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**GENERALIZED TRUST AND
MEDIA CONSUMPTION IN
DEMOCRATIC AND
NONDEMOCRATIC SOCIETIES**

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GENERALIZED TRUST AND MEDIA CONSUMPTION IN DEMOCRATIC AND NONDEMOCRATIC SOCIETIES

Generalized trust is an information- and risk-based resource enabling communication in modern society. Mass media channels can reduce or increase generalized trust, but their effects are dependent on the social context. The purpose of this paper is to examine how different types of media consumption are related to generalized social trust under democratic and nondemocratic regimes. In modern societies generalized trust and mass media serve as mechanisms to overcome information-based uncertainty. We propose and investigate hypotheses on how the relation between news media consumption and social trust differs in democratic and nondemocratic societies. Using multilevel regression modelling on the nationally representative World Values Survey data from more than 75,000 people in 53 countries across the world (2011-2014) and international democracy indices, we look into the interactive effects of regular use of the Internet and television news and generalized trust in democratic and nondemocratic countries. The results show that, irrelevant of the political regime, regular news consumption from television is associated with lower trust to strangers. However, using Internet news in nondemocratic countries is linked with an additional decrease in trust to strangers. We discuss how these findings run against the argument of the bridging effect of the Internet in nondemocratic countries and support the mean-world hypothesis irrelevant of the political regime.

Keywords: generalized trust, social trust, media consumption, news, Internet, television, political regime, multilevel modelling, the DD index, Freedom House status.

JEL Classification: Z130

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Introduction

Uncertainty is one of the central features of modern societies. Individuals have to deal with institutions and with each other without knowing everything about the background of their partners in interaction. Generalized trust is one of the information- and risk-related resources (Luhmann, 2000: 100) that helps deal with this kind of everyday uncertainties.

Uncertainty engenders trust, while exhaustive knowledge makes trust redundant. When individuals are unable or unwilling to get the necessary information about the other party, under certain conditions they would assume trustworthiness of the other party. Trust is the only option when the costs for gathering information are too high (Elster, 2015: 337). In Akerlof's example on the 'lemon' market of used cars (Akerlof, 1970), buyers of second-hand cars have to trust the seller as to the quality of the car before they buy it as there is no other way to predict the seller's honesty.

Trusting unknown people, i.e. generalized trust, becomes a social issue in modern society. In pre-modern societies, where people's lives are embedded in close neighbourhoods and vocational communities, the need for trusting behaviour is very scarce or even non-existent. In modern societies, however, there appears a need for different kinds of trust that cannot be automatically transferred from unconditional trust in families and small-scale societies (Luhmann, 2000: 100). Simmel argued in 1907 that 'without the general trust that people have in each other, society itself would disintegrate, for very few relationships are based entirely upon what is known with certainty about another person, and very few relationships would endure if trust were not as strong as, or stronger than, rational proof of personal observation' (Simmel, 2011: 191). The case of social development with a total lack of generalized trust was demonstrated by Banfield to be leading to impaired economic development and impossibility of working for the common good (Banfield, 1957). To understand why some conditions generate high social trust while others produce low trust has become even more important with the onset of globalization, social media, and the growth of social isolation (Sasaki & Marsh, 2012).

The issue with generalized trust is that this resource is hard to gain in places where its benefits would be highest, i.e. amidst the low-trusting communities and countries. Following Yamagishi, there is a paradox of trust: 'On the one hand, trust is most needed in situations of high social uncertainty, situations where trust is most difficult to produce. On the other hand,

trust is not needed in stable relationships where trust is most easy to produce' (Yamagishi, 2011: 11).

Exceptions to this rule occur only under remarkable conditions. Inspired by ethnographic evidence of divergent relations between uncertainty and trust on the rice and rubber markets, Kollock (1994) tested them in experiments. On the market for rice, it is possible to estimate the quality of the good directly and at almost no cost, while on the market for rubber, it is impossible to do until months later after the deal, which makes important the reputation of the seller to continue exchange on the market (Kollock, 1994: 314-315). Kollock compares the two conditions (known vs. unknown quality of the good) in experiments and demonstrates that trust is higher under the uncertain-quality condition (Kollock, 1994: 329).

Generalized trust is, thus, part and parcel of the everyday mechanics of interaction in modern societies. It helps cooperate with unknown people, from strangers in the street to neighbours in blocks of flats whose names often remain unknown. Though trust is a personal reaction to uncertainty, the reproduction of trust is moderated by the institutional and social context surrounding interaction such as mass media and political regime in society.

Mass media play an important role in shaping social crises and confrontations. In pre-modern times, the dividing lines for social conflicts often lay along religious confessions or estates, often leading to wars. Nowadays, nationalist parties across Europe such as the 'Alternative für Deutschland' in Germany, the 'Freiheitliche Partei Österreichs' in Austria, and many others, champion anti-immigrant policies. Nationalities, religions, and social inequalities are surviving as grounds not only for divisions in modern societies, but also for confrontations where mass media play their part by framing the events and providing comments. The role of mass media in supplying reliable information, the key resource in replenishing generalized trust in modern society, has been contested not once.

Our research question is as follows: How is trust to unknown people related to consuming news from the Internet vs. television, given the political regime of the country?

We argue that systemic features of political regime play a decisive role in supplying varied or, on the contrary, one-sided information to the audience. The news broadcasted by the mass media is more varied and close to reality in democracies, and more black-and-white in nondemocratic societies, which imprints on the reproduction of generalized social trust.

The contribution of this paper is threefold. First, we compare television with the Internet. We put new and old media channels in one comparative framework to estimate the link of television and Internet use with generalized trust.

Second, we focus specifically on the consumption of news. This helps eliminate other popular uses of the media such as casual listening or entertainment.

Third, we look into the connection between media consumption and trust taking into account the political regime in the country. We show how nondemocratic regimes condition the link between media consumption and trusting strangers. In this, we apply multilevel regression analysis methodology tailored for cross-country comparison. We carry out the analysis on the largest comparative survey with national representative samples in 60 countries of the world comprising questions on trust and media consumption, the World Values Survey (2011-2014).

The rest of the paper goes as follows. First, we outline the informational approach to trust that explains how the amount of available information is related to how trustworthy other people appear. We also compare the effects of media under democratic and nondemocratic regimes. After that, we present the research design and results. In the last section, we discuss the results, showing how using the Internet or television for news is different in democratic and nondemocratic societies as regards social trust.

Risk and Information as Sources of Generalized Trust

Trust is risk-calculation behaviour that has cognitive roots in the information. Luhmann writes that trust is an ‘attitude which allows for risk-taking decisions’, in view of potential advantages and in spite of the possibility of being disappointed by the others’ behaviour (Luhmann, 2000: 103). In the same vein, Heimer states that all trust problems are based on uncertainty and vulnerability (Heimer, 2001: 43). Several more authors develop the information-based approach to trust. Hardin points out that ‘trust is a cognitive notion, in the family of such notions as knowledge, belief and [...] assessment’ (Hardin, 2002: 7). Thus, trust can be defined as a reaction to uncertainty and lack of information.

However, generalized trust is not blind belief in the trustworthiness of strangers. It operates in the absence of information but connects past experience with the expectations of future cooperation (Barbalet, 2009: 369; Sztompka, 1999: 71-72). Trust is relevant in risky

situations when there is no certainty about the outcome. Trust builds up on reputation as a measure of consistency of conduct in the past (Figure 1).

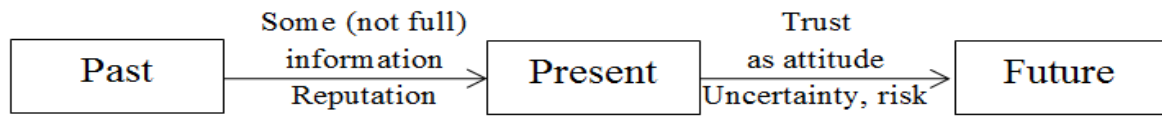


Fig. 1. Trust as Information-Based Risk Behaviour.

As Figure 1 shows, trust is experience-based attitude that is meant to deal with uncertainty, cf. the examples of ‘lemon’ market or rubber market. Schlenker, Helm, and Tedeschi have summed it up in the following paradox: trust, on the one hand, occurs only in risky situations, when outcome is not predefined; on the other hand it requires some information about the situation (Schlenker et al., 1973).

Is generalized trust possible under condition of null information? According to Barbalet, trust occurs ‘in the absence of information about other’s reliability’ (Barbalet, 2009: 367). However, this is closer to a deficit of information or the absence of full information, rather than having no information at all. More authors, from Luhmann (2000: 104) to Sztompka (1999: 72), have underlined it is not the complete absence of information but previous knowledge and reputation that trust builds on. In other words, trust is an expectation.

To distinguish between the positive and negative outcomes of trust, Gargiulo and Ertug have introduced the ideas of ‘optimal trust’ and ‘excessive trust’ (Gargiulo & Ertug, 2006: 175). Optimal trust, on the one hand, stands exactly where trusting can help achieve highest benefits, such as lower information-processing costs and uncertainty, more satisfaction, and lower conflict to the parties. Excessive trust, on the other hand, appears as a result of insufficient monitoring, and unnecessary commitment and embeddedness. Excessive trust leads to ‘blind faith’, i.e. allowing high risks and poor coordination, complacency, and excessive obligations. The authors seek to balance the optimistic bias in trust research by showing the rational reasons for lower trust to strangers. However, they point out that the degree of trust can be classified as ‘excessive’ only post hoc, by its consequences on observable outcomes (Gargiulo & Ertug, 2006: 181). This limits the potential to estimate the cognitive barriers defining the right amount of information, reputation, and monitoring of the other party in trust relationships.

Is generalized trust needed under condition of full information? When there is complete information, trust is needed no more because it is a reaction to our incapability of achieving full knowledge. As Gambetta puts it: ‘Trust is a tentative and intrinsically fragile response to our ignorance [...] If we were blessed with an unlimited computational ability to map out all possible contingencies in enforceable contracts, trust would not be a problem’ (Gambetta, 2000: 218).

To sum up, according to this informational approach, trust is an information-based resource fostering cooperation in presence of insufficient information about the interaction partner. This is especially relevant to modern societies which necessitate communication with many unknown individuals.

Trust is a response to a condition of high uncertainty which in excessive amounts can lead to negative consequences for the individual. Trust hinges on information. Under no information condition, to trust strangers would be forbiddingly irrational; under full information condition, trust is not an issue anymore as the need to trust disappears.

To increase the available information and monitor the situation, one can turn to as many sources of information as possible. In this vein, we could reason that the more media channels a person uses, the higher proportion of information is known to that person. This logic, however, may differ depending on whether news channels are independent of the government and work by high standards. If the information they deliver is consistent and complementary, more information leads to higher trust; if the information is contradictory, more information may lead to distrust. For instance, when the old mass media and online media alike work by high standards with a view to a critical reconstruction of events, the overall effect is complementary. As a result, uncertainty reduces, giving more grounds for expanding trust. In the opposite situation, where the old mass media are under tangible government control, they focus on reinforcing the certainty of the dominant, pro-government narrative. At the same time, online media which eschew government media regulation with more success are more likely to produce the news running against the dominant narrative. It creates harsh discrepancies in the news agenda, and may further lead to trust shrinking.

How the mass media work is by and large defined by the nature of the mass media, and by political context, which are discussed in the following two sections.

Effects of Television and the Internet on Generalized Trust: A Conditional Approach

Mass media is as defining a feature of modern societies as is the rise of generalized trust. Mass media help overcome uncertainty on a day-to-day basis by supplying news to the public. Whether mass media help maintain trust to strangers or hinder it is an empirical question. Depending on the content, quality, and channel, the resulting effect on social trust can differ.

Media moderate trust reproduction and foster new types of trust. Luhmann argues that writing, literacy, and the printing press transformed the way we understand familiar and unfamiliar within the familiar world and ‘our modes of coping with the unfamiliar’ (Luhmann, 2000: 102). In the second half of the last century, television and the Internet prompted a similar transformation. This is one of the reasons why personal levels of generalized trust are nowadays conditioned not only by local milieu or personal experience, but also by television culture (Luhmann, 2000: 103). Sztompka goes further to say that television has nurtured a new type of trust, virtual personal trust (Sztompka, 1999: 42).

Television and Internet news are in the focus of this paper as both of them are electronic-based but one belongs to traditional mass media while the other combines the features of various media channels.

Robinson and Davis (1990) juxtapose television and newspapers audiences and find out that TV-viewers are less informed about current issues than newspaper readers. Taking into account Graber’s (1990) finding that television news viewers recall information better, television audience is generally less aware and better at memorising the message as compared to newspaper readers. Both newspapers and television, however, transmit their message ‘from one to many’, whereas Internet-based media which allow for the massive individualization of content and message, provide communication ‘from many to many’ (Crosbie 1998).

As for the social impact of television, some experiments show that watching political news may produce a positive effect on political knowledge and participation (De Vreese & Boomgaarden, 2006). However, heavy television viewers are known to have lower generalized trust and to view the world as being more dangerous than it is, which is called the ‘mean world’ syndrome (Gerbner et al. 1980). A comparative study of 21 US urban communities also demonstrates that general television use is negatively related with social trust (Hindman & Yamamoto, 2011). In a recent analysis of European countries, both

political and entertainment TV watching were found to be associated with lower social trust and political participation, while Internet use had a positive relationship with social trust (Firat, 2014). According to Firat (2014), this could partly be explained by the different human values fostered by each media channel. In a different study, entertainment TV watching had a positive relation to social trust while political TV watching had a negative one (Moy & Scheufele, 2000). Thus, in both studies political TV watching was associated with lower social trust, thus justifying the ‘mean world’ syndrome. Other research has also found that it is the type of media use but not duration that matters more for political participation (Bakker & De Vreese, 2011; Uslaner, 2004). However, at least for the youth the Internet turns out to be closer related to political participation than either newspapers or television (Bakker & De Vreese, 2011).

Why? The Internet, carrying the individualized message ‘from many to many’ is less prone to mainstreaming and has more potential in spotting the individual interests of the user. However, it has its own caveats in reducing information uncertainty. The ‘dark side’ of the individual choice of news on the Internet is selective exposure (Stroud, 2008), also known as ‘the echo chamber effect’ (Garrett, 2009), or ‘the filter bubble’ (Bakshy et al., 2015), when users tend to neglect opinion-challenging materials in favour of those that confirm their own political views and partisan leanings. This mechanism has been shown to be relevant for social networking sites in particular (Bakshy et al., 2015). In addition, news consumption on the Internet involves various types of activities, such as reading, watching, and sometimes writing comments, i.e. Internet news assume ‘technological fluidity’ (see Firat, 2014) that combines the cognitive activities characteristic of various ‘old media’.

As for social trust, the available evidence of the Internet effects is mixed. Social media as the important modern-day news outlet have sometimes been shown to increase social trust (Firat, 2014; Valenzuela et al., 2009), to decrease social trust (Sabatini & Sarracino, 2014), or to have no substantial effect on social trust whatsoever (Uslaner, 2004). According to Beaudoin (2008), one possible intervening factor could be the perceived informational overload from the Internet.

Overall, the ‘old’ mass media such as newspapers or television have been shown to exert different effects on social trust, both directly and via mediators such as information overload or values. The rise of the Internet and social media has opened up new possibilities for communication, spotlighting the individual interests of the user, not the mainstream message of the old media.

Therefore, the image of heavy television viewers imagining the ‘mean world’ full of dangers has given place to the image of flexible media users, capable of spreading messages above and beyond the mass media, but also prone to selective exposure and the ‘echo chamber effect’ they create online. In empirical research, television watching, both for political news and entertainment, is linked with negative social trust. Internet use, by contrast, demonstrates mixed links with social trust. Therefore, it is reasonable to adopt the conditional approach posing that the relationship between consuming news from various media and social trust can be moderated by third factors pertaining to the individual or the social context. Among those factors, we focus on the difference between democratic and nondemocratic political regimes to formulate the hypotheses of this study.

Trust and Media in Democratic and Nondemocratic Context

Mass media news outlets are meant to reduce uncertainty about the world and ongoing developments. People and events which are presented in favourable light in the media get wider recognition and increment in reputation in that way. In particular, country context can be an important moderator of the relationship between Internet use and political engagement (Räsänen & Kouvo, 2007).

We argue that in nondemocratic societies the linking mechanisms between mass media channels and generalized trust are different from democracies, although the direction of relationships is similar. Take the enhanced visibility of the individual on the Internet (Ragnedda & Ruiu, 2017: Section 3). In democracies, Internet news is just another accessible way to monitor social institutions, whereas in nondemocratic societies, due to opacity of the institutional performance, using the Internet for news is akin to half-legal sneak peeking at what is going on ‘behind the curtains’ of the official news.

Mass media serve different purposes in nondemocratic regimes. In discussing the nature of uncertainty in democracies and dictatorships (equalled with autocracies), Przeworski reasons that democratic regimes assume uncertainty in the sense that ‘there is no group whose preferences and resources can predict outcomes with near certainty [of an authoritarian system]’ (Przeworski, 1991: 47). Democracy ‘generates the appearance of uncertainty because it is a system of decentralized action in which knowledge is inescapably local’ (Przeworski, 1991: 47). Therefore, a democratic regime needs mass media to compensate for the local lacks of information. In a dictatorship, on the contrary, there is a certainty that decisions are made so as not to hamper the dictator; therefore, ‘everyone who knows what the

dictator wants can predict what will happen' (Przeworski, 1991: 50). As a result, mass media do not need to cover local lacks of information. Rather, they are serving the interests of the dictator.

As a rule, in nondemocratic societies, mass media are subject to government regulation, or even censorship. But Internet news outlets, until recently, enjoyed a much wider freedom of speech everywhere. In the countries with democracy issues, it is this 'almost total absence of censorship in the blogosphere, in comparison with TV channels, [that] makes the Internet, and blogs in particular, an extremely accessible and inexpensive arena for the formation of alternative political communication' (Koltsova & Shcherbak, 2014: 1728).

The Internet has created a great potential for civic engagement via enlarging social networks and generating trust to strangers (Ragnedda & Ruiu, 2017). The most prominent and well documented example of this on a massive scale has been the Arab Spring 2011 when activists employed Internet resources to cooperate and mobilize for collective action (e.g., Eltantawy & Wiest, 2011; Howard et al., 2011). However, the media use innovation of the Arab Spring consisted in the massive use of social media for mobilization, not the Internet news per se. Since 2011, the role of the Internet in political changes has been the subject of hot debate as well as critique³ (Morozov, 2011; see Wolfsfeld, 2013: 118).

The Internet, due to its interactive, responsive, and social nature, bears a potential for democratization. Nisbet et al. (2012) investigate the link between Internet use and demand for democratic governance in African and Asian countries. They find out that Internet use increases citizens' demand for democratic governance, the effect being more pronounced in democratic settings (Nisbet et al., 2012). Using media consumption and media systems data on European countries, Geber, Scherer and Hefner (2016) analyze informational media and Internet use effects on participatory and network social capital. They demonstrate that both informational media use and the Internet have a positive effect on participatory social capital, i.e. civic engagement, and the effect is higher in democratic countries (Geber et al., 2016: 506-507). Thus, the moderate positive democratizing effects of the Internet and informational media use that were revealed across different regions of the world are in the same direction.

³ Critics underscore the diverging effects of social media across the countries and the importance of local political context in spurring, or not spurring, any democratizing mobilization. Likewise, in comparing social media role in peacetime civic activism across countries, researchers come to a conclusion that social media were 'rather used to build and reinforce the emerging collective identity and to create consensus within the [already existing] movement than to encourage Habermasian public debate' (Gladarev and Lonkila, 2012: 1391).

There are reasons to believe it also works in the same manner in nondemocratic countries, where the Internet ‘decreases the control of the political elite over the information flow and significantly simplifies the task of collective mobilisation’ (Koltsova & Shcherbak, 2014: 1716), presenting ‘an alternative to the biased nature of [national] television broadcasting’ (Lonkila, 2012: 6) because ‘monopolies or near-monopolies on political news information have thinned’ (Russell, 2011: 1239). Under various nondemocratic settings, from hybrid democracies to autocracies, Internet news outlets and social media will be democratizing the public as well, but their message will more often multiply rather than reduce uncertainty. Democracy corresponds to higher rather than lower generalized trust. Therefore, we may expect that the positive effect between Internet news consumption and generalized social trust will hold in our analysis as well. We suppose that in democratic countries those who use Internet news will have higher chances of trusting strangers. On the one hand, this would be due to the facilitating democratic environment; on the other, due to the fact the Internet news in nondemocratic countries are more likely to run against the mainstream media message, increasing cognitive dissonance and distrust to strangers among the audience. This leads to the following hypothesis of this study:

H1: Regular news consumption on the Internet in nondemocratic societies is associated with lower trust to strangers than in democratic societies, everything else being equal.

The difference in trust between democratic and nondemocratic societies manifests itself in trust towards strangers. People in democratic societies tend to trust all the people whereas people living in non-democratic countries clearly distinguish the in-group from the out-group in terms of trust. News on the Internet in nondemocratic societies is more likely to produce contradictory reports as compared with mainstream, government-controlled media. In addition, if individuals consume the government-controlled media outlets in nondemocratic countries online, this will also incline them to trust strangers less as mainstream news in nondemocratic countries employ the ‘us vs. them’ rhetoric. Therefore, the more varied news consumption in nondemocratic countries will be linked with lower trust to strangers:

H2: Regular watching TV news in nondemocratic societies is associated with lower trust to strangers than in democratic societies, everything else being equal.

Data

The main dataset used for the analysis here is the World Values Survey, 2011-2014 (World Values Survey..., 2016). The World Values Survey (WVS) has a multitopic questionnaire covering topics from media consumption and trust to human values, work attitudes, civic engagement, and others. It was started in 1981 by R. Inglehart to test his theory of postmaterialist value shift (Inglehart, 1977). The WVS has a largest scope in the world among comparative international value surveys. In its 6th wave that was fielded in 2011-2014, there were 60 nationally representative samples collected all over the world representing various cultural and value regions (Figure 2).

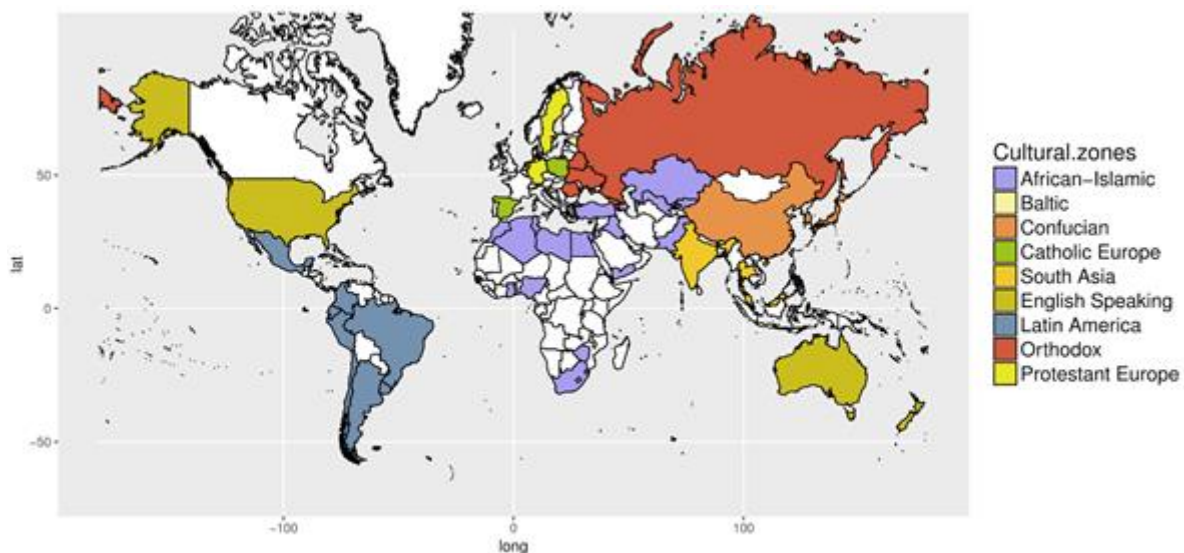


Fig. 2. Countries in the WVS 2011-2014 by Inglehart-Welzel cultural zones.

The dependent variable is trust to unknown people (out-group trust) which is measured by the question: *“I ‘d like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People you meet for the first time”*. This question is part of a 6-question battery on trust. Respondents answered it using a 4-point scale (‘Trust completely’, ‘Trust somewhat’, ‘Do not trust very much’, and ‘Do not trust at all’). The answers were recoded into a binary scale (0 - no trust, 1 - trust) for the ease of interpretation and more chances for models to converge. We do not use the classic generalized trust indicator available in the WVS questionnaire as it has been vastly criticized for non-validity (Sturgis, Smith, 2010) and

two-dimensionality (Miller and Mitamura, 2003). Neither do we deliberately use the composite trust index (Delhey and Welzel, 2012, Newton and Zmerli, 2011) as its components about trust to people of another religion or nationality could measure other latent constructs (e.g. religious intolerance or xenophobia) rather than generalized trust.

Independent variables in this research pertain to individual- and country-levels. On the individual level we focus on the relationship between generalized trust and news consumption. The two hypotheses relate to the effects of the Internet and television. In the questionnaire, respondents answered how often they use Internet / TV news / Daily newspaper / Radio news / as a source of information on an ordinal scale. The original scale was transformed into binary categories where 1 means ‘every day’ and 0 covers all the other categories (‘weekly’, ‘monthly’, ‘less than monthly’, and ‘never’).

Following Putnam’s argument on the purpose of media use (Putnam, 2000: 231) we apply a measure of media consumption that captures the informational use of different channels. Schmitt-Beck and Wolsing also argue that a focus on particular purposes of media consumption yields more consistent results than using pure time spent on the channel as a determinant of attitudes and behaviour (Schmitt-Beck & Wolsing, 2010: 465). Although there are no indicators in the WVS questionnaire to compare informational and entertainment media use, the questions on media specify that each media channel is used as a source of information.

The country-level variable involved in hypotheses testing is the country’s political regime (democracy or not). To measure this characteristic, we use two independent indicators, the binary Przeworski Democracy-Dictatorship index (DD) (Cheibub et al., 2010), and the 3-category Freedom House index (Freedom House, 2017).

The first one, the Przeworski index, or the DD index, is a reproducible indicator based on observational criteria, ‘a characteristic that is not present in any of the existing alternative measures of political regimes’ (Cheibub et al., 2010: 97). A country is considered a democracy if it meets three conditions: there are elections, more than one political party, and changes in who runs the government. If the country fails to meet all the criteria, it is classified as a dictatorship. The values that are used for analysis are the latest available for each country, which is mostly the late 2000s. The distribution of countries in the study by the DD index is shown in Figure 3.

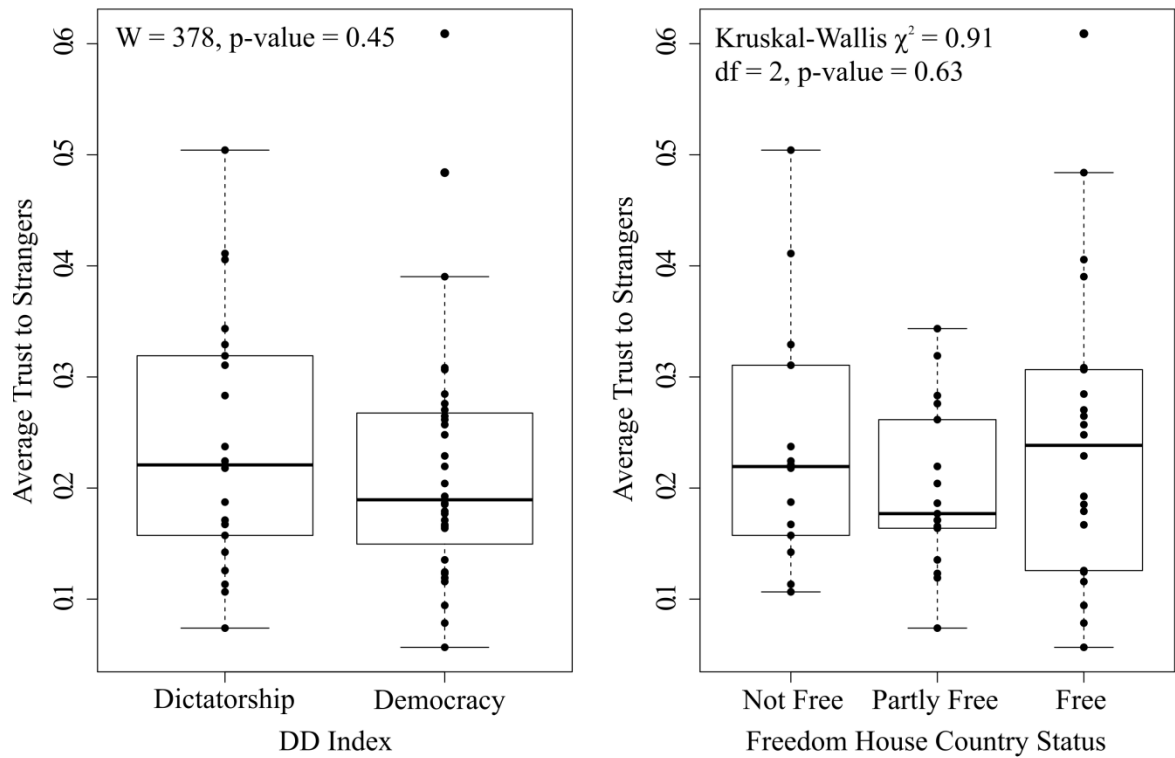


Fig. 4. Generalized Trust by Political Regime.

Both indices of political regime are not free from limitations. The DD index cannot distinguish empirically democratic and nondemocratic countries in cases when there is no change of the ruling party. Moreover, since the late 2000s till the moment of data collection, some political regimes might change. The Freedom House index, on its part, could be criticized for and reliance on expert opinions and, therefore, non-reproducibility.

Control variables in this research also pertain to individual and country levels. On the country level, we use standardized log of GDP per capita for the year of data collection as provided by the World Bank. Global indicators of development have been shown to have a moderating relationship on the link between trust and its indicators. Thus, natural alternatives to GDP would be Human Development Index or Human Empowerment Index (Welzel, 2013). In particular, in the countries with lower levels of human empowerment, generalized trust is dependent on trust to known people, institutional trust, and self-expression values, while in the countries with higher empowerment, generalized trust is more related to tolerance or activism (Almakaeva et al., 2017). However, for testing the hypotheses proposed in this research, either HDI or HEI would be collinear to the indicators of interest measuring democracy. Therefore, we use conservatively the standardized log GDP PPP.

On the individual level, we take into account trust to people one knows from the WVS trust battery and the socio-demographic variables that proved to be related to generalized trust in previous studies.

Using trust to known people as a control is grounded in theoretical debate concerning the relationship between in-group and out-group trust. Delhey and Welzel suggest splitting all trust theories in three groups according to how they portray the relationship between in- and out-group trust (2012). According to antagonism theory, in-group trust does not lead to out-group trust and situations when the former is high and the latter is low are quite common (Banfield, 1958; Gambetta, 1988). Unity-theory, however, views ingroup and outgroup trust as manifestations of ‘same developed capacity to trust’ (Delhey & Welzel, 2012: 48). Prerequisite theory, on its part, states that in-group and out-group trust are different but tightly interrelated forms of trust. According to the latter approach, trust is learned from interactions with other people. Therefore, trust to known people is a necessary prerequisite to trusting unknown people. According to Delhey and Welzel, empirical evidence mostly supports unity theory and prerequisite theory (Delhey & Welzel, 2012), which is why we take into account trust to known people in modelling trust to unknown people.

Among the socio-demographic variables, we include the respondent’s sex (male or female), standardized age, education (WVS 9-point scale recoded into primary, secondary, or higher), and subjective income (1-10 points).

After listwise deletion of the missing values and countries with missing variables (see Table A in Appendix), the final sample shrinks from 90,350 individuals in 60 countries to 75,269 people in 53 countries. Descriptive statistics for all the variables in the study are shown in Table 1.

Tab. 1. Descriptive Statistics of the Data

Individual-level variables	%	Mean	St. Dev.	Min.	Max.
Trust to unknown people (binary)	23.6	-	-	-	-
Trust to known people (binary)	75.3	-	-	-	-
Daily users: Internet	29.2	-	-	-	-
Daily users: Television news	74.4	-	-	-	-
Daily users: Newspapers	31.1	-	-	-	-
Daily users: Radio	42.7	-	-	-	-
Age (standardized)	-	0	1	-1.58	3.39
Sex: female	51.7	-	-	-	-
Education: primary	22.1	-	-	-	-
Education: secondary	53.0	-	-	-	-
Education: tertiary	24.9	-	-	-	-
Income (1-10)	-	4.90	2.11	1	10
<hr/>					
Country-level-variables					
Democracy (DD)	60.4	-	-	-	-
Freedom house: free	41.5	-	-	-	-
Freedom house: partly free	32.1	-	-	-	-
Freedom house: not free	26.4	-	-	-	-
Standardized log GDP PPP	-	0	1	-2.47	2.26
53 countries, 75269 respondents					

Method

We use multilevel modelling (Snijders & Bosker, 2012, Gelman & Hill, 2007) as the main method of analysis for two main reasons. First, the purpose of our analysis is to define the contextual effect of political regime on the relationship between generalized trust and media channels. While the effects on contextual level and on individual level may differ (Robinson, 1950), multilevel analysis helps take both levels into account in one model, with level-relevant variance of the indicators. Second, the structure of our survey data contains individual respondents nested within countries, i.e. observations are not independent. The intra-class correlation coefficient (ICC) shows that approximately 11% of dependent variable variance (generalized) is explained by country-level differences. That is a statistical argument that multilevel modelling is necessary and can give robust results here as compared with OLS (Gelman & Hill, 2007: 449).

The dependent variable is dichotomous; therefore, we apply the multilevel binary logistic regression, a type of generalized linear models. In full, the model looks as follows:

$$\begin{aligned}
Y_{ij} = & \\
& \gamma_{00} + \gamma_{01} * Democracy_j + \gamma_{10} * News\ consumption\ channels_{ij} + \gamma_{11} * \\
& News\ consumption\ channels_{ij} * Democracy_j + \gamma_{01} * Country\ controls_j + \gamma_{10} * \\
& Individual\ controls_{ij} + u_{0j} + u_{1j} * News\ consumption\ channels_{ij} + r_{ij}
\end{aligned}$$

In the formula, Y_{ij} is the $\log[\phi_{ij}/(1 - \phi_{ij})]$, ϕ_{ij} denoting the probability that the respondent trusts unknown people.

A separate issue in the literature on generalized trust is the presence and direction of causality. Delhey and Newton (2005: 314) argue that causality issues arise in most studies of trust as cause and effect relationships are not clear. Some authors have shown that trust may cause equality, or democracy but not vice versa (Bergh & Bjørnskov, 2014; Inglehart, 1999), or that trust and health have circular causality (Giordano & Lindström, 2015). In media and trust research, causal relationship is rarely tested, with few exceptions (see Sabatini & Sarracino, 2014). Usually researchers assume that media shapes social attitudes (Moy & Scheufele, 2000). Due to cross-sectionality of our data, we discuss the relationship between media use, political regime, and generalized trust, but the direction of that link is beyond the scope of this paper.

As a first step of analysis, we estimate the ‘empty’ model without any predictors, to have a benchmark for comparing further models. As a second step, we introduce, one by one, the indicators of media-channel use, with controls. Only then do we model interaction effects between the Internet and television use as a source of information and generalized trust, depending on political regime.⁴

In the tables below, Model 1 includes random effect for Internet use. This is done to allow the relationship between Internet use and generalized trust to vary across countries. Heisig et al. (2017: 823) demonstrate that randomizing individual-level slopes where effects actually vary across countries produces more precise estimates of context effects. We randomize individual-level variable if they are included in cross-level interaction. In Model 2, we add the interaction between randomized Internet effect and the DD index; therefore, Model 1 and Model 2 are nested and can be compared with chi-square (deviance and -2LL). Model 3 includes the randomized television effect and the DD index. Model 4 also includes

⁴ Coefficient estimates for the full sequence of analyses are available upon request.

interaction effect between television use and DD index. Models 3 and Model 4 are, thus, also nested and their deviance indicators can be compared.

To provide additional robustness checks, we estimated models with Freedom House as a regime indicator as well. The sequence of the models is the same as for the DD index.

Results

Table 2 shows how media channels' informational use is related to generalized trust in democratic and nondemocratic political regimes. To test hypothesis 1, which predicts lower levels of generalized trust among the regular consumers of Internet news in nondemocratic countries, as compared to democratic ones, we estimate multilevel binary logistic models (Model 1 and Model 2) with the interaction effect of the Internet news and political regime in the second model. To test hypothesis 2, which predicts lower levels of generalized trust among the regular users of television news in nondemocratic countries as compared to democratic countries, we estimate Model 3 and Model 4, with the interaction effect of television news and political regime in the latter model.

Tab. 2. Generalized Trust by Media Channels and Democracy (DD Index)

	Dependent var.: Trust to people one meets for the first time							
	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	<i>Odds Ratio</i>	<i>P</i>	<i>Odds Ratio</i>	<i>P</i>	<i>Odds Ratio</i>	<i>P</i>	<i>Odds Ratio</i>	<i>P</i>
Fixed Part								
Television news	0.76	<.001	0.76	<.001	0.74	<.001	0.74	<.001
Newspaper news	1.07	<.001	1.07	<.001	1.07	<.001	1.07	<.001
Radio news	1.06	<.001	1.06	<.001	1.07	<.001	1.07	<.001
Internet news	0.96	0.43	0.88	0.05	0.99	0.7	0.99	0.7
<i>Country Democracy</i>	0.86	0.38	0.85	0.32	0.92	0.58	0.91	0.58
Internet* <i>Democracy</i>			1.17	0.06				
Television* <i>Democracy</i>							1.01	0.93
Trust to known people (reference = does not trust)								
Trust to known people	5.03	<.001	5.03	<.001	5.05	<.001	5.05	<.001
Income (1-10)	1.06	<.001	1.06	<.001	1.06	<.001	1.06	<.001
Male	1.03	0.16	1.03	0.15	1.03	0.14	1.03	0.14
Age (standardized)	1.12	<.001	1.12	<.001	1.12	<.001	1.12	<.001
Education level (reference = higher)								
Education: secondary	0.88	<.001	0.88	<.001	0.88	<.001	0.88	<.001
Education: primary	0.90	<.001	0.90	<.001	0.91	<.001	0.91	<.001
<i>GDP (standardized log)</i>	1.08	0.37	1.08	0.37	1.07	0.39	1.07	0.39
(Intercept)	0.07	<.001	0.07	<.001	0.07	<.001	0.07	<.001

Random Part

$\tau_{00, \text{country}}$	0.333	0.332	0.341	0.34
ρ_{01}	-0.014	-0.006	-0.233	-0.233
ICC_{country}	0.092	0.092	0.094	0.094
AIC	73330.762	73329.471	73289.498	73291.49
-2 Log-Likelihood	73298.762	73295.471	73257.498	73257.49
Deviance	72923.45	72926.053	72864.297	72864.347

Notes: 1) model type is multilevel binary logistic regression; coefficients are odds ratios (OR) and p-values; variables in italics refer to country level; 2) Dependent variable: 0 = respondent does not trust strangers; 1 = respondent trusts strangers; 3) null model ICC = 0.112; 4) Model 1 and Model 2 are nested; Model 3 and Model 4 are nested; nested models can be compared with -2 Log-Likelihood and Deviance; all the models can be compared by AIC; 5) estimator is maximum likelihood (Laplace Approximation), package lme4, R version 3.3.2; 6) data sources: (Cheibub et al., 2010; Freedom House, 2017; World Values Survey..., 2016).

Overall, the link between using the Internet or television for news with generalized trust is not substantially different in nondemocratic countries as compared to democracies.

Getting the information from television is associated with lower odds of trusting strangers (0.76 in Model 1, which means that TV viewers in dictatorships are 0.76 times less trustful than those who do not use any media for daily sources of information in dictatorships, holding all other variables constant). Consuming news on the Internet has no significant link with generalized trust. Media effects are relatively robust throughout the models. The effect of DD index (reference category: dictatorship) is non-significant in all the models.

Although the Internet use has no significant effect in the additive model (Model 1), it is marginally significant in the interactive model (Model 2). Model fit for Model 2 is not significantly better than one for Model 1. Altogether, these findings do not support hypothesis 1.

The interaction effect between TV informational use and the DD index is not significant either. Although getting daily news from television is associated with lower generalized trust, this effect seems to be the same in democracies and dictatorships as measured by the DD index. Model fit for Model 4 is no better than the one for Model 3. These findings do not support hypothesis 2.

These results could be due to the fact that the binary DD index does not explain the variation of TV and Internet effects across countries. To check that, we replicate the models described above in the same order with the Freedom House country status as a measure of political regime.

Model 5 tests the additive model of Internet news (randomized slope across the countries) and Freedom House country status, while Model 6 estimates the interactive effect between Internet news and political regime. Model 7 estimates the randomized effect of television news with other direct effects on generalized trust, while Model 8 adds to the model the interactive effect of the regular TV news consumption and political regime. The results are presented in Table 3.

Tab. 3. Generalized Trust by Media Channels and Democracy (Freedom House Index)

Dependent variable: Trust to people one sees for the first time								
	<i>Model 5</i>		<i>Model 6</i>		<i>Model 7</i>		<i>Model 8</i>	
	<i>Odds Ratio</i>	<i>P</i>	<i>Odds Ratio</i>	<i>P</i>	<i>Odds Ratio</i>	<i>P</i>	<i>Odds Ratio</i>	<i>P</i>
Fixed Parts								
Television news	0.76	<.001	0.76	<.001	0.75	<.001	0.83	0.05
Newspaper news	1.07	<.001	1.07	<.001	1.07	<.001	1.07	<.001
Radio news	1.06	<.001	1.06	<.001	1.07	<.001	1.07	<.001
Internet news	0.97	0.43	0.9	0.15	0.99	0.7	0.99	0.69
<i>Freedom House Country Status (reference = Not Free)</i>								
<i>StatusPartlyFree</i>	0,87	0,52	0,88	0,55	0,9	0,62	1,03	0,91
<i>StatusFree</i>	0,85	0,46	0,82	0,35	0,92	0,69	0,95	0,8
<i>Internet*StatusPF</i>			0,91	0,37				
<i>Internet*StatusF</i>			1,26	0,02				
<i>Television*StatusPF</i>							0,78	0,05
<i>Television*StatusF</i>							0,94	0,64
Trust to known people (reference = does not trust)								
Trust to known people	5.03	<.001	5.03	<.001	5.05	<.001	5.05	<.001
Income (1-10)	1.06	<.001	1.06	<.001	1.06	<.001	1.06	<.001
Male	1.03	0.16	1.03	0.15	1.03	0.14	1.03	0.14
Age (standardized)	1.12	<.001	1.12	<.001	1.12	<.001	1,12	<.001
Education level (reference = higher)								
Education secondary	0,88	<.001	0,88	<.001	0,88	<.001	0,88	<.001
Education primary	0.9	<.001	0,9	<.001	0.91	<.001	0.91	<.001
<i>GDP (standardized log)</i>	1.09	0.33	1.09	0.33	1.07	0.39	1.07	0.4
(Intercept)	0.07	<.001	0.07	<.001	0.07	<.001	0.07	<.001
Random Part								
$\tau_{00, \text{country}}$	0.334		0.335		0.345		0.344	
ρ_{01}	-0.023		-0.045		-0.252		-0.239	
ICC_{country}	0.092		0.092		0.095		0.095	
AIC	73332.862		73324.77		73291.53		73291.341	
-2 Log-Likelihood	73298.862		73286.77		73257.53		73253.341	
Deviance	72923.42		72931.009		72864.154		72865.371	

Notes: 1) model type is multilevel binary logistic regression; coefficients are odds ratios (OR) and p-values; variables in italics refer to country level; 2) Dependent variable: 0 = respondent does not trust strangers; 1 = respondent trusts strangers; 3) null model ICC = 0.112; 4) Model 1 and Model 2 are nested; Model 3 and Model 4 are nested; nested models can be compared with -2 Log-Likelihood and Deviance; all the models can be compared by AIC; 5) estimator is maximum likelihood (Laplace Approximation), package lme4, R version 3.3.2; 6) data sources: (Cheibub et al., 2010; Freedom House, 2017; World Values Survey..., 2016).

Direct effect of Internet news use is not significant in Models 5-8, which corresponds to our previous findings. Direct effect of television news is also consistent: regular TV news watching is associated with lower chances of trusting strangers. However, in Model 8, the effect of TV loses its significance. The direct coefficients for political regimes (partly free and free countries, as compared to the reference category, ‘not free’) are not significant.

To test hypothesis 1, here, again, we estimate the interactive effect of regular Internet news consumption and political regime. The interaction effect is significant and positive in free countries as compared to unfree countries, which means that generalized trust among regular Internet news users in nondemocratic countries is, indeed, lower than in democracies. Model fit indices for Model 6 are better than for Model 5. This evidence supports hypothesis 1. Predicted probabilities of generalized trust on Internet news for different political regimes can be found in Figure 5.

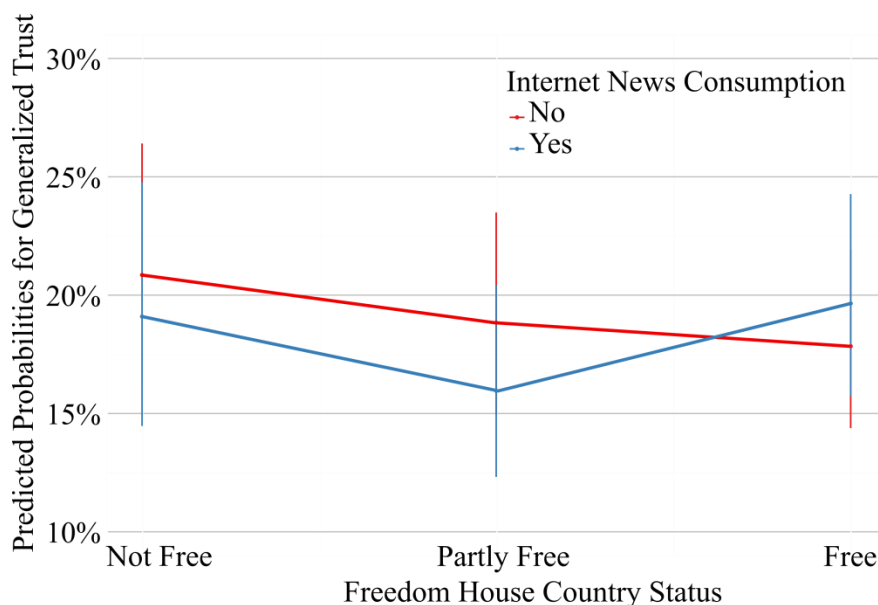


Fig. 5. Predicted Probability of Generalized Trust on Internet News Consumption and Political Regime.

Note: The graph shows the estimated coefficients with 95 % confidence intervals, which are a more conservative measure and can overlap even when coefficients are significant (Payton et al., 2003).

To test hypothesis 2, we estimate Model 7 with randomized effect of regular TV news consumption and Model 8 with an interactive effect of television and political regime. In the additive model, the effect of television is significant and negative; in the interactive effect model, direct effect of television gets marginally significant ($p=.05$), just like the interactive

effect between television and partly free country status. The log-likelihood-based fit index is better for the interactive effect model. Overall, these findings do not support hypothesis 2.

The coefficients of other media channels and all the controls in Models 5-8 are totally consistent with those in Models 1-4. Given the observed difference in the coefficients of interest to testing hypotheses, we conclude that there might be a difference in the link between media channel and generalized trust, depending on political regime and that this difference is evident for those who get news on the Internet. However, whether this link is identified or not is partly dependent on the indicator of political regime used for analysis.

The overall evidence for hypothesis 1 is, thus, mixed: according to the binary DD index, the effect of reading news on the Internet on generalized trust is independent of political regime; but according to the 3-category Freedom House index, Internet news consumers in nondemocratic countries trust strangers significantly less than in democracies. As for hypothesis 2, both democracy indices tested here show no effect on the link between regular TV news watching and generalized trust. However, in contrast to the non-significant direct effect of Internet news, TV news watching (as compared to using no mass media channels) is associated with lower generalized trust everywhere.

Discussion and Conclusion

The aim of this paper was to compare the relationship between news consumption from the Internet and television in democratic and nondemocratic countries. We looked at trust to strangers, or generalized trust, as a major feature of living in modern societies. While trust by itself is a mechanism of coping with uncertainty, regular news consumption can be a systematic way to decrease uncertainty. There is a consistent body of evidence saying that television is linked with lower generalized trust. At the same time, Internet use has mixed results as to its connection with trust to strangers. We hypothesized that in nondemocratic countries those who regularly watch news on television or get the news from the Internet have a lower degree of generalized trust.

According to our results based on the DD index, there is no difference in the link between generalized trust and regular news consumption between democracies and dictatorships, either from the Internet or from television. At the same time, television news is negatively related to generalized trust while using the Internet for information has no specific effect on social trust. Moreover, democratic regime per se has no significant relation to generalized trust either.

Our results based on the Freedom House index show that in non-free countries, those who consume news on the Internet, indeed, have a lower level of trust to strangers. The effect of television, like in the previous test, is universal for democracies and nondemocracies: regular television news watching is associated with lower trust to strangers. Direct effect of democracy, again, has no significant effect on generalized trust.

All in all, there is some evidence of the different effect of the Internet on social trust by political regime, but the effect of TV news watching is rather universal.

These findings run counter those studies which found a positive direct effect of the Internet use on social trust (Beaudoin, 2008; Firat, 2014) or negative effect of the Internet on trust (Sabatini & Sarracino, 2014), and support those studies that detected a negative effect of television informational use on social trust (Firat, 2014; Hindman & Yamamoto, 2011; Moy & Scheufele, 2000). At this point, we can say that our results support the ‘mean world’ syndrome effect produced by television as TV news viewers, in democracies and non-democracies alike, trust strangers less.

At the same time, the non-significant link between using Internet news and generalized trust needs further attention. One explanation of the absence of direct effect of the Internet news with trust is that informational use of the Internet is much more diverse than that of any ‘old media’, including television. News consumption on the Internet may involve different degrees of involvement, from passive viewing to making comments and discussing the news online, so that the resulting effect of consuming Internet news would be different. This is especially important given the worldwide scope of our study, which is not limited to Europe or only highly developed countries. In this way, the Internet’s effect on social trust may be not linear but quadratic, as is the case with the overall country development (human empowerment (Welzel, 2013)), including Internet use, and trust (Almakaeva et al., 2017).

Another explanation of the absence of direct link between Internet news consumption and social trust is the degree of Internet penetration. Even though today the Internet is not anymore a ‘new media’, the share of regular Internet news users among the countries in our analysis varies from about 5% to 70% of the population (compare with 35-95% of daily TV viewers, with a median close to 80%). Our results are robust as we used relevant sociodemographic controls (education, age, sex) and GDP. However, currently observed Internet effect may partly be the results of its lower availability and use.

All in all, our findings run against those papers which argue for the bridging effects and mobilizing power of the Internet (e.g. Eltantawy & Wiest, 2011) and support those authors and theories that argue for a conditional effect model (Firat, 2014; Gladarev and Lonkila,

2012). This is in accordance with the echo chamber effect theory (Bakshy et al., 2015; Garrett, 2009; Stroud, 2008) saying that the Internet's bridging potential is effectively hindered by communicating to the like-minded people and by the predominantly entertainment purposes of using the Internet. Thus, Internet use may lead to higher civic involvement, but the effect will be stronger in already democratic environments (Geber et al., 2016; Nisbet et al., 2012). Discussion of the link between democracy and social trust bring us back to the paradox of trust saying that trust often lacks where it might bring highest good. As put by Inglehart (1999: 88), trust (along other factors) is conducive to stable democracy, but democratic institutions do not necessarily produce trust: 'A society's political institutions are only one among many factors involved in the emergence of a culture of trust or distrust.'

We come to a conclusion that democracy by itself is not related to higher or lower generalized trust. However, its interaction with media consumption shows a significant difference in the link between consuming news and trust in democratic and nondemocratic countries. In other words, being well-informed in democratic countries as compared to not consuming news from the media at all is different from doing the same in nondemocratic societies.

Further conclusions relate to the need for exploration of divergent media-trust relationships in democratic and nondemocratic societies. As argued by technoskeptics (e.g. Morozov, 2011), Internet by itself is only one factor of social environment that cannot be considered without the general social context.

We have partly mentioned the limitations of research with a design like ours. We have relied on previous literature rather than tested the causal relationships between social trust and media. As noted above, social trust may cause important social phenomena such as equality or democracy, but only in one direction (Bergh & Bjørnskov, 2014; Inglehart, 1999), while in other cases there is a circular causality between trust and other individual characteristics (Giordano & Lindström, 2015). Here, we deliberately stuck to the simpler model design and non-causal interpretations, given the rather complex nature of the logistic multilevel modelling.

Another limitation of this paper is that we assume that television and the Internet informational use bring certainty. However, we use no external proofs to test this and take it as a forced constraint of the data set we use.

Otherwise, we have modelled the data on more than 50 diverse countries across the world, which few papers do (e.g. Nisbet et al., 2012) and which allows for more robust conclusions that regional samples. In addition, we have taken into account the nested nature

of the data (individuals in countries) and applied the multilevel model, which is more suitable for modelling such data than common OLS or binary regression. Above that, we included the necessary controls directly to the model, which some previous studies with similar designs somehow avoided (Geber et al., 2016).

Our study is relatively easy to extend by including more comprehensive or more informative measures of democracy. As the first option, we could further test the DD index and Freedom House indices by including control for regime change and the Freedom on the Net, respectively. The limitation of these indices, beyond those already mentioned, is that they cover not many countries, which will further reduce our sample. Unfortunately, this is also the case for the OpenNet Initiative index measuring transparency and consistency on Internet filtering. Further most natural candidates for measures of democracy in the country are the Polity IV index that takes into account the institutions' performance across 167 countries and varies from -10 to +10, and the newly minted V-Dem, an integral index on varieties of democracy in 170 countries. This will be the next step in our research.

Another further step for this research would be to take into account the finding that consuming online news promotes political interest (e.g., Kruike-meier et al., 2013). Obviously, the relationship between media consumption and social trust is not only direct but rather mediated or moderated by other variables. Even with cross-sectional data such as the WVS, it is possible to add interest in politics as a further relevant control variable.

In the most concise form, our conclusions can be summarized as follows:

1. Internet and television have different relationships with generalized trust in democratic and nondemocratic societies. While television consistently demonstrates the 'mean world' effect and lower trust to strangers, the effects of the Internet news use vary. In nondemocratic countries, Internet news users trust strangers substantially less than in democratic ones. Thus, the effects of media consumption do depend on political regime, but these effects are also contextual.
2. Neither the Internet nor democracy per se is directly related to generalized trust. We explain this by the diversity of the purposes of the Internet use, and the 'dark sides' of Internet informational use such as selective exposure, which is not necessarily leading to higher social trust. Democracy by itself is also not enough to produce social trust.

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Appendix

Tab. A. Availability of Indicators per Countries

	trust to known	trust to unknown	internet	tv	radio	newspapers	income	town size	education	sex	DD (Przeworski)	Freedom House	GDP PPP
Algeria	+	+	+	+	+	+	+	+	+	+	+	+	+
Azerbaijan	+	+	+	+	+	+	+	+	+	+	+	+	+
Argentina	+	+	+	+	+	+	+	+	+	+	+	+	+
Australia	+	+	+	+	+	+	+	+	+	+	+	+	+
Bahrain	+	+	+	+	+	+	+	+	+	+	+	+	+
Armenia	+	+	+	+	+	+	+	+	+	+	+	+	+
Brazil	+	+	+	+	+	+	+	+	+	+	+	+	+
Belarus	+	+	+	+	+	+	+	+	+	+	+	+	+
Chile	+	+	+	+	+	+	+	+	+	+	+	+	+
China	+	+	+	+	+	+	+	+	+	+	+	+	+
Taiwan	+	+	+	+	+	+	+	+	+	+	+	+	NA
Colombia	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyprus	+	+	+	+	+	+	+	+	+	+	+	+	+
Ecuador	+	+	+	+	+	+	+	+	+	+	+	+	+
Estonia	+	+	+	+	+	+	+	+	+	+	+	+	+
Georgia	+	+	+	+	+	+	+	+	+	+	+	+	+
Palestine	+	+	+	+	+	+	+	NA	+	+	NA	+	NA
Germany	+	+	+	+	+	+	+	+	+	+	+	+	+
Ghana	+	+	+	+	+	+	+	+	+	+	+	+	+
Hong Kong	+	+	NA	NA	NA	NA	+	NA	+	+	NA	+	+
India	+	+	+	+	+	+	+	+	+	+	+	+	+
Iraq	+	+	+	+	+	+	+	+	+	+	+	+	+
Japan	+	+	+	+	+	+	+	NA	+	+	+	+	+
Kazakhstan	+	+	+	+	+	+	+	+	+	+	+	+	+
Jordan	+	+	+	+	+	+	+	+	+	+	+	+	+
South Korea	+	+	+	+	+	+	+	NA	+	+	+	+	+
Kuwait	+	+	+	+	+	+	+	+	+	+	+	+	+
Kyrgyzstan	+	+	+	+	+	+	+	+	+	+	+	+	+
Lebanon	+	+	+	+	+	+	+	+	+	+	+	+	+
Libya	+	+	+	+	+	+	+	+	+	+	+	+	NA

Malaysia	+	+	+	+	+	+	+	+	+	+	+	+	+
Mexico	+	+	+	+	+	+	+	+	+	+	+	+	+
Morocco	+	+	NA	NA	NA	NA	+	NA	+	+	+	+	+
Netherlands	+	+	+	+	+	+	+	+	+	+	+	+	+
New Zealand	NA	NA	+	+	+	+	+	+	+	+	+	+	+
Nigeria	+	+	+	+	+	+	+	+	+	+	+	+	+
Pakistan	+	+	+	+	+	+	+	NA	+	+	+	+	+
Peru	+	+	+	+	+	+	+	+	+	+	+	+	+
Philippines	+	+	+	+	+	+	+	+	+	+	+	+	+
Poland	+	+	+	+	+	+	+	+	+	+	+	+	+
Qatar	+	+	+	+	+	+	+	NA	+	+	+	+	+
Romania	+	+	+	+	+	+	+	+	+	+	+	+	+
Russia	+	+	+	+	+	+	+	+	+	+	+	+	+
Rwanda	+	+	+	+	+	+	+	+	+	+	+	+	+
Singapore	+	+	+	+	+	+	+	NA	+	+	+	+	+
Slovenia	+	+	+	+	+	+	+	+	+	+	+	+	+
South Africa	+	+	+	+	+	+	+	+	+	+	+	+	+
Zimbabwe	+	+	+	+	+	+	+	+	+	+	+	+	+
Spain	+	+	NA	NA	NA	NA	+	NA	+	+	+	+	+
Sweden	+	+	+	+	+	+	+	+	+	+	+	+	+
Thailand	+	+	+	+	+	+	+	+	+	+	+	+	+
Trinidad and Tobago	+	+	+	+	+	+	+	NA	+	+	+	+	+
Tunisia	+	+	+	+	+	+	+	+	+	+	+	+	+
Turkey	+	+	+	+	+	+	+	NA	+	+	+	+	+
Ukraine	+	+	+	+	+	+	+	+	+	+	+	+	+
Egypt	+	+	+	+	+	+	+	+	+	+	+	+	+
United States	+	+	+	+	+	+	+	NA	+	+	+	+	+
Uruguay	+	+	+	+	+	+	+	+	+	+	+	+	+
Uzbekistan	+	+	+	+	+	+	+	+	+	+	+	+	+
Yemen	+	+	+	+	+	+	+	+	+	+	+	+	+

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