

## SCHOLARLY COMPETENCE, ACTIVITIES AND OUTCOMES

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### Reading, Writing and Political Competence

*Abstract:* In the present paper we analyze the relation between political competence and media exposure. Taking into account the dynamic transition of media environment related to growing impact of the internet (web 2.0) we made several assumptions about the influence of traditional and new media on political sophistication. We hypothesize that the impact of the media on political competence is related to qualitative, rather than quantitative factors; competence rises with the way a media consumer interacts with the medium, rather than on the amount of time spent with the medium. The empirical analysis based on a mass public opinion survey confirms our assumptions: there is a positive relationship between media exposure and political competence, however various kind of media differ as far as their influence is concerned. Moreover the use of interactive internet features (participation in information exchange) is a key factor shaping competence.

*Keywords:* media effects, political competence, media exposure, television, newspaper, web 2.0

Public space and, in particular, mass media are undergoing dynamic transition that renders our to-date knowledge about the interrelation between political competence and the media environment increasingly obsolete. The main factor of this transition is the quantitative and qualitative evolution of the digital media consumption and its consequences. Many scholars studying media and their impact on political consciousness tend to analytically differentiate between traditional media and the internet, studying these issues separately. However, in our view, such a distinction loses validity in an ecology in which content is published via multiple outlets (print, voice, multimedia, etc.) and whose origins may be impossible to trace (readers referring to ‘the internet’ as source of knowledge, rather than any particular news organization). The internet, via its interactive features and the work of aggregators, has acquired a collective identity superimposed on the identities of organizations and individuals providing news content. In our paper we try to trace the various possible sources of media influence on political competence and, as much as possible, differentiate their impact.

Before the origin of the internet (or, at least, before web 2.0) the study on the relations between consciousness (including its political aspects) and the media was often based on a simple model: a correlation between media exposure and political views (level of competence, opinions, attitudes) was measured. Cognitive capability (here we use education as proxy) could be treated as an intervening factor: a catalyst for effec-

tive absorption of information. In such a model, media exposure could be treated as a determinant of political attitudes (“media effects” as sources of views). Reader, listener or viewer was conceived as a passive vessel into whom content was (metaphorically) poured; it either remained there or disappeared. The shape of the vessel in such a model was the cognitive structure (worldview, ability to process information). Alternatively, media consumption could be treated as dependent variable. Choosing a newspaper or watching a TV program were thus hypothetically a factor determining consumption (selective exposure due to pre-existing cognitive bias). In such a model, media audience use the media to reinforce existing views, attitudes and opinions. Regardless of which direction of causality is assumed, exposure to media could be operationalized without much methodological difficulty as contact (reading, listening to or watching) with a medium.

This ‘pre-internet’ media ecology assumed that: 1. Audiences are conscious of what media they use; 2. The mass media constitute a clear-cut category and news are produced by professionals (journalists); 3. The news (setting aside interpretation and commentary associated with them) are true in the narrow sense of the word, and can be corrected if this is not the case. Thus, media effects and selection of outlets are related to framing of news stories. These assumptions need not be true in the web 2.0 environment. Internet users refer to aggregators, rather than authors or news organizations, as sources of knowledge (“I read it on Facebook”). It is no longer clear what constitutes a mass medium, which has become a category with fuzzy boundaries (Is a popular politics blog a mass medium? What if the blog is written by a professional journalist with a newspaper? Do commentaries count? Does audience-generated content on a newspaper website count as a news story?). Moreover, the increasingly freelance character of journalistic work undermines professional standards of this professional group and multiplies the numbers of ‘semi-journalists’, people who produce content part-time, without proper education and oversight. As a consequence, media and journalists are losing their role of the provider of a common, undisputed source of objective information (an assumption behind the division between the news and commentary in the Anglo-Saxon world). “Post-truth”, a commonly used concept in 2016, captures the essence of this transition.

Our analysis takes into account these processes by analyzing the relation between political competence and media exposure. We believe that a meaningful study should look at both the traditional and social media effects. Our hypotheses are related to the information ecology understood broadly, as all publically available information. In the most general terms, we hypothesize that the impact of the media on political competence is related to qualitative, rather than quantitative factors; competence rises with the way a media consumer interacts with the medium, rather than on the amount of time spent with the medium. In line with other researchers, we believe that reading print media will have more impact than watching electronic sources. The use of interactive internet features (participation in information exchange) will be, in our view, a key factor shaping competence. Cognitive abilities (operationalized by education level) will be a key mediating factors in knowledge formation, a catalyst. Our analysis assumes that competence is a product of conscious effort by citizens conditioned by information sources available for them. Our model, therefore, neither treats people as blank sheets on which news content

is imprinted, nor as fully formed subjects selecting the media content to reinforce existing views.

Our paper is an empirical analysis based on a mass public opinion survey. We operationalize political competence (our dependent variable) as the ability to identify positions of existing political parties. Our independent variable is media consumption with regard to its level of sophistication. We control for education, which, we assume, has an independent effect on the political orientation. We hypothesize that audience involvement (operationalized by reading print media and by writing, commenting in discussions) strengthen political competence. Citizens who interact with others and who reach for a variety of sources (supplementing electronic media with print) will be more competent regardless of their education and the total time spent on reading or watching the news.

### Concepts

Media influence people because the world is too complicated to gather first-hand knowledge about it, and because no person is competent enough to evaluate available information about different aspects of its functioning. A simple model of media effects on political competence assumes that citizens are ignorant and fill gaps in their knowledge with available material. It is presumed that they neither have access to the full complexity of information nor possess the cognitive capacity to process the large amount of information necessary to build an opinion. By relying on journalists to explain the world to them, they are susceptible to biases of the journalist or the news outlet. Such an influence may be exerted by media manipulation, whereby politicians and journalists collude in framing issues to the benefit of organized interest groups (Entman 1989). Converse argued that individuals lack strong feelings on issues but nevertheless respond in surveys as best as they can, choosing between responses put in front of them — but often choosing in essentially random fashion. “[L]arge portions of an electorate simply do not have meaningful beliefs, even on issues that have formed the basis for intense political controversy among elites for substantial periods of time” (Converse 1964: 245). In this pessimistic view, media have an agenda which serves as guidance for the audience in establishing the importance of information. “Media agenda setting, to the degree that it does take place, is a powerful force in determining which problems are taken seriously and in providing the context within which policies and individuals will be judged” (Graber 1988: 133).

However, media cues (the supply side) must match the audience needs (the demand side) for information to be absorbed. Dependency theory (De Fleur, Ball-Rokeach 1976; 1989) proposes a relationship among audiences, media and the larger social system. In this concept information is not absorbed at random, but selected to satisfy information needs. The needs, in turn, are conditioned by the social system in which the media operate. Research shows that media consumption does not influence the salience of issues for citizens (i.e., it may be concluded that it is not related to their value orientations), but contributes to their level of competence (Visser et al. 2008).

### **Cognitive Competence and Audience Involvement**

In our paper we assume that political competence is the outcome of several mutually reinforcing factors: cognitive skills, selection of sources and involvement with other citizens. We believe that, when people interact with the media, they are engaged in an interactive process through which they evaluate the information, fit it into their existing knowledge and either accept or reject it. Media may cause different reactions depending on the audience level of sophistication.

We follow the line of argument developed by Zaller (1992). He designed a model in which the media effect is a product of two factors: information flow and audience competence. Zaller's concept highlights the role of the media in forging the link between latent and explicit attitudes. His concept is original because he did not predict media effects understood as imprinting of information on consciousness, but rather understood it as the outcome of intellectual skills, information flow and attention. Political communications become only one of the factors influencing attitudes on a political issue.

The balance of messages to which individuals are exposed, and their own selectivity in internalizing some while rejecting others, systematically determine the mix of considerations in their heads, and this, in turn, affects the likelihood that one rather than another survey answer will be made. Thus, individuals vacillate in their responses, but only within a certain, systematically determined range (Zaller 1992: 266).

We apply the approach described as “constructivist” by Neuman et al. (1992: 17):

Constructivism emphasizes the prospect of an active, interpreting, meaning-constructing audience, (...) studies the interaction between the audience member and the media rather than a narrowly defined effect of media on the audience, (...) defining communication as the creation of meaning in interaction rather than in terms of influence. (...) Constructivism emphasizes the varying character of communication content. [it] emphasizes the importance of the medium of communication.

Zaller's and Neuman's insights were developed in the pre-internet era. We believe that the interactive functionalities of web 2.0 and the increase in the information flow in which citizens are immersed made their assumptions more relevant. It is only now that the media audience can truly select the information content (forming ‘information bubbles’) and engage in mass self-communication (term coined by Castells 2007) with other citizens, creating shared meanings.

### **Print versus Electronic Media**

Research shows that television is the most important source of information about politics in Poland. Most citizens gained knowledge of the committees and candidates taking part in the parliamentary elections from television news (79%), as well as commercials and advertisements broadcast on radio and television (66%). Radio is less important—almost half (49%) received information from this source. More than two-fifths (42%) read about politics in newspapers and magazines. One-third (32%) declared in contact with the contents of the campaign on the internet. Personal contacts were a source of knowledge for more than half of citizens (53%), while meeting with politicians for 8% of the total. (CBOS data in Feliksiak 2015).

While television has the greatest range of information, it does not necessarily have the greatest impact. Since TV is almost universally used and other sources tend to be supplementary, our model treats non-TV sources of news (print and online) as added value to TV. We assume that, while most people are familiar with the popular news content offered by TV, some citizens expand by probing the issues in other sources.

Of course, use of different sources of information about politics requires different level of involvement. Neil Postman (2005: 16) put it in stark terms:

[U]nder the governance of the printing press, discourse in America was different from what it is now—generally coherent, serious and rational; ... under the governance of television, it has become shriveled and absurd.

Printed text requires more attention and thought than watching television. Postman called it the “typographic mind”: the ability to follow developed argument and rationally consider a multitude of perspectives on an issue.

There is evidence from other countries showing that print media provide a more complex view of politics relative to electronic (TV) coverage.

The analysis of the contextualization of news indicates that coverage in weekly newsmagazines contains a greater number of contextual and expository elements than other media. On average, the longer magazine stories include more references to expert sources, definitions of terms and concepts, and more analysis of the causes, consequences and possible policy outcomes of issues. ... [P]eople learn more from magazines coverage of political issues because readers are provided with more contextual information (Neuman et al. 1992: 58–59).

Moreover, the structure of a newspaper article facilitates information gathering.

[T]he traditional ‘inverted pyramid’ structure of articles, in which the most important and the most recent developments are presented in headlines and in the first few paragraphs of the story, makes newspapers an especially effective medium for learning (Neuman et al. 1992: 78).

This view is based on research of cognitive processes: a match between the semantic presentation of the text and the storage of information in a cognitive ‘semantic network’ may make print information easier to recall than visual information (Rumelhart and Norman 1985).

Print media are considered by audiences as more prestigious and more useful in building political competence. Salomon (1984) found that television is perceived primarily as an entertainment medium. “Newspapers, in contrast, as a text-based medium are seen as ‘serious’, more like a textbook or legal document” (Neuman et al. 1992). Research by Kononova, Alhabash and Cropp (2011) indicates that newspapers are considered to be more credible than online news or television.

### **Traditional Media, web. 1.0 and web 2.0.**

The development of new technologies, especially the internet introduces a new model of social communication (see: Cairncross 2001; DiMaggio et al. 2001; van Dijk 2010). Traditional media use one-direction communication from the sender to the audience. The audience does not provide feedback, other than measures of audience size or readership. Traditional mass communication is judged by these criteria: content must be attractive in order

to draw audiences. This impairs building political competence. First of all, some political content is rejected by broadcasters as too difficult, some politicians are neglected as dull. From the point of view of audience size, politics based on scandal is preferable.

Internet, according to Castells (2007), offers a counterweight to the traditional model. It introduces the possibility of interactive horizontal communication between users: information is created by users for other users. Such forms of internet communication as blogs, vlogs, fora, podcasts, and network file sharing allow audiences to create content. The distance between the sender and the recipient of the information decreases. To a large extent, the interactivity of new forms of communication invalidates this division. Multiplicity of sources of content increases the chance that information unavailable in the traditional media would be transmitted online. Moreover, large-scale participation in two-way communication has the potential to increase engagement, socio-political mobilization of users.

The development of the internet has changed in a significant way the relationship between the state and the citizen: it reduced distance between them and led to tighter control over the actions of the authorities<sup>1</sup>. Generally, there are three dimensions of the benefits that the internet brings to the citizen. There is information, debate (deliberation) and civic participation (Bryan et al. 1998).

Information is where internet acts like traditional media, serving as a vehicle for content. According to Prior (2007), media environment and which information channels audience uses differentiate access to free information. Media environments provide different amount and quality of information. Access to media has an impact on the degree and quality of contact with news and thus influences the distribution of political power in a democratic system. Internet extends the amount of information available to citizens, thereby giving them better ability to make decisions related to politics.

We make a different (though not contradictory) argument. The added value of online news, in our model, is the interactive feature of the internet, i.e. the ability to participate in a discussion. Debates conducted through the internet have been criticized for superficiality—internet users often comment very briefly, past one another, using simple language and underdeveloped thoughts. Researchers also point to the fact that communication in online fora is not very interactive and is uneven, inegalitarian. Most web users are passive and stick to reading other people's posts, while those who do speak out, do not relate to the topics raised by other participants (Norris 2001; Jankowski and van Selm 2000). However, the idea of web 2.0 is to move the user from the position of recipient only to the role in which he or she is also the content creator. We assume that relating to other web users interactively adds an extra layer of competence. We believe that the "participation divide" (Hargittai and Walejko 2008) is an important factor explaining political competence.

As far as empirical results are concerned, there is clear evidence that internet is increasingly gaining in importance as a source of political information. This is related to its increased use and the movement of print and electronic media online. For example, the proportion of Americans using newspapers has fallen from 33% in 2002 to 27% in 2010, while for television it has remained stable from 66% in 2002 to 67% in 2010 (Faraon et al. 2014). In Sweden, the internet and personal contacts (i.e. friends, family and work colleagues)

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<sup>1</sup> For the opposite, pessimistic view see Morozov 2011.

have become the most important sources of information, surpassing other media (e.g. TV, newspapers and radio). Polish data show a gradual increase in significance of web-based material as source for political information during electoral campaign (Feliksiak 2015).

The evidence, however is mixed as regards the impact of online information gathering vs. traditional media. Some studies indicate that active use of online media does increase political participation. Daekyung and Johnson (2006) have shown that a majority of politically interested web users relied more on online news than newspapers and television. Online news significantly and positively predicted political involvement, political interest, campaign interest, and likelihood of voting. Some studies have shown the relationship between the political activities of the network, and increase civic engagement (Shah, Cho, Eveland and Kwak 2005). A Dutch study (Utz 2009) found that interacting with prospective voters on a platform that is a part of their daily life could be a way on increasing political involvement.

Data from Poland show the power of online political activity as a factor socializing users to participate in democratic process and document emancipating role of the internet as a medium of increasing civic awareness (Wenzel, Feliksiak 2012). The encounter with the views of other voters, as well as discussion with other citizens, triggers participation in politics. However, there is no evidence of conscious or unconscious impact of the internet on voting preferences. It appears that the use of the web allows citizens to systematize ideas and express them, but does not modify the views.

Recent studies have shown that internet sources should be differentiated according to the degree to which content is user-generated. Interaction with

different types of online sources seem to produce different effects on political attitudes... It was suggested that social networking sites were perceived as less credible compared to online news media because the latter are known for their expertise, credibility and quality in the editorial process (Faraon et al. 2014).

Moreover, according to Townera and Dulioa (2011) news presented online are more credible than information from social networking sites and are given more attention, which leads to more explicit processing.

## **Hypotheses, Method and Data**

### **Hypotheses**

Based on our knowledge, we pose several hypotheses about the mechanisms of political competence-building through different patterns of media consumption.

Hypotheses H1 and H2 are about traditional media:

- H1. Most generally, a greater degree of consumption of media is positively related to the level of political competence. However, we do not postulate the direction of influence, i.e. whether politically interested citizens spend more time on political news because they like to, or they are competent because of news consumption. We believe this to be a chicken-or-egg problem.
- H2. Regardless of the level of exposure, “readers” are hypothetically more competent than mere “watchers” and “listeners.” Almost all citizens who follow politics in the media

use TV. Reading is an extra dimension. We believe that the skills and attention necessary to digest written news significantly contribute to political competence.

Hypothesis H3 is about online media:

H3. In line with our argument about web 2.0, we posit an independent influence of interactive participation online on the level of knowledge. We believe that taking part in political discussions on the internet serves as a ‘training ground’ for political competence, however imperfect. The digital divide, although its impact is diminishing (Kryszczuk and Green 2016), remains an important predictor of political mobilization. Its impact is located not in internet use per se, but in the level and mode of use. We postulate the significance of a “second-order digital divide” (Hargitai 2002) or the “participation divide” (Hargitai and Walejko 2008).

Hypothesis H4 is about cognitive skills, operationalized by education:

H4. Education has an independent effect on competence. Moreover, we believe that there is an interaction effect between education and media use, rendering higher educated and strongly engaged citizens particularly competent.

### Data and Methodology

In order to test our hypotheses we use Polish National Election Study 2015 data. The PNES 2015—a post-electoral survey carried out on a random sample of adult Poles (N = 1733)—provides a series of variables which measure the degree of exposure to various kinds of media. The questions about frequency of using television, radio, newspapers (including online broadcasts or editions) as a source of political information let us identify seven groups of media users: sole “readers” and “watchers,”<sup>2</sup> those who use two kinds of media as a source of political information: “readers and watchers”, “readers and listeners” and “listeners and watchers”, those who use all kind of media and those who do not use media at all. The questions about the level and mode of the use of internet are basis for identification of passive (using social networks as a source of political information, and sharing political information) and active (posting comments on political issues) web users.

Political competence—our dependent variable—is traditionally measured with subjective political competence scale which captures respondents’ belief that they can participate in political decisions (Almond, Verba 1963). Nevertheless the subjective sense of political competence, in our opinion does not reflect the real state of the matter.

We can alternatively measure political competence referring to Dahl’s enlightened understanding defined as the right to “have adequate and equal opportunities for discovering and validating the choice on the matter to be decided that would best serve the citizen’s interests.” (Dahl 2000), assuming that competent citizen is knowledgeable about politics in order to make reasonable (rational) political decisions. In this case one of possible measures of political competence is an additive index of correct answers for a range of questions about political facts. This variable is also burdened by some bias (see Żerkowska-Balas et al. 2017), the most important of which is that knowledge of particular facts, selected by researchers, does not necessarily equal political competence.

<sup>2</sup> As the number of sole “listeners” was too low to give conclusive and statistically significant results, they were included in “watchers&listeners” group.



In the present paper we use a measure of political competence based on respondents' knowledge about parties' positions on important issues. We refer to issue voting theory, according to which a knowledge of party policies is a base for voting decision, especially among more sophisticated voters (Converse 1964; Robertson 1976; Zipp 1985; Laver, Hunt 1992; Shepsle, Boncheck 1997; Thurner, Eymann 2000; Hortala-Vallve, Esteve-Volart 2010). This is true especially in case of *hard issues* (e.g. economic issues or foreign policy) which require substantive knowledge and interest to the matter (Carmines, Stimson 1980). Following the research on issue voting, we assume that politically sophisticated citizens know party policies hence they are able to place (more or less accurately) each party on each issue scale, whilst less competent ones more often are not able to answer the question. Number of "don't know" answers seems therefore to serve well our purpose. Our assumption is to some extent confirmed by the previous research on applicability of the knowledge and the accuracy of estimation of positional measures as a proxy for political knowledge and competence (Żerkowska-Balas et al. 2017).

For the purposes of our analysis we create an index of political competence which is a sum of missing answers (don't knows and refusals) on the three semantic differential scales related to six parties' (Law and Justice, Civic Platform, Polish Peasants' Party, United Left, Modern and Kukiz'15) propositions related to tax policy (progressive vs flat tax), foreign policy (for or against further integration with the EU) and relations between the Church and the State (for or against the separation of the Church and the State). The new variable ranges from 0 to 18 (mean level of political competence equals 11, with standard deviation 6.4). In order to enable easier and intuitive interpretation, the variable was recoded so that higher values denote better competence.

We test our hypotheses using two kinds of statistical models. Firstly, we use analysis of variance, which provides information on differences in the level of political competence between users of media as far as the type of medium and frequency of its use are concerned. The heterogeneity of variance makes it plausible to use more robust unequal variances Welch's t-test and the Games-Howell post-hoc test.

Secondly, we use OLS regression model to verify the joint influence of various kinds of media on political competence. In the model we include a range of control variables related to sociodemographic status. The level of education (primary, vocational, secondary, higher) is the key control variable, as it is strictly related to political sophistication. We also control for gender (0—woman, 1—man), age and income (quartiles) which are typical suspects as far as the level of political competence is concerned. It is recognized that the level of political competence is higher among male, middle aged and affluent citizens. This is related above all to levels of political interest and engagement in public life. Men are perceived as more competent due to higher propensity to participate in politics. Youngest citizens are less interested and engaged in politics due to other responsibilities related to their life cycle, which distract them from public life (they have to start a family find job etc.). Moreover, due to the age, their political experience is smaller than the experience of more mature citizens, which also affects the level of dependent variable. Last but not least, more affluent citizens should be more politically competent due to two reasons: firstly the income level is often a function of age and education—the determinants of political competence; secondly, the stake in the political game is higher for the richest, which makes it plausible

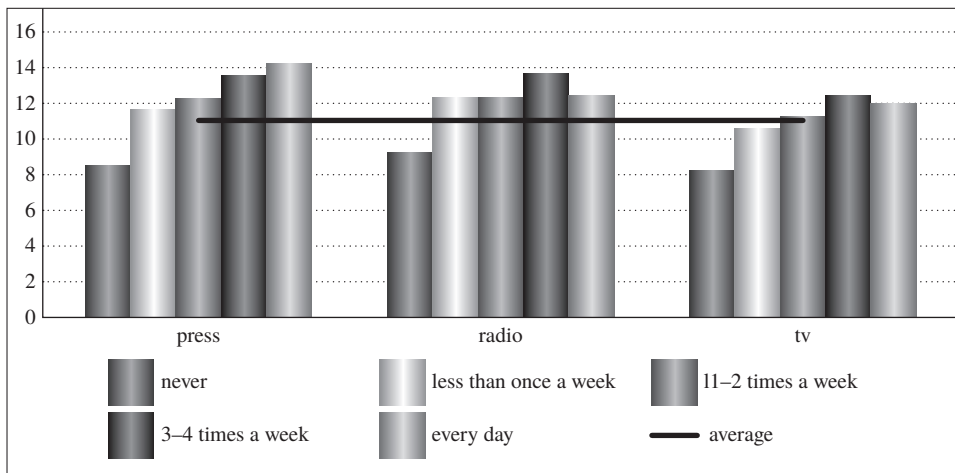
to expect that they will be more interested in politics and thus more politically competent.

### Analyses

Our first hypothesis concerns positive relationship between media exposure and political competence. This relationship is true in the light of our analyses: the correlation between the additive index of the use of media and respondent's ability to determine party position on various issues is statistically significant and positive (Pearson correlation coefficient is  $-0.29$ ,  $p < 0.01$ ). The more often citizens used various kinds of media during electoral campaign, the more politically competent they are.

In this paper we want to go beyond simple assumption that the frequency of contact with any kind of media boosts the level of political competence. In subsequent stages of our analysis we look more closely at the influence of various kinds of media. In the first step we focus on traditional media: newspapers, television and radio; secondly we analyze passive and active use of the internet.

Figure 1  
Frequency of Traditional Media Exposure and Political Competence



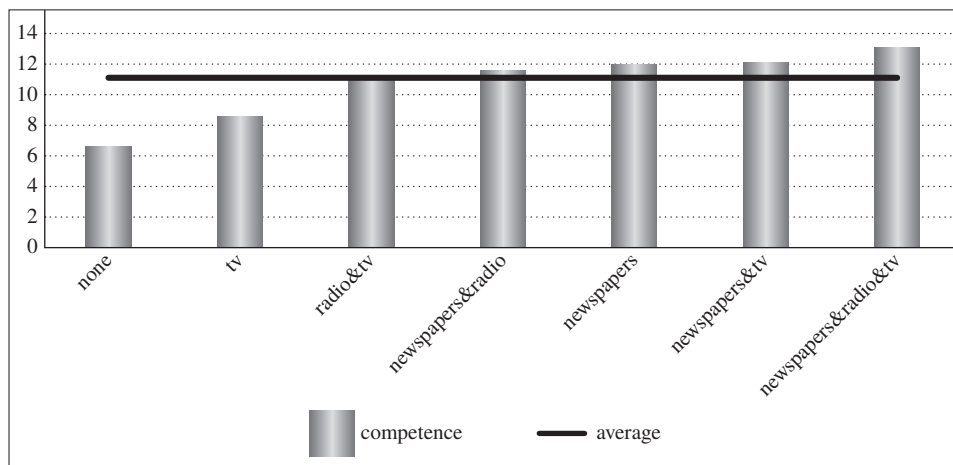
Our analyses (figure 1) show that there is statistically significant effect of all traditional media exposure: the more robust (in case of heterogeneity of variance), Welsch's test, is statistically significant in case of all analyzed media (for press  $t(4) = 68.9$ ,  $p < 0.000$ ; for radio  $t(4) = 34.9$ ,  $p < 0.000$  and for tv  $t(4) = 21.4$ ,  $p < 0.000$ ). However, not all the sources of information perform in the same way. The Games-Howell post-hoc tests<sup>3</sup> revealed that in case of radio and television there is statistically significant difference only between those who never use this medium to get political information and those who use it, no matter

<sup>3</sup> All non-reported results are available upon request.

how often. Newspaper readers are more diverse as far as the political competence is concerned: there are significant differences between non-readers, moderate readers (less than once a week and 1–2 times a week) and frequent readers (3–4 times a week and every day).

In natural settings the majority of people do not limit to one kind of medium, but rather use various combinations of sources of information. Hence the level of political competence is a result of different kinds of exposure. In order to reveal how various patterns of media consumption influence political competence, we identified six subgroups: those who never used media to get political information, those who use one (newspaper or television<sup>4</sup>), two (newspaper and television/radio or television and radio) and three sources of political information.

Figure 2  
**Traditional Media Exposure and Political Competence ( $t(5) = 50.5, p < 0.000$ )**



The t-test (variances unequal) revealed statistically significant ( $p < 0.000$ ) differences between mean levels of political competence among various kinds of media consumers (figure 2). It is clearly visible that consumption of media of any kind has positive effect on political competence. Moreover, various kinds and combinations of media differ as far as their influence on the dependent variable is concerned. The latter is confirmed by post-hoc test results reported in the table 1.

Several conclusions can be drawn from table 1. Firstly, those who do not use any kind of media to get political information are less politically competent than users of any combination of media. Secondly, “watchers” (those who use television as the only source of information) are less politically competent than all but those who do not use any kind of media. Thirdly, “readers” are the most politically competent, no matter whether they use any other kind of source of political information or not (there is no statistically significant

<sup>4</sup> Due to the low number of respondents who use radio as the only source of information (only 13 respondents) which unable robust analysis of this group, they were included into the group of tv and radio users. Further described findings related to the synergic effect of traditional media justify this decision.

Table 1

**Difference of Mean Level of Political Competence Between Various Kinds of Media Users  
(Game-Howell post-hoc test; row—column)**

	none	newspaper & tv & radio	radio & tv	newspapers & tv	newspapers	tv
none		-6.52* (0.49)	-4.44* (0.64)	-5.65* (0.56)	-5.26* (0.90)	-1.89* (0.58)
newspapers	5.26* (0.90)	-1.26 (0.81)	0.82 (0.91)	-0.39 (0.85)		3.37* (0.87)
television	1.89* (0.58)	-4.60* (0.43)	-2.55* (0.59)	-3.76* (0.50)	-3.37* (0.87)	
radio & tv	4.44* (0.64)	-2.08* (0.50)		-1.21 (0.57)	-0.82 (0.91)	2.55* (0.59)
newspapers & tv	5.65* (0.56)	-0.87 (0.40)	1.21 (0.57)		0.39 (0.85)	3.76* (0.50)
newspaper & tv & radio	6.52* (0.49)		2.08* (0.50)	0.87 (0.40)	1.26 (0.81)	4.63* (0.43)

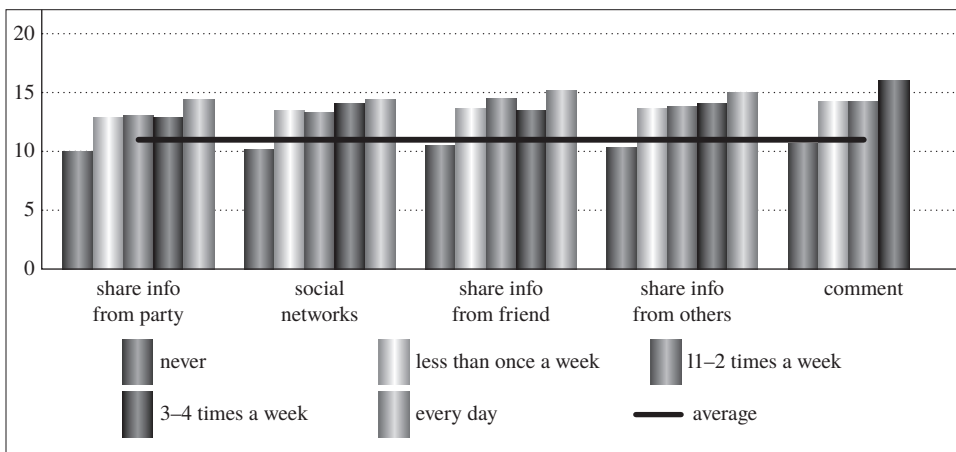
\*p < 0.001.

difference between those who use only newspapers, those who additionally watch television and/or listen to the radio). Last but not least, users of both television and radio are more politically competent than sole television users.

The second part of our analyses is dedicated to effects of passive and active internet use on political competence. Figure 3 shows the influence of frequency of various kinds of passive and active use of internet as a source of political information.<sup>5</sup>

Figure 3

**Frequency of Internet Exposure and Political Competence**



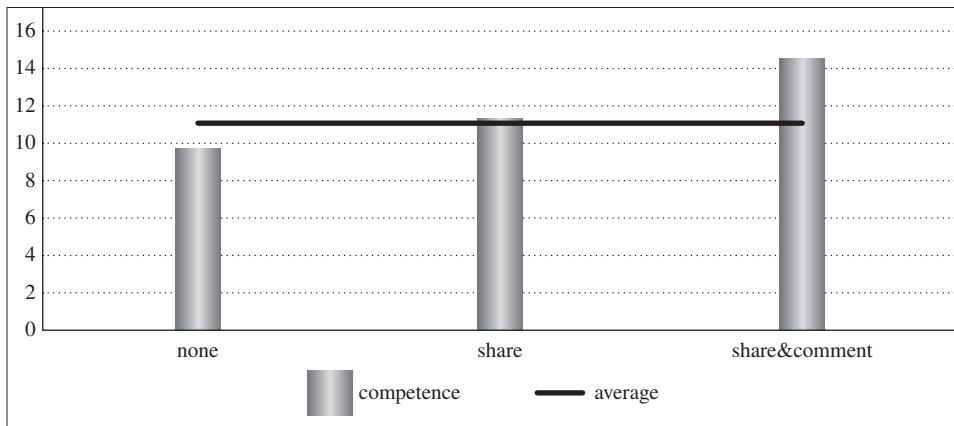
<sup>5</sup> The frequency of commenting political information in the internet was measured on different 4-item scale: often, sometimes, rarely, never. However, to enable easier comparison of results we decided to include the graph on the same figure.

The statistically significant Welsch’s t-test (for social networks  $t(4) = 38.3, p < 0.000$ ; for sharing information from party  $t(4) = 38.8, p < 0.000$ , for sharing information from a friend  $t(4) = 40.9, p < 0.000$ , for sharing information from others  $t(4) = 41.1, p < 0.000$  and for commenting  $t(3) = 66.8, p < 0.000$ ) confirms that use of internet increases political competence. Further post-hoc tests reveal that those who do not use internet as a source of information neither in passive nor in active way are less competent than internet users of any kind. Moreover, there are no statistically significant differences between respondents who use social networks as a source of political information or share any kind of political content more or less frequently. Only those who post political comments in the internet every day are significantly more competent than those who do it less often or do not do it at all.

This confirms the assumption that interactive use of the internet influences political competence. In order to verify this initial result we divided our sample into three groups: those who do not use internet as a source of political information, those who only share information and those who share and post comments (the sample of completely passive users was too small to give significant results). As figure 4 shows, those who only share information are less competent than those who share and post political comments. Both these groups are significantly more politically competent than those who do not actively use internet at all.

Figure 4

**Kind of Internet Exposure and Political Competence ( $t(2) = 99.4, P < 0.000$ )**



In the next step we run bivariate OLS regression models which show the effect of individual media exposure on political competence. The analysis reveals that all kind of analyzed media increase political competence: citizens who use television, radio, newspaper and/or social networks as a source of political information, share political information or post political comments are more capable to define political party opinions on important issues (table 2). However, as previous models show, different types of media vary as far as the relative influence is concerned: reading newspapers increases political competence the most, the impact of the television is the weakest.

Table 2

**Bivariate OLS Regression Models (dependent variable: political competence)**

	Standardized Coefficients Beta	Adjusted R-Squared
television	0.22***	0.049
radio	0.26***	0.069
newspaper	0.33***	0.111
social network	0.20***	0.041
share information	0.17***	0.027
comment	0.24***	0.059

\* p &lt; 0.05;

\*\* p &lt; 0.01;

\*\*\* p &lt; 0.001

Next we examine joint influence of various kind of media exposure on political competence when controlled for gender, age, level of education and income. Following theoretical grounds we believe that these variables may influence political sophistication and, what is more important for us, interact with media consumption. In order to test our assumptions we run regression model which includes variables of interest (standardized coefficients, statistical significance and adjusted r squared are reported in table 3).

As we expected, all but one control variables are statistically significant determinants of political competence, yet it must be emphasized that the model does not fit very well the data, as the adjusted r-squared values are not very high.

Table 3

**OLS Regression Model (dependent variable: political competence)**

	Standardized Coefficients Beta
television	0.10***
radio	0.07**
newspaper	0.14***
comment	0.09***
shared information	0.03
social network	0.04
level of education	0.14***
age	-0.03
gender (f = 0, m = 1)	0.16***
income	0.08**
Adj. R-Squared	0.19

\* p &lt; 0.05;

\*\* p &lt; 0.01;

\*\*\* p &lt; 0.001

What is most important, our analyses confirm statistically significant influence of almost all kinds of media exposure on political competence: those who get political information from television, radio and/or newspapers as well as those who post political comments on the internet are more capable of locating political parties on issue positions (and thus more politically competent). Use of social networks and sharing political information does not affect our dependent variable and therefore these variables are excluded from further analysis.

As we assumed, the level of education may intervene in the process of acquiring political information from the media and therefore influence the effect of media exposure on political competence. To control for this effect we test the regression model with interactions between all kinds of media exposure and the level of education (table 4).

Table 4

**OLS Regression Models With Interactions (dependent variable: political competence)**

	Standardized Coefficients Beta
television	0.07
radio	0.13***
newspaper	0.08**
comment	0.10
television * education	0.05
radio * education	-0.08
newspaper * education	0.11*
comment * education	-0.01
level of education	0.09*
age	-0.06*
gender	0.15***
income	0.08***
Adj. R Square	0.20

\* p &lt; 0.05;

\*\* p &lt; 0.01;

\*\*\* p &lt; 0.001

There are two main findings to be drawn from the model. First, the interaction effect is significant only in case of newspaper readers. As further analyses revealed, the newspaper is the most effective source of political information for citizens with elementary education, it decreases among those with vocational and secondary and is lowest (but still significant) among higher educated. Second, the effect of education on political competence is much stronger than the effect of watching television and commenting political events in the internet (media exposure variables for these media, as well as their interactions with education are statistically insignificant).

## Discussion

Briefly summarizing the findings: we focused on the relation between political competence and various kinds of media use. Taking into account the dynamic transition of media environment related to growing impact of the internet (web 2.0) we made several assumptions related to the influence of traditional and new media on political competence.

We hypothesized that a greater degree of media consumption is positively related to the level of political competence. Our analyses partially confirmed this. Using any kind of media as a source of political information brings about sophistication which facilitates orientation in the world of politics. Moreover, the variety of sources is more important than the level of exposure. Only in case of reading newspapers and posting political comments

online are there statistically significant differences in political competence related to the frequency of use.

Our analysis revealed that the type of media used as a source of political information matters. Newspapers are the most influential source of political information (which is in line with our hypothesis). “Readers” are more politically competent than users of other kinds of traditional media, no matter whether the newspaper is the only source of information or not.

Internet also proved to be an important source of political information. Capturing the effects of the digital divide becomes increasingly difficult, as the borders between traditional and digital media are blurring (e.g., paper newspapers are treated the same as their online editions). In our paper we focused on active use of social networks: sharing political information and taking part in political discussions in the social media. We expected that digital exclusion would be an important predictor of political competence, but we conceived it as the “participation divide.” We managed to confirm our hypothesis: the effect of online discussion is significant, but the influence of passive internet consumption on political competence is much weaker than the influence of any other medium. We believe that our findings are an argument for the importance of the second-order digital divide in building civic competence.

Last but not least, education proved to have independent role on political competence (its influence even eliminates the positive effect of watching television and commenting political events in the internet on political competence). However, contrary to what we expected, interaction effect between education and media use is significant only in case of newspaper reading (which increases political competence especially among the worst educated).

While we managed to identify significant effects, our models only account for 20% of variance in competence. In other words, there exist important other factors determining orientation in the political world. They are probably qualitative in character. We do not know what exactly was read, which could be the key to explaining the issue further. Reading and writing are performed at different levels of sophistication; not every instance recorded in our study is an expression of the operation of Postman’s “typographic mind.”

To conclude the paper, we would like to make a broader point about the contemporary changes in the public sphere. Since the beginning of mass communication, two narratives about its impact on citizenship can be differentiated in both academic and journalistic discourse. The first is optimistic: citizens are seen as rational and their behavior as optimal, given the constraints. The development of the internet seemed to support this attitude, at least initially. The “internet galaxy” (term invented by Castells 2003) appeared to offer new quality to every aspect of human interaction. Google executives (Schmidt and Cohen 2013) even presaged the new “digital age”, characterized by rationality and social progress. In this view, citizenship would be enhanced due to the spread of horizontal communication. More information is available, which presumably allows for better decision making; channels of deliberation allow for better formation of collective identity; internet offers new avenues of political participation, such as voting online or improved opportunities for fund-raising. In the optimistic view the internet is a milestone of progress in the formation of the public sphere.



Recently, however, the pessimistic narrative appears to gain momentum. In this view the increase in the number of communication channels and in the amount of information offers new avenues for undermining truth. Facts are either questioned by outright lying or by rendering truth unimportant. Internet, rather than helping dispel irrational beliefs, as predicted by Schmidt and Cohen, does the opposite: it allows myth and unfounded belief to spread without control. We live in the world of ‘fake news’ and ‘post-truth.’ Emotion replaces rational thought as a large number of citizens are unable to determine and process facts, while everyone responds to emotional signals. Citizenship is harmed by ideological bubbles in which citizens are attached to the media by ideological links and information is accessed selectively. Moreover, internet gives both the governments and international corporations a wide range of tools to control citizens, making them open to surveillance and manipulation to the degree unprecedented in history (see: Orłowski 2013).

We believe that that our findings are a small contribution to the cautiously optimistic vision of the transformation of the public sphere. It appears that information-gathering in general, and reading written text in particular, improves knowledge. Engaging in discussions with other citizens has an independent effect. We can link this finding to earlier literature (starting with Klapper 1960) that media have very limited effects on attitudes and that the effects of news frames on individual beliefs appear dubious at best, if natural environment is studied (Chong and Druckman 2007). We conclude that the pessimistic interpretation of the development of the mass communication environment underestimates the cognitive capacity of human beings to select relevant information to make sense of the world. Reading news, even if it is biased, and writing about issues, even in crude terms, is good for civic competence.

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