the substitution or displacement of its predecessor, possibly causing a significant decline in the production, distribution, and consumption of the displaced medium. By contrast, functional differentiation or a low degree of functional equivalence creates circumstances in which both types of media may coexist. This situation will be characterized by stability or even growth in the production and supply of both forms of media and their continued or perhaps increased consumption and use by individual consumers.

In the present context, it is important to note the low degree of interchangeability between reading and consuming other media (Adoni & Nossek, 2001). In other words, reading as a cultural practice satisfies a few important personal and social needs better than use of any other medium, possibly accounting for its continuous resilience in the new media environment.

A model developed in our earlier research integrated the technological and functional approaches into a research framework (Adoni & Nossek, 2001, p. 65; see Figure 1). Its principal characteristics are the dialectic process of interrelations between the technological characteristics of a new medium and its functional need gratification for the audience vis-à-vis an old medium, thus contributing to the resilience of an old medium or its displacement by new media.

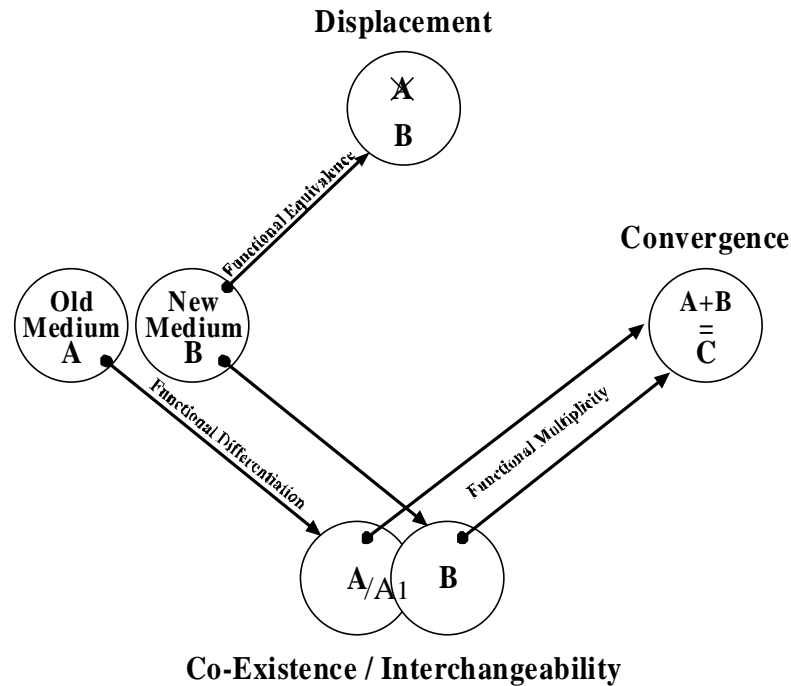


Figure 1. Dialectic model of media interaction.

(Adapted from Adoni & Nossek, 2001, p. 65)

The graphic presentation of the interactions between the media at the first point in time indicates that the media arena is controlled by the more established medium (A) when a new medium appears (B). This is the initial thesis of the dynamic process. At this point, two developments or antitheses may emerge: displacement of the older medium by the new one because of the functional equivalence between them (in the upper portion of the model, medium A is displaced and disappears) or the creation of conditions suitable for the shared existence of the two media with little functional interchangeability. Nevertheless, the appearance of medium B may exert an influence on medium A and alter it, thereby enabling it to realize its unique nature and capability for survival. This option would modify A to A1, even though it is still the same technology.

The synthesis stage develops if two media converge and create a new medium ($A + B = C$), representing another type of interaction between two given communications media with different characteristics and distinguishable literacy capabilities. Such media are characterized by their ability to perform multiple functions simultaneously and their convergence of traditional media and computer or Web literacy into a unified convergent literacy.

Time Budgeting

Time-budgeting studies collect information about how people use their time. We would like to emphasize that time budgeting is not only a uniquely objective methodology of data collection but is also grounded in the philosophical assumption that time is the basis for all human actions. Paradoxically, time is the most egalitarian of all human resources: We all have only 24 hours per day. Leisure time, however, is clearly not distributed equally among classes, ages, and genders. As such, it constitutes a significant indicator of the social status of groups and an important predictor of their leisure and cultural behavior.

Although data collection methods may vary, time-budgeting data are generally classified into four categories adopted and standardized by the OECD (Bonke & Jensen, 2012; Goodin, Rice, Bittman, & Saunders, 2005; Katz et al., 2000). According to Robinson and Godbey (1997), the first three categories are time spent in paid labor; time spent on unpaid household labor (cooking, cleaning, child care, shopping, and the like); and time spent on personal care (eating, sleeping, etc.). Activities in those three categories might be called *obligatory* activities. The fourth category is conventionally called *free time* or *leisure*, and it comprises the time left over after performing the activities in the other three categories (Katz et al., 2000; Maditinos, Papadopoulos, & Prats, 2014). Other studies of leisure do not accept this residual category and define leisure as time devoted to freely chosen activities that offer individuals various positive experiences (Kelly, 2012).

This study deals with only one subcategory of leisure: media use. Data are customarily gathered from personal diaries or survey questions on time allocated to the four categories during the day preceding the interview. As the data are usually quantitative, time-budgeting research critics claim that such studies are essentially descriptive and that the findings may be explained only by a conceptual framework external to the issue of time (Katz et al., 2000).

Empirical research findings from the United States and Europe show that in the 21st century, the medium accounting for the most leisure time use is television: about 50% of such time in the United States and 30% in Europe (Robinson & Martin, 2009). This finding might indicate that the principal effect of television on print media is no longer significant and that the remaining decline in time spent on print media in the Western Hemisphere might be attributed to online and offline competitors (symmetric and asymmetric communication channels) (Nimrod & Adoni, 2012) and to sociological and cultural factors.

Individual Use of Media According to Demographic Variables

Demographic variables of gender, age, and level of education appear to be major predictors of the time allotted to old and new media use and the frequency of their use (Adoni, 1985; Adoni & Nossek,

2001; Katz & Gurevitch, 1976; Roe, 2000; Van der Voort et al., 1998). As for gender, most studies indicate that women read more books than men, whereas men read more newspapers and spend more time watching television than women (Adoni & Nossek, 2001). In later research (Adoni & Nossek, 2007), we amply demonstrated that gender is a powerful variable in predicting differences in book reading within the common culture and the same social stratum. In general, women are more active book readers than men and tend to prefer literary genres different from those that interest men. These differences are particularly salient in groups with lower education but are evident among highly educated groups as well.

Various studies (Adoni, 1995; Adoni & Nossek, 2001; Johnson-Smaragdi, D'Haensen, Krotz, & Hasebrink, 1998) demonstrated that traditional literacy in its different forms is a *sine qua non* skill for the consumption of print media and of newer types of media and for developing the competence and skills necessary for Internet use. Clearly, all these intellectual skills are a function of the cultural capital acquired by individuals at an early age within the informal setting of the family (Bourdieu, 1984, 1990). This is most evident in the case of literary, musical, and artistic education that requires a lengthy learning period and constant exposure to books, music, and works of art. By contrast, television consumption is related to media literacy that does not require basic traditional literacy skills or a long period of apprenticeship.

Several studies have shown that television viewing is usually of greater duration among less educated people (Meyrowitz, 1985; Pronovost, 1998). Roe (2000) also found this to be true of young children whose mothers' lower level of education correlated with their relatively high consumption of television. Similarly, a survey conducted in the Flanders region of Belgium asked 16- to 18-year-olds about their time use and media consumption and found that the best predictors of print newspaper reading were socialization and especially the presence of newspapers at home, which were read primarily by the respondents' fathers. The survey also found that attitudes toward print-media reading were dependent on ability to use the content in conversations with friends and family (Raeymaeckers, 2002).

Insofar as social groups are concerned, early empirical studies (e.g., Kaye & Johnson, 2000) showed that the *digital divide* was most pronounced between younger and older people, between those with considerable and little schooling, between high and low-income families and individuals, and between men and women. Thanks to the meteoric rate of new technology diffusion in the Western world, significant use of personal computers and the Internet is evident in all social groups. However, empirical data considering age, education, and socioeconomic differences, suggest that old patterns still prevail and that the best predictors of frequency and sophisticated use of the Internet are young age, high income, and high level of education (Zickuhr & Smith, 2012).

The study of the complex phenomenon of print media consumption in the new digital media environment justified our attempts at converging several theoretical frameworks: technological theories, the functional *uses and gratifications* approach, and time-budgeting procedures. These led to the following research questions:

RQ1: Is book and newspaper reading still a common cultural behavior? What is its status among other types of media consumption? How much time is allotted to the consumption of print media in comparison to equivalent digital media (e-books and online newspapers)?

RQ2: How much time is allotted to the consumption of print media in comparison to other media?

RQ3: Are there common patterns of print-media consumption among different demographic groups (by gender, age, education, economic status, and urban vs. rural residence) in various European countries?

Are there differences in the consumption of various types of newspapers that might indicate the potential role of print newspapers in drawing the contours of national or regional, local or transnational, and European or global public spheres?

RQ4: Can the European audience be segmented according to its use of print media? If so: (1) Are the segments distributed similarly in each country and comparable among the participating countries? (2) What sociodemographic characteristics predict segment affiliation?

Method

The study was based on a large cross-European audience research project conducted in the context of EU COST Action IS0906. Data were collected online in early 2013 from nine European countries (Belgium, Croatia, Denmark, Germany, Hungary, Israel, Italy, Poland, and Portugal) by local and international commercial firms, with quotas instituted to ensure that each sample was representative of the country's population. The overall sample size was 10,742 European Internet users aged 14 and over, with about 1,200 participants in each country. As the sample involved Internet users from diverse countries (in terms of culture, geographic location, income, and Internet penetration), the analysis provided an overall picture of European audiences and their use of print media.

Measurements

The present study addressed several parts of the data according to the following issues:

Media use the day before responding to the survey: Respondents were asked to think about the previous day and report how much time they spent using various media. This part of the questionnaire was split into two sections: one relating to traditional mass media (e.g., television, radio, newspapers) and differentiating between these old media and use of digital/Internet-based media (via computer and cellular phone), and the other considering various Internet-based activities, such as use of social network services (SNSs), blogs, and online games.

Types of print newspapers read and location of use: Respondents were presented with a list of various types of newspapers (e.g., daily international, national, and local newspapers) and were asked to indicate which types they read. They were also given a list of at-home (e.g., in the living room) and out-of-home (e.g., at work, at school, public spaces) locations and were asked to mark all those in which they used newspapers.

Leisure preferences: Respondents were given a list of 14 leisure and media-use activities and were asked to indicate the three they were most likely to choose if they had a few hours of free time.

Background questionnaire: The questionnaire examined the following demographic and sociodemographic variables: sex, age, family status, education, income, employment status, residential area, and country of residence.

Data Analysis

Data were analyzed using SPSS v.20 software. We used descriptive statistics (i.e. frequencies, ratios, crosstabs, and chi-squared tests) and Pearson correlations to determine the position of print media relative to equivalent digital media and their use compared to that of other media. We explored segments within the European media audience by performing a cluster analysis of all data regarding reading activities the day before responding to the survey. In the next stage, we used crosstabs and chi-squared tests to identify the differential representation of the various countries in each such segment. Finally, as differences in media use could be affected by various background factors, we conducted a series of logistical regressions in which the dependent variables were cluster types and the independent variables were various sociodemographic parameters and country of residence. Categorical variables were dummy-coded for this purpose. Unless otherwise stated, all reported findings below are significant at or above .01.

Results

The State of Print Media Among European Audiences

An examination of reported use of print media the day before responding to the survey (Table 1) demonstrated a certain weakness of print newspapers in comparison to their digital alternatives. A higher percentage of participants reported reading online newspapers (61.42% vs. 57.28%) and a much higher percentage reported obtaining news online via other channels (67.67%). Moreover, the mean use time of online newspapers was significantly higher than that of print newspapers (40.08 vs. 31.74 minutes). Overall, the mean use time among the sample as a whole is highest for online newspapers (24.79 minutes), followed by other online news channels (22.23 minutes), and print newspapers (18.35 minutes). By contrast, the percentage of participants reporting reading books in print was more than double that of those who reported reading digital books (45.93% vs. 21.06%), as was overall mean use time (54.94 vs. 27.27 minutes). As a result, the mean time of print-book reading among the sample as a whole was about four times higher than that of digital-book reading (25.60 vs. 5.89 minutes).

Table 1. Use of Print Media the Day Before Responding to the Survey.

	Use (N)	Use (%)	Mean use time among users (min.)	SD	Mean use time among sample* (min.)	SD
Newspapers, Print	6,153	57.28	31.74	34.52	18.35	32.69
Newspapers, Online	6,598	61.42	40.08	44.59	24.79	41.97
Obtaining news online from other sources	7,269	67.67	32.76	39.26	22.23	36.17
Books, Print	4,934	45.93	55.40	67.89	25.60	54.79
Books, Digital	2,262	21.06	27.27	54.94	5.89	29.82

* N = 10,742

The share of total media use devoted to each medium was similar for both types of newspapers (about 8%) and only a little higher than that for obtaining other news online (6.72%). Book reading, however, showed a significant difference, as print-book reading accounted for 13.46% of total media use, as compared with 10.46% for digital-book reading. Nevertheless, this difference was relatively small compared with the disparity found in mean use time (in minutes), suggesting that people who read digital books were generally lighter media users than people who read books in print. Furthermore, although significantly more people reported reading newspapers than reading books, the mean percentage of total media-use time devoted to book reading was higher than that of all types of news consumption. This means that fewer people read books, but those who do devote a greater share of their media-use time to this activity.

Correlations between reported use times of various mass media (Table 2) revealed strong associations among reading-related media, especially between print and digital books ($r(1,870) = .502, p < 0.001$) and between online newspapers and other online sources of news ($r(5,807) = .496$). The associations between uses of reading-related media and uses of other mass media were generally low (Pearson correlation $< .2$ in most cases). The notable exceptions were the high correlations of digital-book reading with television viewing ($r(1,561) = .443, p < 0.001$) and with listening to the radio via mobile phone ($r(1,593) = .466, p < 0.001$).

Table 2. Use of Print and Equivalent Media Correlated with Use of Other Mass Media.

		Newspapers, Print	Newspapers, Online	Digital news sites	Books, Print	Books, Digital
Newspapers, Print	Pearson	1	.344	.176	.348	.397
	N	6,153	4,345	4,637	3,612	1,892
Newspapers, Online	Pearson	.344	1	.496	.236	.290
	N	4,345	6,598	5,809	3,642	2,047
Digital news sites	Pearson	.176	.496	1	.092	.114
	N	4,637	5,809	7,270	3,818	1,986
Books, Print	Pearson	.348	.236	.092	1	.502
	N	3,612	3,642	3,818	4,936	1,872
Books, Digital	Pearson	.397	.290	.114	.502	1
	N	1,892	2,047	1,986	1,872	2,264
TV, TV set	Pearson	.207	.161	.134	.129	.094
	N	5,650	5,894	6,470	4,398	2,113
TV, Computer	Pearson	.162	.125	.086	.260	.358
	N	2,712	2,918	3,029	2,382	1,766
TV, Mobile phone	Pearson	.244	.132	.121	.274	.443
	N	1,792	1,845	1,834	1,710	1,563
Radio, Radio set	Pearson	.206	.111	.068	.126	.065
	N	4,676	4,693	5,043	3,721	1,905
Radio, Computer	Pearson	.158	.127	.115	.139	.216
	N	2,306	2,523	2,583	2,136	1,684
Radio, Mobile phone	Pearson	.394	.261	.113	.303	.466
	N	1,970	2,039	2,015	1,867	1,595
Audio	Pearson	.128	.151	.125	.141	.149
	N	3,040	3,224	3,419	2,651	1,719
Video	Pearson	.165	.089	.066	.149	.245
	N	3,158	3,311	3,460	2,628	1,684

Note: All Pearson correlations presented in this table are significant at $p < .001$.

Print-newspaper consumption data revealed that among the various types of newspapers, free newspapers were the most prevalently used (read by 46.2% of users), followed by national daily newspapers (45.6%), and magazines and other periodicals (42.5%). There were no significant differences in location of use among users of various types of newspapers. In all cases, the percentage of users indicating at-home locations (ranging between 83% and 88%) was significantly higher than that of readers reporting out-of-home locations (53%–58%). There were, however, many differences among the nine countries examined in this study in the reported use of various types of newspapers (Table 3). The percentages of participants who reported that they read national daily newspapers were highest in Croatia (65.0%) and Israel (61.3%); Denmark had the highest percentage of local newspaper use (56.7%), followed by Italy (44.4%) and Poland (43.8%); and Israel displayed the highest free-newspaper use rate

(65.4%), followed by Poland (58.2%) and Denmark (56.7%). Poland also had a remarkable percentage of respondents who reported reading weekly newspapers (62.3%), whereas Belgium had a high percentage of magazine and periodical readers (60.0%). The percentage of respondents who reported reading international daily newspapers was extremely low in all participating countries.

Table 3. Use of Various Types of Print Newspapers, by Country (% of National Samples).

	Belgium	Croatia	Denmark	Germany	Israel	Italy	Poland	Portugal	Hungary	The Sample
National daily newspapers	51.8	65.0	34.0	37.3	61.3	49.5	45.6	47.3	18.9	45.6
Local daily newspapers	23.6	35.1	56.7	36.0	22.1	44.4	43.8	21.7	26.7	34.6
International daily newspapers	0.7	2.6	4.8	2.7	2.1	4.8	3.5	4.2	0.7	2.9
Weekly newspapers	21.8	12.3	13.9	28.3	29.4	24.8	62.3	28.0	9.2	25.6
Free newspapers	51.0	30.0	56.7	51.0	65.4	18.6	58.2	43.5	42.0	46.2
Magazines/Periodicals	60.0	49.0	52.5	36.8	31.8	46.5	25.8	42.5	39.2	42.5

Subsegments Among European Audiences According to Reading Patterns

The reading-related data were subjected to a *k*-means cluster analysis, which specified the groups with similar reading patterns. The analysis built on five relevant measures of use time so that each subsegment could share between one and five common practices. Analysis explored five possible solutions (from three to seven clusters), and produced an optimal solution (based on distinctiveness) of three clusters. After separating *nonreaders* from *light readers*, four segments were identified based on use of print media and their digital equivalents (Table 4). The first cluster, labeled *light readers*, reported relatively light use of all five media with a mean overall reported reading time of 77 minutes. As this group comprised most sample respondents (73.9%), it represents the typical European user of print media and their equivalents. The second-largest group was that of *nonreaders*, who did not use any of the reading-related media the day before the survey. This group contained 12% of the sample respondents.

The two remaining clusters, labeled *heavy print readers* and *heavy online readers*, were much smaller (8.3% and 5.8%, respectively). The first was characterized primarily by heavy use of print books. The average time devoted to this medium was 163 minutes, and the cluster's mean overall reported time devoted to reading was 268 minutes. The *heavy online readers* made intensive use of both online newspapers (133 minutes) and other online news sources (98 minutes). Their time spent reading print newspapers, however, was somewhat lower than that of the *heavy print readers* (28.51 vs. 31.54 minutes). Heavy online readers' mean overall reported time devoted to reading was the highest of all (290 minutes).

Table 4. The Four Clusters Based on Use of Print and Equivalent Media.

Medium	Cluster				Entire Sample
	Light Readers	Heavy Print Readers	Heavy Online Readers	Nonreaders	
Newspapers, Print	18.84 ^c	31.54 ^a	28.51 ^b	0.00 ^d	18.19
Newspapers, Online	19.29 ^c	32.63 ^b	132.89 ^a	0.00 ^d	24.62
Digital news sites	19.35 ^c	26.43 ^b	98.52 ^a	0.00 ^d	22.17
Books, Print	14.74 ^c	162.83 ^a	17.94 ^b	0.00 ^d	25.45
Books, Digital	5.18 ^b	14.66 ^a	12.03 ^a	0.00 ^c	5.74
Total use time	77.40 ^c	268.09 ^b	289.90 ^a	0.00 ^d	96.17
Cluster size	7,937	892	619	1,294	10,742
Percentage of sample	73.9	8.3	5.8	12.0	100

Note: Data represent the mean number of reported minutes spent on use of each medium the day before taking the survey. Means that are significantly different according to LSD tests are denoted by the letters *a*, *b*, *c*, and *d*.

The clusters were not equally represented in the nine countries examined in this study (Figure 2). The countries in Northwestern Europe had the highest rates of *nonreaders* (Germany, Denmark) and *light readers* (Belgium), and those in Eastern Europe had the highest rates of *heavy print readers* (Croatia, Poland) and *heavy online readers* (Croatia, Hungary). Representation of the clusters in countries in Southern Europe (Israel, Italy, and Portugal) had no special characteristics and was similar to that of the sample as a whole.

Surprisingly, these findings were not fully in line with respondents' leisure preferences. The percentage of respondents who indicated "reading books, newspapers, and magazines" as one of the three activities that they were most likely to choose if they had a few hours of free time was highest in Italy (41.3%) and Belgium (39.4%) and lowest in Portugal (27.1%) and Croatia (29.4%). Nevertheless, Croatia and Hungary had the highest rates of respondents listing "visiting websites of interest" as their preferred leisure activity (58.2% and 47.2%, respectively).

Furthermore, the leisure preferences of respondents from Northwestern Europe may explain the high percentages of *nonreaders* and *light readers* among them. Belgium and Denmark had the highest percentages of respondents indicating "watching television" as their preferred leisure activity (63.3% and 49.3%, respectively), and Germany had the highest percentage of individuals listing "listening to music" (16.8%). People from these countries thus exhibited a stronger preference for other types of mass media. Very high percentages of respondents from Southern Europe opted for activities such as "using SNS and sending SMS" (Israel and Portugal), "calling friends and family" (Israel), and "visiting" (Italy), indicating that these individuals have a stronger preference for social activities.

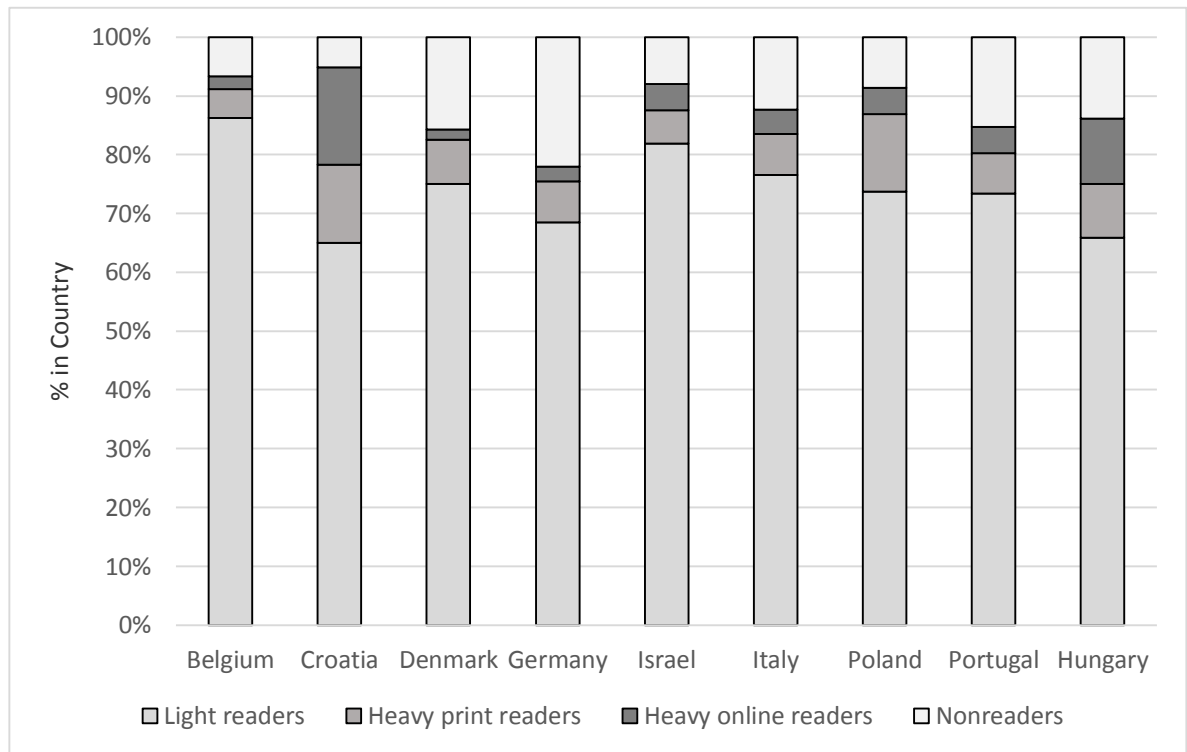


Figure 2. Cluster percentages in countries examined.

As the cross-national comparison suggested differentiating between Northwestern, Eastern, and Southern Europe, the countries were dummy-coded accordingly and used as independent variables in a series of logistical regressions, with the cluster types as dependent variables. Other independent variables were gender, age, family status, education, income, employment status, and place of residence. A summary of the analyses is presented in Table 5.

Being a *light reader* was strongly associated with being married with children and working full time, positively correlated with being male, older, and well-educated and negatively correlated with living in Southern Europe. Belonging to the *heavy book reader* group was strongly and positively associated with being older, having higher education, and living in Eastern Europe and strongly and negatively associated with being male and working full time and somewhat negatively associated with being married with children. Strong predictors of belonging to the *heavy online readers* included being male, residing in a big city, and living in Eastern Europe and not in Northwestern Europe. Heavy online reading was also somewhat positively correlated with being older and negatively correlated with being married with children. Being a *nonreader* was strongly and negatively associated with being older, being married with children, having higher education and higher income, and living in Eastern Europe and negatively

associated with being male and residing in a big city, although it was also strongly and positively associated with residence in Northwestern Europe.

Table 5. Summary of Regression Analyses Examining Associations Between Cluster Type and Socioeconomic Background.

	Light readers	Heavy print readers	Heavy online readers	Nonreaders
Gender	.101*	-.603***	.730***	-.123*
Age	.005**	.010***	.011**	-.020***
Family status	.351***	-.188*	-.247*	-.411***
Education	.153**	.272***	.131	-.546***
Income	.109	-.016	.080	-.316***
Employment status	.275***	-.553***	-.153	-.002
Residence in big city	-.063	.125	.338***	-.156*
Northwestern Europe	-.045	-.055	-.786***	.318***
Eastern Europe	-.455**	.699***	.977***	-.305***
Constant	.678***	-2.702***	-4.046***	-.704***
χ^2	273.84	260.12	364.71	375.38
<i>df</i>	9	9	9	9

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Note: Regressions were binary logistical, with cluster affiliation (1 = *yes*, 0 = *no*) as the dependent variable. All independent variables except age were dummy-coded: Gender: 1 = *male*, 0 = *female*; Family status: 1 = *married with children*, 0 = *other*; Education: 1 = *some postsecondary education*, 0 = *lower education level*; Income: 1 = *higher than average*, 0 = *similar to average or below*; Employment status: 1 = *full time*, 0 = *other*; Place of residence: 1 = *in or near a big city*, 0 = *other*; Northwestern Europe: 1 = *Belgium, Denmark, Germany*, 0 = *other*; Eastern Europe: 1 = *Croatia, Hungary, Poland*, 0 = *other*.

Discussion

Displacement of an old medium—such as print—by a new one is a long process of change in the production, distribution, and consumption of both media. As elaborated in our model, a longitudinal perspective and empirical data collected at several points in time (Adoni & Nossek, 2001) are sine qua non conditions for exploring this process. The present study, which examines comparative data on Internet users in nine European countries, was intended as a baseline for future research. Even at this initial stage, however, with only one set of data, it is possible to assess the present status of print in the new digital mediascape and to offer tentative speculations about its future.

The main finding of our study is that print media still constitute an important component of the new communications environment for European audiences. More than half of the population reads print newspapers and nearly half still read print books. One-fifth of our sample of audiences read digital books.

The disparities in the mean amount of time that the general population devotes to reading print newspapers, online newspapers, and other online news sites were relatively marginal. The difference between use of print books and their digital equivalents, however, was significant: The mean time devoted to reading print books was double the mean time devoted to reading print newspapers. Hence, the print-book reading public was smaller than that of print newspapers, although the former tended to consist of heavy readers who devote a greater share of their media use time to this activity.

This finding demonstrated the importance of using the time-budgeting method along with questions on the general use of a medium. The surprisingly high share of time devoted to reading books by the members of the reading public confirmed our assumption that book reading is an important cultural activity for European audiences. Nevertheless, it is important to note that other studies (Desilver, 2014; Zickuhr & Rainie, 2014) have reported a slow but steady and continuous increase in digital-book reading. Hence, it is plausible to assume that we are witnessing an option for future displacement of print books by their digital counterparts, assuming the two media satisfy exactly the same needs, with a possible advantage for the digital option. As elaborated below, however, our findings suggest that this displacement, if actualized, will only be partial.

The displacement process of print newspapers, by contrast, is much more pronounced. Print newspapers already have a smaller reading public than both online newspapers and various online news sites. The online editions of newspapers are often substantially different from their print versions, whereas digital news sites use journalistic formats that differ from those of the print medium, with greater emphasis on visual aspects of news, and news sites are updated constantly with no absolute deadline. The convergence of these platforms with computers and smartphones makes it possible to obtain up-to-date news anywhere, which empowers users by enabling them to react (talk back) and even participate in original news content creation. These new technologies apparently fulfill both the traditional need for information and new and unique psychosocial needs for active social and political participation. Consequently, according to our model, their digital counterparts seriously threaten the existence of print newspapers. Adversely, according to the explanations of the model, option A1, which means a modification of medium A (print newspapers and magazines in our case), might develop that will cater to certain functional needs that the online equivalents do not satisfy sufficiently. This relates to the growing demand for investigative journalism, alternative voices, accurate information, and, in particular, specialization and in-depth interpretation that print media, especially weekend editions, news magazines, and special editions of daily newspapers (such as economic supplements targeting average consumers locally and globally) offer (Nossek, 2009).

Unlike print newspapers and their online equivalents, the text of a given book published in digital form or in print is exactly the same. There are, of course, some e-books with open texts that include links to other sites, but these remain the exception to date. From a functional point of view, we may assume that the same reading material offered in two different technological forms will provide rather similar gratification to readers. These conclusions were corroborated by a recent study reporting that in 2013, print-book reading remained stable and dominant, although the popularity of digital books was rising. Few readers have abandoned print for e-books, and nearly all e-book readers also read print books (Zickuhr & Rainie, 2014).

Identical content notwithstanding, print and digital books use two completely different technologies, and readers' preferences for either of them may well be a function of such differences. The digital book has many attractive features: Once a relatively inexpensive digital reading device is acquired, digital books are cheaper and more easily available than their print counterparts; they save storage space; they meet the needs of the visually challenged; and they are easily transportable. Despite these advantages, however, their penetration has been slow and does not hint at complete displacement of print books (Desilver, 2014; Zickhur & Rainie, 2014).

Our findings clearly demonstrate that readers are not giving up print so easily and tend to prefer the book as a tangible object. Readers may favor specific features of print, such as the smell and touch of paper and various book formats. They may also view their books as art objects and enjoy them as such. In his famous essay "Unpacking My Library: A Talk about Book Collecting," Walter Benjamin (1969) succinctly describes exactly this type of reader. When discussing the relationships between readers and their books, he claims that it is "a relationship to objects which does not emphasize their functional, utilitarian value, that is their usefulness" (Benjamin, 1969, p. 60), and he uses terms such as "love" and "enchantment" to describe readers' fascination with their books.

The very material substance of print newspapers and print newsmagazines might also explain the resilience of these media, as Carolyn Kitch (2009) described in her article "The Afterlife of Print":

Left behind in the information race by rapid, electronic news-delivery vehicles, newspapers and magazines today increasingly capitalize on their very weakness: their material substance and the permanence of their content (p. 340).

According to Kitch (2009), the copies of the special issues of newspapers and magazines covering major events like wars, major terrorist attack, earthquakes or presidential elections become material artifacts that people buy and keep as a memory enhancing identity and integrative moments of their community.

From a sociological point of view, it is well documented (Bourdieu, 1984; Escarpit, 1971) that books as objects serve as signifiers of high social status. Even in the current digital age, an impressive home library attests to the higher status of its owner (Yamane, 2014). Moreover, many people like to read the "right" print books and magazines in public, thereby asserting their social status and aspirations. Finally, many readers feel more comfortable with traditional literacy and have difficulty acquiring even the minimal skills necessary for using digital books (Adoni & Nossek, 2001).

This loyalty to and even admiration of print can also, at least partially, explain the very high correlations between reading print media and reading their equivalents, in comparison to the lower correlation of reading and consuming all other media. The high correlations between print and equivalent media use clearly demonstrated that preferences were motivated by technological features. Correlations were highest, however, when based on both technological features and content, such as the high correlation between reading print newspapers and use of digital news sites, showing that users who are primarily interested in news will use all sources available to obtain it.

The most interesting case was that of digital books. The correlation between reading print books and reading their digital equivalents was the highest of all, apparently because of the identical content and physical resemblance between the two. Digital-book reading, however, was also highly correlated with print-newspaper reading and with use of mobile phones for radio listening and television viewing. The digital book thus functioned as a kind of a link between print and the newest digital media.

European audiences examined in this study consisted of four types of readers of print media and their equivalents: The largest group, comprising three-quarters of our sample, divided its reading time for print media and equivalents (77 minutes per day) almost equally among print media (books, newspapers, and magazines) and their digital counterparts (digital books, online newspapers, and other digital informational sites). They were light readers of each medium and did not focus on any specific type of reading. Nonreaders made up about 12% of audiences, and heavy print readers and heavy online readers were small. These findings demonstrated that the majority of Internet users balance their time spent reading different media. The consequent functional interpretation is that different media fulfill different psychosocial needs. Thus, instead of displacement, we are witnessing the evolution of a new functional division of labor among print media and their digital equivalents.

As anticipated on the basis of previous studies (Cope & Phillips, 2006; Nossek & Adoni, 2006) and the latest Pew Research Center findings (Zickuhr & Rainie, 2014), we found that being a light reader was strongly associated with marriage and children and full-time employment, whereas heavy print-media reading was associated with higher education, the female gender, and not having full-time employment. Age mainly differentiated readers from nonreaders, with the latter tending to be younger.

The results of the cross-national comparisons were unexpected and somewhat ambiguous. Audiences from Northwestern European countries had the highest percentages of light readers and nonreaders, whereas Eastern European countries had the highest percentages of both of print readers and heavy online readers, possibly because print media were the most widely available and dominant media in postsocialist countries for many years (Gulyás, 2003), whereas television and other audiovisual media had long established their ubiquitous presence and consequent cultural dominance of the media scene in Western Europe. The sources and trustworthiness of the various media in the different countries over the years may also explain the variance in use of print media. At this stage of our research, however, the causes underlying the differences among countries (e.g., extent of readership of various types of newspapers) are unclear, and our interpretations are speculative and partial. These findings should be further investigated in future research through in-depth exploration of idiosyncratic cultural and political conditions and historical backgrounds.

In conclusion, our analysis of consumption of print media and their digital equivalents among European audiences depicted a complex configuration that does not suggest any immediate or complete displacement process of one type of media with another at this stage but rather a slow synergistic evolution among media types during which sophisticated audiences are aware of their idiosyncratic psychosocial needs and know how to use various media simultaneously to fulfill those needs in the best possible way.

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