European Journal of Communication
http://ejc.sagepub.com/

Newspaper Readers in Europe : A Multilevel Study of Individual and National Differences

Eiri Elvestad and Arild Blekesaune

European Journal of Communication 2008 23: 425
DOI: 10.1177/0267323108096993

The online version of this article can be found at:
http://ejc.sagepub.com/content/23/4/425

Published by:
SAGE
http://www.sagepublications.com

Newspaper Readers in Europe

A Multilevel Study of Individual and National Differences

Eiri Elvestad and Arild Blekesaune

ABSTRACT

This article discusses national and individual differences in newspaper reading in Europe. The study uses comparative data on newspaper reading from 23 European countries from the European Social Survey (ESS). By using a multilevel analysis technique, newspaper reading is analysed from the perspective of both individual and national characteristics. The authors claim the findings of this study could throw new light on Hallin and Mancini's theory of media systems. The analysis shows that individual differences explain most of the variation in newspaper reading, but some of the variance could also be explained as national variance. Age, gender, education level and household income explain differences in newspaper reading, but these variables do not have the same effect in all countries. National-level variables in newspapers' situation, other media use, demography and public opinion also improve the effectiveness of 'the newspaper reading in Europe' model.

Key Words comparative European study, media systems, media use, multilevel analysis, newspaper reading

Eiri Elvestad is Research Fellow in Sociology, Department of Sociology and Political Science, Norwegian University of Science and Technology (NTNU), 7491 Trondheim, Norway [email: Eiri.Elvestad@hive.no]. Arild Blekesaune is Associate Professor of Sociology, Department of Sociology and Political Science, NTNU [email: Arild.Blekesaune@svt.ntnu.no].

European Journal of Communication Copyright © 2008 SAGE Publications (Los Angeles, London, New Delhi and Singapore) www.sagepublications.com, Vol 23(4): 425–447. [10.1177/0267323108096993]

Introduction

When the European media situation is compared with the rest of the world, discussions stress the high circulation of newspapers. Europe is characterized by high numbers of newspaper readers among its population compared with the rest of the world (WAN, 2006).[1] Despite this, the newspaper situation has been claimed to be one of the major characteristics distinguishing the media situation between different European countries. Evident dimensions of difference include the varying hold of the mass newspaper on public attention and even newspaper reading in general; some cultures produce avid readers, others less so (De Bens and Østbye, 1998; Kelly et al., 2004: 2). The general picture is a high level of newspaper readers in the Nordic countries[2] and fewer readers in southern Europe. Norway, Finland and Sweden have a newspaper penetration that is over seven times higher than that of Greece or Portugal (WAN, 2005). The former Eastern bloc countries have been pointed out as a region in the middle (Weibull, 2005). In their attempt to classify European nations into different media systems, Hallin and Mancini (2004) use newspaper circulation as one of the characteristics by which to distinguish them.[3]

Even though globalization processes involve a decrease in the differences between national media systems (Hallin and Mancini, 2004), and challenge cross-national comparative media research that treats the nation as a unit (Livingstone, 2003), we claim that the variable newspaper consumption in Europe still justifies cross-national comparative studies of newspaper reading. But how could these differences best be explained? What are the main explanatory variables? And are the differences in newspaper reading suitable characteristics by which countries may be distinguished in the media systems models of Hallin and Mancini (2004)?

The differences in newspaper reading have been interpreted both as an expression of characteristics of the individuals living in each country, and as characteristics of the country as a whole (Gustafsson and Weibull, 1997; Weibull, 2005). Both survey data and national newspaper circulation in countries have been used in analysis and discussion of newspaper reading. Lauf (2001) used a survey analysing how individual characteristics such as gender, age, income and education influence newspaper reading in different ways in a sample of European countries. Taking a different position, Gustafsson and Weibull (1997) and Weibull (2005) use newspaper circulation in a sample of European countries and selected national characteristics to explain the variable circulation. We argue that these studies emphasize the need for research into the interaction between variables characterizing individuals and variables characterizing nations, a

kind of research often referred to as 'multilevel research' (Hox, 2002). Individuals are nested within nations, and both the individual characteristics and the national context to which the individuals belong can influence newspaper reading. By using multilevel analysis, we can determine the direct effect of individual- and national-level explanatory variables, and determine whether the explanatory variables at the national level serve as moderators of individual-level relationships.

The main approach of this article is to discuss how individual characteristics and the national context within which they live can explain differences in newspaper reading in European countries today. Three main questions are addressed in this article:

1. Which variables at the individual level affect newspaper reading?
2. Do nation-level effects actually exist?
3. If so, can we gain an impression of how they operate by examining the relation between individual-level variables, nation-level variables and outcomes?

Comparable data on both an individual and national level from as many European countries as possible is a prerequisite for doing such an analysis. For the last few years, the European Social Survey (ESS), a survey with comparable questions about newspaper reading, has been accessible for academic use. The ESS is an academically driven social survey designed to chart and explain the interaction between Europe's changing institutions and the attitudes, beliefs and behaviour patterns of its diverse populations.[4] We use data from its second round (ESS 2, 2004/5) where the survey covers 24 nations.[5] The project is designed and carried out to high standards, something which also improves the between-country comparability. We also include comparable data on the national context from other databases.

The national context

Many reasons have been put forward as an explanation of newspaper reading patterns at a national level, from the climate to the media system (Gustafsson and Weibull, 1997; Hallin and Mancini, 2004; Kelly et al., 2004; Weibull, 2005). Religion, politics and economic indicators have all been claimed to influence the national media situation, and correspondingly the newspaper reading of the nation. Protestantism contributed to the spread of literacy and thus to the early development of mass-circulation media in Northern and Central Europe (Eisenstein, 1979). Does this give

us reason to expect that countries dominated by Protestantism spend more time reading newspapers? The strength of the local press in Northern Europe has been explained by its role in small self-governed municipals (Høst, 1999), and the fact that this medium is the core communication channel in this region, while people in Southern Europe have other social and cultural networks[6] that fulfil this function (Gustafsson and Weibull, 1997). Further, Weibull (2005) maintains that public opinion such as 'political interest', 'trust in parliament' and 'trust in the press' are variables that could be expected to relate to the level of newspaper reading in the population. Countries with a strong economy measured by GNP tend to rank higher in newspaper reading than those with a lower GNP (Gustafsson and Weibull, 1997; Weibull, 2005). Further, in many cases newspaper reading is connected with work (Andersson, 2005; Gustafsson and Weibull, 1997), and it has been noted by Høst et al. (forthcoming) that higher unemployment rates in a country seem to decrease newspaper use.

The extent to which newspapers compete with other media for advertising income and the attention of the public may also affect newspaper reading. In countries where newspapers get a larger share of advertising revenue, the newspaper circulation is higher (De Bens and Østbye, 1998). Other kinds of media use may substitute for newspaper reading, but this tendency is ambiguous (Weibull, 2005). While some nations may be dubbed 'TV nations', 'newspaper nations', etc., other nations may be labelled 'media omnivore' nations (cf. 'cultural omnivores'; Peterson and Kern, 1996).

Based on the relationship between media system and political system, Hallin and Mancini (2004) present three models of media systems[7] suitable for categorizing the Western European and North Atlantic countries. They place the Nordic countries with Belgium, Switzerland, Austria, Germany and the Netherlands. All these are categorized as a *North European democratic corporatist model*. Ireland and the UK are examples of a *North Atlantic liberal model*, while the countries in Southern Europe – France, Portugal, Spain and Greece – come under the category of a *Mediterranean or polarized pluralist model*.[8] The former Eastern bloc countries are absent from the models of Hallin and Mancini. According to Hallin and Mancini (2004: 305), Eastern European countries such as Poland, Hungary and the Czech Republic and the Baltic states have much in common in terms of historical development with the democratic corporatist model. However, recent research (Weibull, 2005) on newspaper reading suggests that these countries could be placed in a group of their own.[9] The analysis of newspaper reading in this study is used to discuss whether the three media systems of Hallin and Mancini (2004), and a group of former

Eastern bloc countries, reflect the different patterns of newspaper reading in Europe in an effective way.

Individual characteristics

At an individual level, characteristics such as gender, age, education and income have been frequently used as explanatory variables in analyses of newspaper reading.[10] But these characteristics do not necessarily have the same effect in all European countries (Weibull, 2005) and change over time (Lauf, 2001). In some countries, newspapers are read only by the elite, while in others almost anyone reads newspapers (Hallin and Macini, 2004). In all of the nine[11] European countries in Lauf's study, age has become the most powerful discriminating variable between daily and non-daily reading. The decline in newspaper reading is due to both age and cohort effects. Each new generation seems to increase readership as it ages, but reads less than the generation it replaces (Lauf, 2001; Nilsson, 2005). On the other hand, a study by Weibull (2005) suggests an adjustment to this unambiguous picture. He found that in the UK, Portugal, Spain and Italy, the young population read more than the rest of the population (Weibull, 2005).

The general picture of gender differences in newspaper readership in Europe is that men read more than women, but the size of the difference varies between countries (Lauf, 2001; Weibull, 2005). Hallin and Mancini (2004) claim that there are large gender differences in newspaper reading in Southern Europe, while these differences are small or non-existent in Western Europe.

Further, both status and class have been discussed as important explanatory factors in variance in newspaper reading (Chan and Goldthorpe, 2007; Nilsson, 2005). People with higher education tend to read more newspapers than those with less education (Schoenbach et al.; 1999; Vaage, 2006). The effect of education, however, is not clear. The differences between groups with high or low education are smaller in countries with high newspaper penetration (Gustafsson and Weibull, 1997). A later study by Lauf (2001) has shown that education no longer plays a significant role in predicting the everyday reading of news about current politics in his sample of countries. In contrast, Nilsson (2005) found that in Sweden, children growing up in academic families read more morning papers than those living in working-class families.

Newspaper reading as a question of economy has been raised by several theorists (Andersen, 2005; De Bens and Østbye, 1998; Høst, 2005; Lauf, 2001). Studies by Høst (2005) and Lauf (2001) show how income may have become particularly relevant in some European countries. On

the other hand, it is possible that free dailies or non-dailies and online versions may have prevented a decline in newspaper reading related to income.

Measuring newspaper readership

When newspaper reading patterns in Europe are discussed, it is often based on the circulation of paid-for newspapers (Gustafsson and Weibull, 1997; Hallin and Mancini, 2004; Kelly et al., 2004; Weibull, 2005). Using the circulation of paid-for newspapers as a measurement of newspaper reading in each country does not cover the percentage of people actually reading newspapers, nor does it cover the differences between countries according to the number of people reading each printed copy of a newspaper. Even though there are difficulties when using readership surveys,[12] we believe respondents' own reporting of newspaper reading is advantageous. We argue that self-reported time spent on newspaper reading gives more information about actual newspaper reading than circulation rates per 1000. Asking about time spent on newspaper reading allows for discussion not only about why some countries have a high level of newspaper readers, but also why some spend a lot of time on reading and others do not.

The dependent variable: newspaper reading

Our analysis is based on following question in the ESS survey: 'On an average weekday, how much time, in total, do you spend reading newspapers?'[13]

The ESS survey does not specify what is meant by 'newspaper'. This implies that the respondents are permitted to use their own definition. First, the newspaper format is not defined. According to Andersen (2005), it is likely that respondents who read the online versions regularly will still consider this as reading 'newspapers'. Newspapers then may be either online, printed or both. Second, respondents may refer to free-copy versions, subscription or non-subscription paid copies of newspapers. And third, the content actually read in newspapers may vary a lot.[14] Will this result in comparing apples and oranges? We argue that it will not. Most of the online newspapers are online versions of printed versions, and the content and layout of free-copy versions and subscription and non-subscription paid-for versions vary almost just as much within the category as between. There is a diversity of newspapers, but still in most people's minds newspapers are something different from TV or radio (even though media convergence does confuse this distinction).

To give an exact 'time spent on newspaper reading' is difficult and asking for time-use 'on an average day' could lead to overreporting. However, since the purpose of this study is a cross-national comparison, this is less problematic. There is no obvious reason to expect that these possible sources of error will vary between nations and muddle the analysis.

Newspaper reading in Europe

Table 1 shows the average time spent reading newspapers (in minutes), and the percentage of non-readers in each country.

Table 1 shows that there are broad differences in newspaper reading between inhabitants of the European countries. When comparing time-use with the share of non-readers we can also conclude that in some countries there are fewer people spending a lot of time reading newspapers, while in others almost the whole population read, but the average time spent reading is shorter. How does the distribution of countries according to time spent on newspaper reading and the share of non-readers relate to the four groups of countries presented in the theoretical introduction?

Despite the increasing newspaper circulation in Ireland in recent years (WAN, 2006), the Irish have taken us by surprise. Table 1 shows that the Irish spend the most time reading newspapers. They read 10 minutes more than the Norwegians. The 2004/5 ESS study also found that the Irish spend more time than any other nation in Europe reading newspapers. These findings differentiate studies placing the Irish at the lower end of the European table of newspaper reading based on circulation per 1000 (Hallin and Mancini, 2004; Raeymaeckers, 2002; Weibull, 2005). Despite a high proportion of non-readers, the average time spent reading in the UK is also among the highest in Europe.

As expected (see Hallin and Mancini, 2004), a North–South distinction can be observed, but the picture is not clear-cut. Greece has the lowest share of readers and has the population that reads the least. Norwegians spend less time than the Irish in newspaper reading, but almost 96 percent read newspapers on an average day. While the polarized pluralist countries show similar reading habits in this study, there are huge differences between democratic corporatist countries. Belgium differs most from the other countries in this group with reading habits more akin to the Southern European countries. Furthermore, Denmark destroys the picture of a high reading percentage in the Nordic countries.

There is also a tendency for former Eastern bloc countries to be located in the middle, but as Weibull (2005) claims, there are also distinct patterns within this group of nations. We can see that the reading patterns

Table 1 Average time spent reading newspapers in minutes, and share of non-readers (percentage) on an average day. $N = 32{,}765$

Country	*Newspaper reading (minutes)*[a]	*Non-readers (percentage)*
Ireland	53.4	12.8
Norway	43.5	4.4
Finland	40.3	6.4
Iceland	38.7	5.4
UK	38.4	26.2
Estonia	38.1	17.1
Sweden	36.9	8.1
Austria	36.8	15.6
Switzerland	35.5	9.0
Netherlands	35.0	19.9
Germany	33.3	19.4
Slovenia	32.1	14.9
Czech Republic	31.9	22.1
Hungary	31.2	21.4
Denmark	31.0	21.7
Luxembourg	30.9	22.5
Slovakia	29.3	25.5
Poland	26.2	30.6
France	22.5	39.4
Belgium	22.8	45.7
Portugal	19.8	41.5
Spain	17.7	49.2
Greece	16.2	66.3

[a]Respondents who do not read a newspaper on 'an average day' are included with the value of 0 minutes.
Note: Ukraine is omitted, because of a lack of values on several variables at the national level and Italy does not participate in the ESS.
Source: ESS (2004/5).

of Slovakia and Poland are closer to Southern Europe, while Hungary, the Czech Republic, Slovenia and Estonia have fewer non-readers and the inhabitants spend more time reading.

But what characteristics could explain these differences in newspaper reading? Is it variations in the characteristics of the individuals living in these nations that explain the differences; do characteristics of the nations explain the differences; or is it a combination of both that explains the variance? In the following, we show how multilevel analysis might be a useful technique to study these questions.

A multilevel model of newspaper reading

We use a hierarchical linear regression analysis (Hox, 2002) to examine individual-level and national-level effects on newspaper reading. The key differences between multilevel models and standard multiple regression is the use of two random variables (an individual-level random variable and a country-level random variable) for modelling the unexplained variance in multiple models (Browne and Rasbash, 2004).

To test the models we use iterated GLS estimates, and the statistical models were estimated with the MLwiN program.[15] All continuous explanatory variables on the individual level were centred by the grand mean on the individual level, and explanatory variables on the national level were centred by the mean on the national level. The results were interpreted from regression coefficients and random components at both levels.

Table 2 summarizes the results of the estimated two-level models for newspaper reading.[16] In the analysis, we start with the simplest possible model (the intercept-only model) in step I, and build up the analysis from this base model. Step II includes variables at the individual level and shows the linear correlation between these variables and time spent on newspaper reading. In step III, the explanatory variables are allowed to have a curvilinear effect on time spent reading newspapers. The IGLS deviances measure to what extent these three models explain the variation in newspaper reading, and show that each extension of the model in Table 2 implies statistically significant improvements in model explanation.

Consistent with our suggestion that newspaper reading is usefully approached as a multilevel phenomenon, decomposition of the variance in newspaper reading suggests that a significant proportion of the variance lies between nations.[17] The intra-class correlation suggests that approximately 6.5 percent of the total variance in newspaper reading lies between nations. Even if we control for national differences in the effects of age, income and education (model III), the intra-class correlation of 5.1 percent indicates that a substantial part of national differences in newspaper reading should be explained by national conditions.

Individual characteristics and newspaper reading

By including gender, age, education and income in the analysis (step II) we are able to test whether these explanatory variables show significant correlation with newspaper reading in the total sample of Europeans. The model in step II shows that men spend almost 5 minutes more a day reading newspapers

Table 2 Effects of individual-level variables on newspaper reading. N_1 = 32,765, n_2 = 23 countries. Two-level models estimated by MLwiN

	Model I	*Model II*	*Model III*
Fixed effects			
Intercept [β_0]	32.35**	35.39**	36.58**
Women [β_1][a]		−4.94**	−4.77**
Age (± 47.8) [β_2][b]		0.49**	0.53**
Household's income (± 6.1) [β_3][b]		0.67**	0.89**
Years of education (± 11.8) [β_4][b]		0.89**	1.104**
Age^2 [β_5]			0.004**
Household's income^2 [β_6]			−0.14**
Years of education^2 [β_7]			−0.11**
Random effects			
Between individual variance [σ^2_{e0}]	1050.63**	978.13**	970.18**
Between nation variance [σ^2_{u0}]	72.74**	59.41**	52.61**
IGLS deviance (−2*log likelihood)	32,1834.50	31,9459.40	31,9190.90
Degrees of freedom	3	7	10

*Significance at .05 level; ** significance .01 level.

[a]women = 1 and men = 0.

[b]Continuous explanatory variable on the individual level that is centred by the grand mean on individual level.

than women. Time spent on reading newspapers rises with increasing age. For each year of increased age, the time spent on reading newspapers increases by half a minute. Household income and years of education are positively correlated with time spent on newspaper reading. This indicates that those living in higher-income households and those with a higher education spend more time reading newspapers than those with fewer years of education and those living in low-income households. Including age^2, household income^2 and education^2 in model III increases the explanatory power of the former models. This implies that age, household income and education have a curvilinear correlation with newspaper reading.

Previous research (e.g Lauf, 2001; Weibull, 2005) indicates that there will be variations between nations in the way the variables at the individual level may affect the time spent on newspaper reading. To examine this, we extended the model to allow for the possibility of nations having different slopes by allowing the slope coefficient to vary randomly at the national level. The slope coefficients for gender, age, household income

Table 3 Predicted means of newspaper reading (minutes) among men and women in different countries, when the effects of age, income and education are set to their mean values. $N = 32{,}765$

Country	*Men*	*Women*	*Diff. (men–women)*
Iceland	39.9	37.0	2.9
Sweden	37.8	34.4	3.4
Finland	41.9	38.4	3.5
Switzerland	37.5	33.9	3.6
Germany	33.7	30.1	3.6
Norway	44.2	40.6	3.6
Austria	39.3	35.5	3.8
Netherlands	36.6	31.5	5.1
Denmark	32.3	26.6	5.7
Luxembourg	35.9	28.0	7.9
Belgium	27.7	19.5	8.2
Ireland	54.9	48.7	6.2
UK	42.8	33.7	9.1
Poland	32.3	32.8	−0.5
Slovakia	35.7	34.4	1.3
Estonia	42.3	40.3	2.0
Slovenia	37.1	33.5	3.6
Czech Republic	34.9	30.3	4.6
Hungary	37.1	32.4	4.7
France	26.5	20.1	6.4
Spain	26.0	18.8	7.2
Portugal	35.0	25.6	9.4
Greece	25.1	14.3	10.8

Source: ESS 2004/5.

and years of education all have a significant variance between nations. This analysis shows that gender, age, household income and years of education do not have the same influence on newspaper reading in all nations.

In Table 3, we show the predictions of newspaper reading when we allow the effect of gender to vary between countries. In these predictions, the effects of age, income and education are set to their mean values. Here we find that men spend more time reading newspapers than women in all nations except Poland. In the introduction, we presented a hypothesis claiming that individual characteristics vary more between the four groups of nations than within them. There is a tendency towards greater gender distinction in the polarized pluralist countries and the two liberal countries than in the

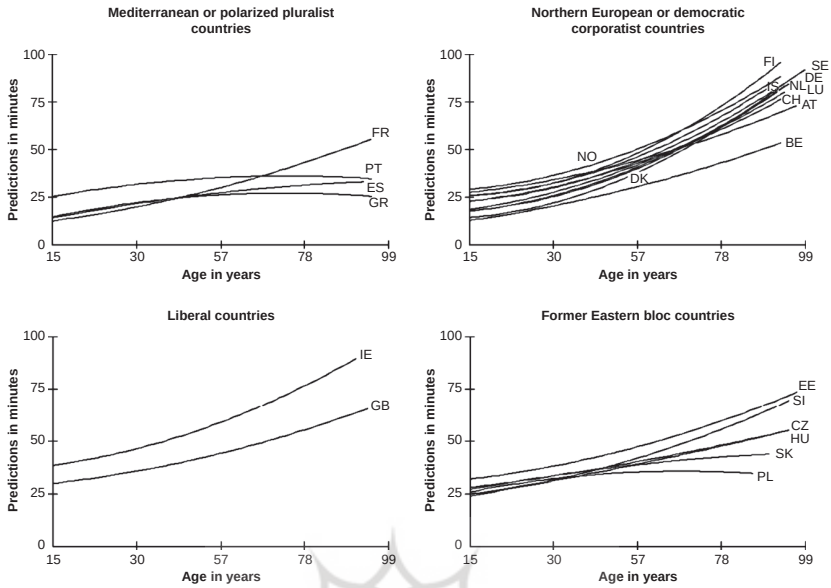

Figure 1 Predicted lines of newspaper reading (in minutes) among men in different countries by age, when the effects of income and education are set to their mean values

democratic corporatist countries or former Eastern bloc countries. However, the Netherlands, Denmark, Luxembourg and Belgium in particular differ from the other countries in their group, with a greater gender difference. Furthermore, there is a greater gender difference among the British than the Irish. The former Eastern bloc countries also have a wide variation. While Polish women spend a little more time reading newspapers than men, Czech men read almost five minutes more than women.

To demonstrate how the effects of age, education and household income influence time spent on newspaper reading in different countries, and within the four groups, Figures 1–3[18] show predicted country lines from the model in step III.

Age has been frequently stated as the most important determinant of newspaper reading (e.g. Lauf, 2001). The predicted country lines in Figure 1 show that the older members of the population tend to spend more time on reading newspapers than younger members, but the picture is not clear. These differences are more obvious in the groups of democratic corporatist and liberal countries, and are more ambiguous in the groups of polarized pluralist countries and former Eastern bloc countries. What are the differences within these groups of countries? France breaks with the pattern

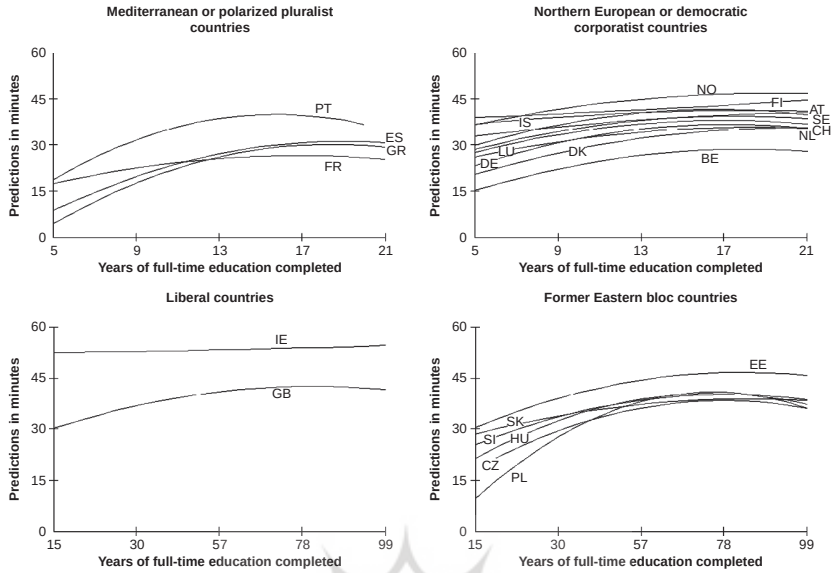

Figure 2 Predicted lines of newspaper reading (in minutes) among men in different countries by years of full-time education completed, when the effects of age and income are set to their mean values

within the Mediterranean group because of greater age differences. In the group of democratic corporatist countries, Denmark differs from the other Nordic countries with a steeper slope, while Belgium and Austria differ from the other countries in the group because of smaller age differences. In the group of former Eastern bloc countries, Polish and Slovakian newspapers show less of a difference between age and readership. The variation between the European nations according to time spent reading is greatest among the elderly population. The age distinction could be interpreted as an effect of generation, as an effect of phase in life, or both (Nilsson, 2005). If age distinction is an effect of generation, it is reasonable to expect a pronounced decline in newspaper reading, particularly in those nations with a large share of readers today. This again implies that the national distinctions according to newspaper reading will decrease in the future.

Figure 2 shows that years of education show a positive but weak correlation with reading time in most nations. The group of democratic corporatist countries show similar and small slopes in almost all countries. The relatively steep curve of Denmark compared with the rest of the Nordic countries should be noted. In the polarized pluralist and former Eastern bloc countries, slopes are steeper, indicating greater differences in

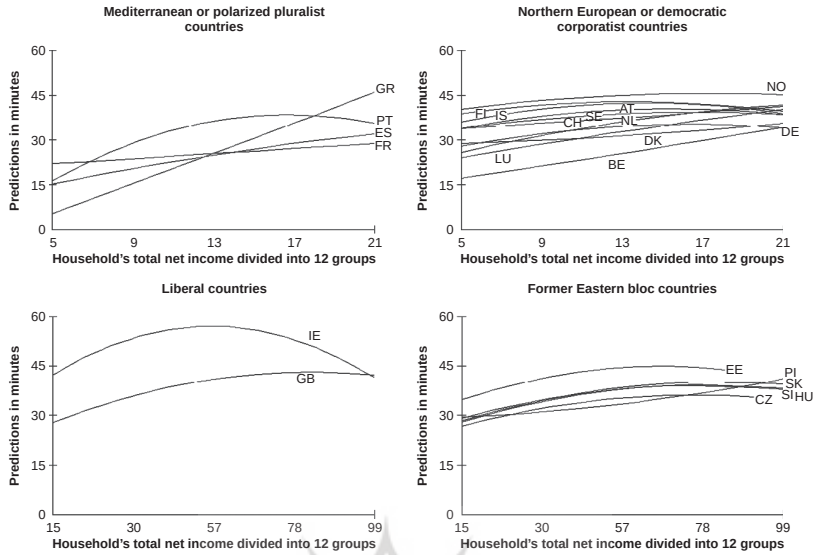

Figure 3 Predicted lines of newspaper readings (in minutes) among men in different countries by household's total net income divided into 12 groups, when the effects of age and education level are set to their mean values

reading time between the low and better educated. In the group of polarized pluralist countries, France differs from the rest of the group because the influence of education level on time spent reading newspapers is nearly non-existent. Poland differs from the other Eastern bloc countries with a much steeper line. In the group of liberal countries, Ireland shows no differences in reading time between low or highly educated readers, while the British highly educated population spend more time reading than those with a lower education.

Figure 3 shows that in most European countries household income has a small effect on time spent reading newspapers. In the democratic corporatist and former Eastern bloc countries, income has a limited effect on reading, while in the polarized pluralist and liberal countries there are larger differences between household economy and reading. But again, there are some countries that do not show the same tendency as the rest of their group. The Belgians, again, differ from the main tendency in their group. Together with the Luxembourgers and the Dutch, Belgians' reading habits are more influenced by household economy than the rest of the group. In the polarized pluralist group, the French are again different by

being the only nation in this group where income does not seem to influence reading time. The effect of household income also differs between the liberal countries. While household income shows a positive correlation with reading time in the UK, the curve for the Irish shows that those who read least are those with the lowest and those with the highest household income.

How do national characteristics explain newspaper reading?

The fact that we found that 6.5 percent of the total variance in time spent on newspaper reading lies between nations leads us to further analysis of what kinds of variables at the national level might be of importance. Table 4 shows how national-level variables of newspapers' situation, other media use, other demographic factors, public opinion and media systems correlate with time spent on newspaper reading when included separately in model III (Table 2). To include variables at the national level implies variables where all individuals within the nation are given the same value. This does not influence the correlations of the individual-level variables in the model. The IGLS deviance difference is a measurement of the variations in the explanatory power of the model before and after we include the national-level variables in the model.

The division of European countries into media systems (Hallin and Mancini, 2004) with former Eastern bloc countries as a fourth group explains more of the national-level variance than the other variables in Table 4. This indicates that the media system/group of the nation the respondents live in influences time spent on newspaper reading. The explanatory power of media systems/groups is first and foremost caused by the low time spent reading among the polarized pluralist countries. Inhabitants of the polarized pluralist countries read almost 12 minutes less than those in former Eastern bloc countries.[19]

Not surprisingly, the newspaper circulation per 1000 and the number of newspapers per household in each country influences the time spent on reading. Furthermore, this analysis supports only some of the hypotheses about explanatory variables at the national level proposed in previous research (e.g. Gustafsson and Weibull, 1997). The share of national newspapers of the total circulation is a measurement of the relative strength of national and regional/local dailies. This analysis shows that the share of regional/local or national newspapers in a country does not influence the time spent on newspaper reading. Høst (1999) claims that the many newspaper titles and many local/regional non-dailies in particular might explain the high level of newspaper reading in Norway. Titles per million

Table 4 Effects of national-level variables on newspaper reading. N_1 = 32,765, n_2 = 23 countries. Two-level models estimated by MLwiN, where each variable is included separately in Model III in Table 2

	β-coeff.	*SE*	*IGLS deviance–difference*
Newspaper situation:			
Circulation per 1000 inhabitants[a]	0.025**	0.006	6.8**
Newspapers per household[b]	17.160**	3.687	11.1**
Share of national newspapers[c]	−0.613	4.020	0.0
Number of titles per million[d]	0.375	0.211	2.0
Regional and local paid-for dailies and non-dailies per million[e]	0.363**	0.087	8.4**
Newspapers' share of advertising expenditure[f]	0.238**	0.086	9.0**
Other media use:			
Average TV use[g]	−0.083	0.123	0.7
Average radio use[g]	0.273*	0.118	7.0**
Average Internet use[g]	13.998*	6.942	2.3
Other demographic variables:			
Population density[b]	−0.023	0.013	2.5
GNP[i]	0.090	0.128	0.2
Average household income[g]	0.479	0.715	0.1
Average education level[g]	2.084	1.280	3.4
Religion (share of protestants)[j]	0.053	0.036	1.5
Unemployment[j]	−1.173*	0.494	4.8*
Public opinion			
Average political interest[g]	9.519	5.112	2.1
Average 'trust in parliament'[g]	0.505	0.927	0.1
Average 'trust in press'[f]	−0.245	0.129	1.6
Media systems (dummies with former Eastern Bloc countries as reference):			19.5**
Mediterranean or polarized pluralist	−11.798**	2.679	
Northern European or democratic corporatist	−1.203	2.364	
North Atlantic or liberal	10.279	5.282	

(Continued)

Table 4 (Continued)

Notes:
[*]Significance at .05 level; [**] significance at .01 level.
[a]Paid-for dailies: average circulation/adult population (copies per thousand) (WAN, 2005).
[b]Paid-for dailies per household (WAN, 2006).
[c]Calculated from circulation (in 1000s) (WAN, 2006). Data from Spain come from Medio Impresos 2006; www.introl.es/ojdx4/diarios2.asp
[d]Paid-for dailies: number of titles/adult population (titles per million) (WAN, 2005).
[e]Titles of regional and local paid-for dailies and non-dailies per million of the population (WAN, 2006).
[f]Calculated from advertising expenditure per medium, newspaper's share (percentage) (WAN, 2006). Values from Iceland, Slovenia and Slovakia are calculated from 2003 data, others from 2004 data.
[g]Calculated from the ESS survey.
[h]GNP: per capita purchasing power parity in US$. *Source:* The CIA World Factbook 2005.
[i]Total population/total sq km (land + water). *Source:* The CIA World Factbook 2005.
[j]The CIA World Factbook 2007.
[l]Based on percentage replies 'Tend to trust' in Eurobarometer (EB62.0). Switzerland, Norway and Iceland (who had not participated in this survey) are set to the national average of 45 percent.

inhabitants in countries are almost significant at the .05 level, and show a positive correlation with reading time. Furthermore, we can conclude that the numbers of local/regional newspapers per million can explain some of the national variance in newspaper reading.

The position of newspapers in the national media is measured both by newspapers' share of advertising expenditure and time spent on other media in the country. Not surprisingly, in countries where the newspapers have a larger share of the advertising expenditure, people spend more time on newspaper reading. This causality could be interpreted as a consequence of mutual influence. This analysis does not support presumptions of some countries being newspaper readers, and others being radio listeners or television viewers. Living in countries with a high average radio and Internet use increases the possibilities of spending more time on newspaper reading. Both time spent on radio listening and Internet use in a country correlate positively with newspaper reading.[20]

This analysis supports the hypothesis claiming that some of the differences in newspaper reading can be explained by the unemployment rate in the country (see Høst et al., forthcoming). In countries with a low rate of unemployment, the inhabitants spend more time reading. The strength of other demographic variables in explaining the variance in newspaper reading is limited. With regard to the economy, this analysis shows that it is the economic position of the individual rather than the economic situation of the country that influences newspaper reading. Population density

shows an almost significant correlation at the .05 level, which could indicate that low population density stimulates newspaper reading. Educational level and political interest in a country also show a positive correlation with reading, almost reaching significance at the .05 level. This indicates that people in countries with a higher educational level on average and a higher share of politically interested inhabitants read more. The hypothesis that nations with a high percentage of Protestants read more than others, building the theory of Protestantism as an explanation for early mass circulation of the press (Eisenstein 1979), is not supported by this analysis. Neither are the hypotheses of 'trust in parliament' and 'trust in press' (Weibull, 2005) supported in this analysis.

Discussion

We commenced this article with the assumption that there are huge differences in newspaper reading between European countries. Our analysis of time spent on newspaper reading in the 23 European countries included in the ESS support this argument. The Irish, who read about 53 minutes on an average day, are at the top of the reading time ranking; at the bottom, we find the Greeks, who read newspapers for 16 minutes a day. Recent research (e.g. Weibull, 2005) comparing newspaper reading shows that newspaper reading should be interpreted as a consequence of both individual characteristics and the characteristics of the national context the individuals are nested within. In this article we show how multilevel analysis, which allows us to include variables at both individual and national level in the analysis, could contribute to a better understanding of newspaper reading in Europe.

The analysis shows that individual-level characteristics explain most of the variation in newspaper reading. We found that the individual characteristics gender, age, education and household income influence the time spent on newspapers. Men spend more time on reading than women; the highly educated read more than those with a low education; people living in households with a high income read more than others; and older people read more than younger people. But these explanatory variables do not affect time spent on newspaper reading in the same way in all countries. For instance, there are huge differences in the extent to which gender, education, income and age affect reading in Norway and Greece. This again implies that the function of newspapers differs between these countries (see Schoenbach et al., 1999).

Even though variables at the individual level explain most of the variation in newspaper reading, the analysis shows that a considerable share of the

national variation may be explained by variables at the national level; 6.5 percent of the variance in newspaper reading can be explained as systematic variation between countries. The multilevel analysis technique makes it possible to determine whether several national-level explanatory variables improve the 'time spent on newspaper reading' model. This study shows that numbers of local/regional newspaper titles, newspapers' share of advertising expenditure, average radio consumption and the unemployment rate in a country improves the model, while, for instance, GNP, 'trust in press' and the proportion of Protestants do not improve the model.

We are aware that Hallin and Mancini (2004: 11) stress that individual countries only fit the media systems roughly. We are also aware that Hallin and Mancini do not discuss time spent on newspaper reading. Nevertheless, we would argue that the findings in this study contribute to the ongoing discussion about the categorization of nations into media systems and even the relevance of the media systems expounded by Hallin and Mancini. As we understand Hallin and Mancini, this kind of discussion is in accordance with the intention of their book. Both time spent on newspaper reading and the influence of the explanatory variables at the individual level vary between and within the four groups of nations. There is a tendency towards more time being spent on reading in the democratic corporatist countries than in the other groups, but Ireland has the population that reads the most. Furthermore, within the group of democratic corporatist countries there are huge differences in time spent on newspaper reading and the way individual characteristics influence reading time also varies within this group. Denmark, Luxembourg and Belgium in particular are different from the rest of their group. Within the polarized pluralist group, France is distinguished from the other countries because the French spend more time on reading, but first and foremost because the way individual characteristics influence reading is more like that of the democratic corporatist countries. The pattern of newspaper reading in Ireland is distinguished from that of the UK, and in terms of time spent on newspaper reading and reader characteristics, appears closer to the pattern found in the Nordic countries (except Denmark). There is also reason to argue that when we group the Eastern European countries together, this category demonstrates a similar heterogeneity. Poland is a prime case illustrating that to treat former Eastern bloc countries as one group is problematic: Poland has more similarities with the polarized pluralist countries than with the other former Eastern bloc countries. Despite these differences within the four groups, including the media system as an explanatory variable at the national level in the analysis model makes a better fit. This implies that the media system catches some similarities between the

nations grouped together that in turn explain newspaper reading. A justification of countries being included in each system could lead to a further improvement of the 'time spent on newspaper reading' model. If so, we would argue that what explains newspaper differences in Europe also might give some new insight into media systems and which countries should be grouped together.

On the other hand, there are indications of a development towards there being fewer differences between nations and media systems. The huge age difference, as expressed by a young population reading much less than the old, indicates a future decline in newspaper reading.[21] This could contribute to greater individual differences. Recent studies (Høst, 2005; Nilsson, 2005) in countries with a traditionally high newspaper circulation imply that newspaper reading might become an elite phenomenon. The finding that time spent on newspaper reading differs increasingly between the older and younger population in Europe could also indicate fewer national differences in the future. According to Hallin and Mancini (2004: 13), national differentiation between media systems is clearly diminishing, but they also claim that it is uncertain whether that process of convergence will stop at a certain point, or continue until national differentiation becomes irrelevant. We conclude that despite globalization or Europeanization in national reading patterns, we still need more multilevel analysis of changes in newspaper reading in Europe. The question whether national variations in newspaper reading will persist or disappear can only be analysed by multilevel models.

Notes

We wish to thank the Norwegian Social Science Data Services (NSD) for access to ESS data. We would also like to thank Toril Aalberg and Kristen Ringdal for their helpful suggestions for this article.

1. On the list of top-ranking paid-for dailies (average circulation/adult population) 14 out of the 19 countries are European countries (WAN, 2006).
2. The Nordic countries are defined as the Scandinavian countries, Iceland and Finland.
3. Hallin and Mancini's (2004) three media system models are an attempt to bury and replace Siebert et al.'s (1956) *Four Theories of the Press*. One important difference between the two theories is that Hallin and Mancini develop more sophisticated models based on real comparative analysis.
4. It is funded via the European Commission's Fifth and Sixth Framework Programmes, the European Science Foundation and national funding bodies in the individual countries.
5. For more information, go to www.europeansocialsurvey.org/

6. For example, the family, the local market and one's peer group (Gustafsson and Weibull, 1997: 258).
7. The classification of media systems relates to ideal types and the media systems of individual countries only fit them approximately (Hallin and Mancini, 2004).
8. Hallin and Mancini's (2004) study only covers the media systems of the US, Canada and Western Europe and excludes very small countries (e.g. Luxembourg and Iceland).
9. Because of low newspaper circulation, Poland is placed together with Southern European countries in Weibull's (2005) analysis.
10. In the following presentation of theories on newspaper readers, we include studies of different kinds of newspapers or newspaper content. For instance, Nilsson (2005) examined morning newspaper reading, Weibull (2005) discussed paid-for dailies per 1000 and Lauf (2001) focused on reading about current affairs in newspapers.
11. Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands and the UK.
12. Experiences from Swedish readership research indicate that self-perceived regularity denotes identification with the newspaper, and newspaper reading measured by 'frequency' scales offers a more effective predictor of long-term reading development (Gustafsson and Weibull, 1997).
13. Original values and categories – 00: no time at all; 01: less than 0.5 hours; 02: 0.5 hours to 1 hour; 03: more than 1 hour, up to 1.5 hours; 04: more than 1.5 hours, up to 2 hours; 05: more than 2 hours, up to 2.5 hours; 06: more than 2.5 hours, up to 3 hours; 07: more than 3 hours (77: refusal, 88: don't know, 99: no answer). To make it possible to interpret the coefficients in the analysis in minutes of reading, the midpoint of the range was used for all categories except the highest, when the base value was used. Hence, the estimates are conservative and underestimate the average number of hours in each category.
14. Some studies distinguish between 'popular press' and 'quality press'. However, it is hard to define an actual newspaper as either 'popular press' or 'quality press' (see more in Spassov, 2004; Weibull, 2005).
15. MLwiN is a software package for fitting multilevel models. MLwiN was created by the Centre for Multilevel Modelling team based at the University of Bristol, together with various colleagues in other centres. We use version 2.01 of MLwiN, which is the latest version. For more information about MLwiN, downloading manuals, etc., go to www.mlwin.com/
16. If we use non-readers/readers as the dependent variable, the strength and the direction of the correlation coefficients are the same.
17. Wald test $\chi^2 = 10.885$, d.f. = 1, $p < .001$.
18. The national codes are based on ISO 3166 Alpha-2 codes, where the codes are Austria (AT), Belgium (BE), Switzerland (CH), Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), Spain (ES), Finland (FI),

France (FR), United Kingdom (GB), Greece (GR), Hungary (HU), Ireland (IE), Iceland (IS), Luxembourg (LU), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Sweden (SE), Slovenia (SI) and Slovakia (SK).

19. When using 'non-reading/reading' as the dependent variable, the analysis gives the same result.
20. Some of the Internet use could actually be newspaper reading, since this study does not specify the medium used for newspaper consumption.
21. Paper versions of newspapers may disappear, but the increasing availability of online versions may take over.

References

Andersen, Ole E. (2005) *Nye kurver i medielandskapet – en analyse av Medieautbud og forbrug i Danmark 1994–2004.* Copenhagen: Forlaget Markedsföring.

Andersson, Ulrika (2005) 'Att läsa eller inte läsa', pp. 123–40 in Annika Bergström, Ingela Wadbring and Lennart Weibull (eds) *Nypressat. Ett kvartssekel med svenska dagstidningsläsare*. Göteborg: Institutionen för journalistik och masskommunikation.

Browne, William and Jon Rasbash (2004) 'Multilevel Modelling', pp. 459–79 in Melissa Hardy and Alan Bryman (eds) *Handbook of Data Analysis.* London: Sage.

Chan, Tak Wing and John H. Goldthorpe (2007) 'Social Status and Newspaper Readership', *American Journal of Sociology* 112(4): 1095–134.

De Bens, Els and Helge Østbye (1998) 'The European Newspaper Market', pp. 7–22 in Denis McQuail and Karen Siune (eds) *Media Policy: Convergence, Concentration and Commerce*. London: Sage.

Eisenstein, Elisabeth L. (1979) *The Printing Press as an Agent of Change*, Vols I and II. London: Cambridge University Press.

ESS 2 (2004/5) *European Social Survey 2004, Documentation Report*, 2 edn. Bergen: Norsk samfunnsvitenskapelige datatjeneste (Norwegian Social Science Data Services [NSD]).

Gustafsson, Karl Erik and Lennart Weibull (1997) 'European Newspaper Readership: Structure and Development', *Communications* 22(3): 249–73.

Hallin, Daniel C. and Paolo Mancini (2004) *Comparing Media Systems: Three Models of Media and Politics.* Cambridge: Cambridge University Press.

Høst, Sigurd (1999) 'Newspaper Growth in the Television Era – The Norwegian Experience', *Nordicom. Nordic Research on Media and Communication Review* 20(1): 107–28.

Høst, Sigurd (2005) 'Hvorfor går avisene tilbake?', paper presented at the Nordic Conference of Media Research, Aalborg, 11–14 August.

Høst, Sigurd, Åsa Nilsson and Lennart Weibull (forthcoming) 'What Happens to the Nordic Press Market?', *Nordicom Information.*

Hox, Joop (2002) *Multilevel Analysis: Techniques and Applications*. Mahwah, NJ: Lawrence Erlbaum.

Kelly, Mary, Gianpietro Mazzoleni and Denis McQuail (eds) (2004) *The Media in Europe: The Euromedia Handbook*. London: Sage.

Lauf, Edmund (2001) 'Research Note: The Vanishing Young Reader. Sociodemographic Determinants of Newspaper Use as Source of Political Information in Europe, 1980–98', *European Journal of Communication* 16(2): 233–43.

Livingstone, Sonia (2003) 'On the Challenges of Cross-National Comparative Research', *European Journal of Communication* 18(4): 477–500.

Nilsson, Åsa (2005) 'Tidningsläsandets åldrar och generationer', pp. 141–60 in Annika Bergström, Ingela Wadbring and Lennart Weibull (eds) *Nypressat. Ett kvartssekel med svenska dagstidningsläsare*. Göteborg: Institutionen för journalistik och masskommunikation.

Peterson, Richard A. and Roger M. Kern (1996) 'Changing Highbrow Taste: From Snob to Omnivore', *American Sociological Review* 61(5): 900–7.

Raeymaeckers, Karin (2002) 'Research Note: Young People and Patterns of Time Consumption in Relation to Print Media', *European Journal of Communication* 17(3): 369–83.

Schoenbach, Klaus, Edmund Lauf, Jack M. McLeod and Dietram A. Scheufele (1999) 'Research Note: Distinction and Integration. Sociodemographic Determinants of Newspaper Reading in the USA and Germany, 1974–96', *European Journal of Communication* 14(2): 225–39.

Siebert, Fred S., Theodore Peterson and Wilbur Schramm (1956) *Four Theories of the Press*. Urbana, IL: University of Illinois Press.

Spassov, Orlin (ed.) (2004) *Quality Press in Southeast Europe*. Sofia: Southeast European Media Centre.

Vaage, Odd Frank (2006) *Norsk mediebarometer 2005*. Oslo and Kongsvinger: Statistisk sentralbyrå (SSB).

WAN (World Association of Newspapers) (2005) *World Press Trends 2005.* Paris: Zenith Optimedia.

WAN (World Association of Newspapers) (2006) *World Press Trends 2006.* Paris: Zenith Optimedia.

Weibull, Lennart (2005) 'Sverige i tidningsvärlden', pp. 19–48 in Annika Bergström, Ingela Wadbring and Lennart Weibull (eds) *Nypressat. Ett kvartssekel med svenska dagstidningsläsare*. Göteborg: Institutionen för journalistik och masskommunikation.