Report

COMMON SENSE WANTED
RESILIENCE TO 'POST-TRUTH' AND ITS PREDICTORS IN THE NEW MEDIA LITERACY INDEX 2018*

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► The index is assessing the resilience potential of 35 European societies to post-truth phenomenon by employing media freedom, education and interpersonal trust indicators.

► The Northwestern European societies have higher resilience potential to fake news with better education, free media and high trust between people.

► The Balkan countries are most vulnerable to the adverse effects of fake news and post-truth, with controlled media, deficiencies in education and lower trust in society.

► Media freedom is imperative, but sometimes overlooked factor, to tackling post-truth and fake news, considering also that people still tend to trust traditional media more as opposed to social networks.

► Education remains the key component in dealing with the post-truth phenomenon – as the general education level as well as tailored media literacy training.

* The views and opinions expressed herein are solely those of the author and do not necessarily reflect the positions the Open Society Institute – Sofia or its sponsors.

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A MAJORITY FOR COMMON SENSE: IDENTIFYING THE PROBLEMS

Reportedly, in the 1950s, a supporter of US politician Adlai Stevenson once called out, „Governor Stevenson, all thinking people are for you!" And Adlai Stevenson answered, „That's not enough. I need a majority."

To many people, this anecdote seems perfectly fitted for today's world. The ubiquitous spread of fake news and associated phenomenon bring about and multiply real-world consequences such as distrust in institutions and expert knowledge, rising polarization in society, hate speech and crime in the extreme cases.

'Post-truth', voted word of the year of the Oxford dictionaries in 2016, has come to describe the current situation. Often associated with the noun 'post-truth politics', it is defined as 'relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief'.

The related term 'fake news' is defined here simply as 'fake news', despite that there is an array of manifestations – or as one researchers says "there's a whole menagerie of animals in the false-information zoo... they include rumors, hoaxes, outright lies, and disinformation from foreign governments or hostile entities."[1] Oftentimes, other terms are used – Facebook calls it "false news", an expert panel to the EU[2] uses "disinformation" as it fears fake news is overused.

THE NEED OF RESILIENCE TO 'POST-TRUTH': WHERE THE MEDIA LITERACY INDEX COMES IN

The Media Literacy Index was created in 2017 as a response to the 'post-truth' phenomenon.[3] Actually, it is about measuring resilience to 'post-truth', 'fake-news' and

[1] *Robinson Meyer*, "Why It's Okay to Call It 'Fake News'", The Atlantic, 9 March 2018 , https://www.theatlantic.com/technology/archive/2018/03/why-its-okay-to-say-fake-news/555215/

[2] A new European Commission sponsored report declines to call fake news "fake news" and insists on "disinformation". Please, see "A multi-dimensional approach to disinformation: Report of the independent High level Group on fake news and online disinformation". 12 March 2018, https://ec.europa.eu/digital-single-market/en/news/final-report-high-level-expert-group-fake-news-and-online-disinformation

[3] The report on the first Media Literacy Index 2017 entitled "Can this be true? Predictors of media literacy and resilience to the post-truth phenomenon in Europe", October 2017, is available at http://osi.bg/?cy=10&lang=2&program=1&action=2&news_id=749

their consequence in a number of European countries and offering an useful instrument to finding solutions.

This is second edition of the Media Literacy Index – hence, index 2018 – scoring and ranking 35 countries in Europe according to their potential to withstand the 'post-truth' and its negative consequence. The main assumption is that indicators for media freedom, quality of education, interpersonal trust and e-participation can serve as predictors to the level of resilience of a society to fake news, post-truth and related phenomenon. The concept of media literacy is employed to gauge the potential for resilience to the negative effects of diminishing public trust, severely polarized politics, and fragmented media, among others.

In addition to the index immediate results, this report also offers a brief look into the nature of the post-truth phenomena and fake news and suggestions how they can be tackled, deliberating on different approaches.

According to the 2018 results (Figure 1), the best equipped countries to resist the post-truth, fake news and their ramifications are the Northwestern European countries – i.e. Scandinavian ones, the Netherlands as well as Estonia and Ireland. This coincides with other findings and expert opinion singling out these countries for their capacity to hold out to the fake news.[4] Estonia's performance is telling – it has both excellent education score and free media and is standing out at the background of other CEE countries.

The lowest scoring countries are in Southeast Europe – all the way from Croatia to Turkey – as well as their close neighbors Hungary and Cyprus. As a rule, the reasons for the low results are poor or mediocre education performance and controlled (not free) media. Such countries are most likely to be vulnerable to fake news and ensuing negative effects.

As a rule, the highest scoring countries would have the best education performance, the most free media and high trust among people in society. The countries at the bottom of the ranking have low education scores, more controlled media, and in generally low trust among people. These may be of different proportions, e.g. in the case of Turkey the overall result is due more to very low media freedom score, while in the case of Macedonia the main problem is its lowest education score.

[4] Finland, Sweden and Holland were singled out by Rob Goldman, VP in Facebook, writing on Twitter on 16 February 2018, quoted also below in this text.

Media Literacy Index 2018

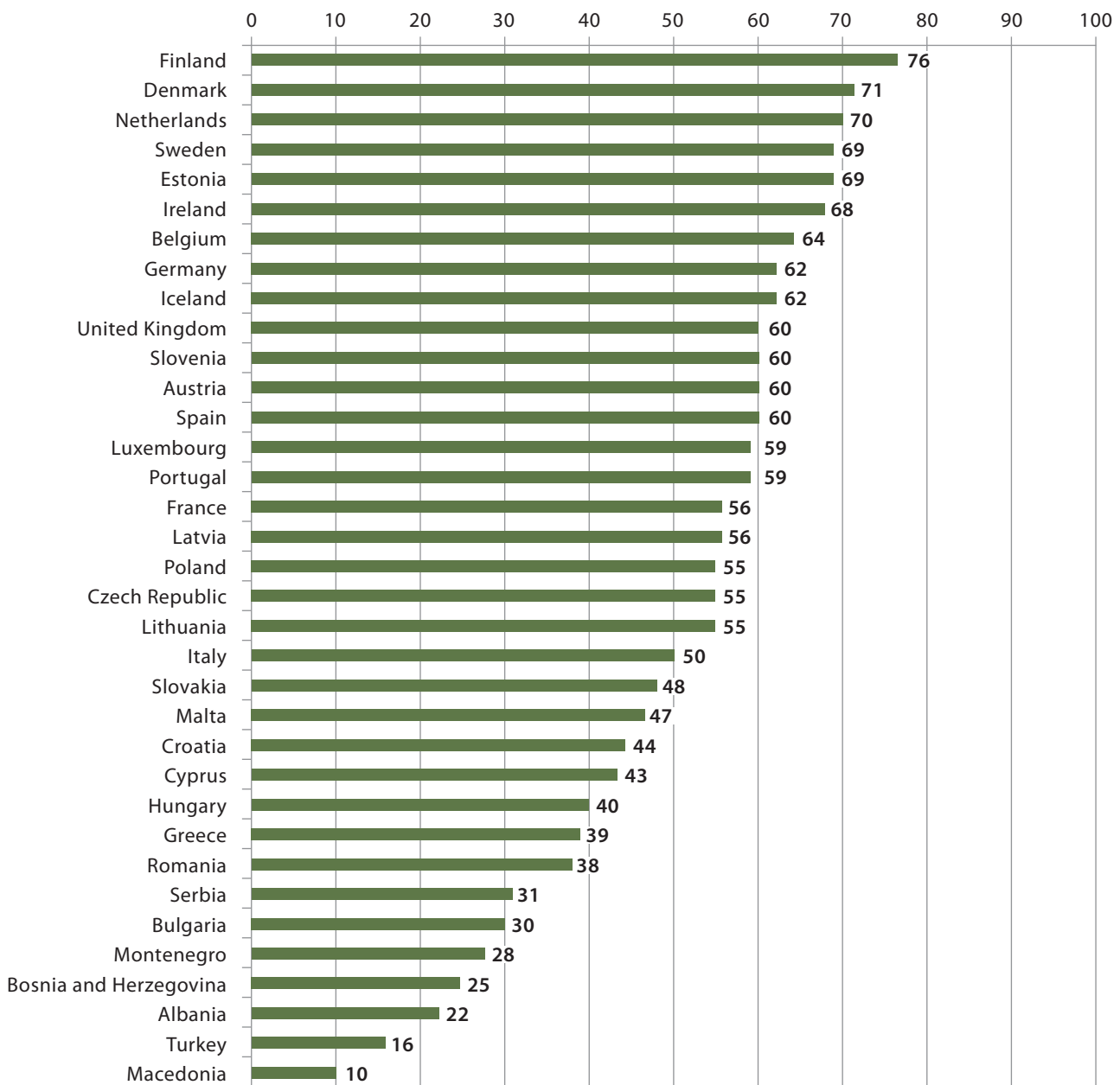| Country	Score
Finland	76
Denmark	71
Netherlands	70
Sweden	69
Estonia	69
Ireland	68
Belgium	64
Germany	62
Iceland	62
United Kingdom	60
Slovenia	60
Austria	60
Spain	60
Luxembourg	59
Portugal	59
France	56
Latvia	56
Poland	55
Czech Republic	55
Lithuania	55
Italy	50
Slovakia	48
Malta	47
Croatia	44
Cyprus	43
Hungary	40
Greece	39
Romania	38
Serbia	31
Bulgaria	30
Montenegro	28
Bosnia and Herzegovina	25
Albania	22
Turkey	16
Macedonia	10

Figure 1. The figure shows the 35 European countries, included in the index, ranked according to their media literacy scores. The index uses standardized scores from 100 to 0, highest to lowest.

How the predictors are measured: about the index methodology

The current paper contains a proposal for measuring if not media literacy itself, but predictors of media literacy with the aim to rank societies in their potential for resilience in the face of the post-truth phenomenon. The model employs several indicators (Table 1) that correspond to different aspects related to media literacy and the post-truth phenomena. Level of education, state of the media, trust in society and the usage of new tools of participation seem to be the predictors of media literacy. As they have different importance, the indicators are included with a corresponding weight. The media freedom and education indicators carry most weight, with reading literacy attributed relatively most importance in education. Trust and e-participation indicators are attributed the remaining share. The index converts

METHODOLOGY OF THE MEDIA LITERACY INDEX	
Indicators	**Weight**
Media Freedom indicators	
Freedom of the Press score by Freedom House	20%
Press Freedom Index by Reporters without Borders	20%
Education indicators	
PISA score in reading literacy (OECD)	30%
PISA score in scientific literacy (OECD)	5%
PISA score mathematical literacy (OECD)	5%
Share of population (%) with university degree (Eurostat)	5%
Trust	
Trust in others (Eurostat)	10%
New forms of participation	
E-participation Index (UN)	5%

Table 1. The table shows the methodology of the media literacy index with the groups of indicators, sources and their respective weight (importance). The data are converted into standardized scores (z-scores) from 100 to 0, highest to lowest.

the data into standardized scores from 0 to 100 (lowest to highest) and ranks the countries from 1 to 35 (highest to lowest position).[5]

Putting resilience to 'post-truth' on the map

When cluster analysis was applied to the scores of the Media Literacy Index, it produced five different groups out of the 35 countries. Each group contained countries with similar characteristics and the clusters are hierarchical – i.e. the best performing countries are in the first cluster, and the worst performing ones are in the last. In addition, cluster 1 is closer and more similar to cluster 2 and cluster 4 is closer, and more similar to cluster 5.

There is clearly a geographic pattern in the potential of resilience to 'post-truth' (Figure 2). The countries in the better performing first two clusters (coded in blue) are in the north and northwest of Europe as opposed to the countries in the southeast and there is a middle cluster from Hungary, Italy to Greece. The yellow-to-orange coded countries are much more likely to be exposed to the negative effects of fake news and the associated post-truth phenomenon.

Who's up and who's down: changes in scores and rankings

The table (Table 2) shows the scores and ranking of the 2018 index as well as the changes in comparison to the 2017 index results. The five clusters are also shown by the color codes. There are several cases with substantial differences. Poland has lost 3 positions and 3 points compared to last year (2017). In 2018, the Czech Republic has lost 2 positions and 1 point, Slovakia – 1 position and 2 points, Hungary, Ser-

[5] The used methodology and sources are based on the Catch-Up Index of the Open Society Institute – Sofia; the latest available data is as of 30 January 2018. You can find description of the methodology in the report „Don't Stop Now: Findings of the European Catch-Up Index 2016", available in the Documents and Links section of the website **www.thecatchupindex.eu**. Missing data were replaced using imputation procedures as described in the report.
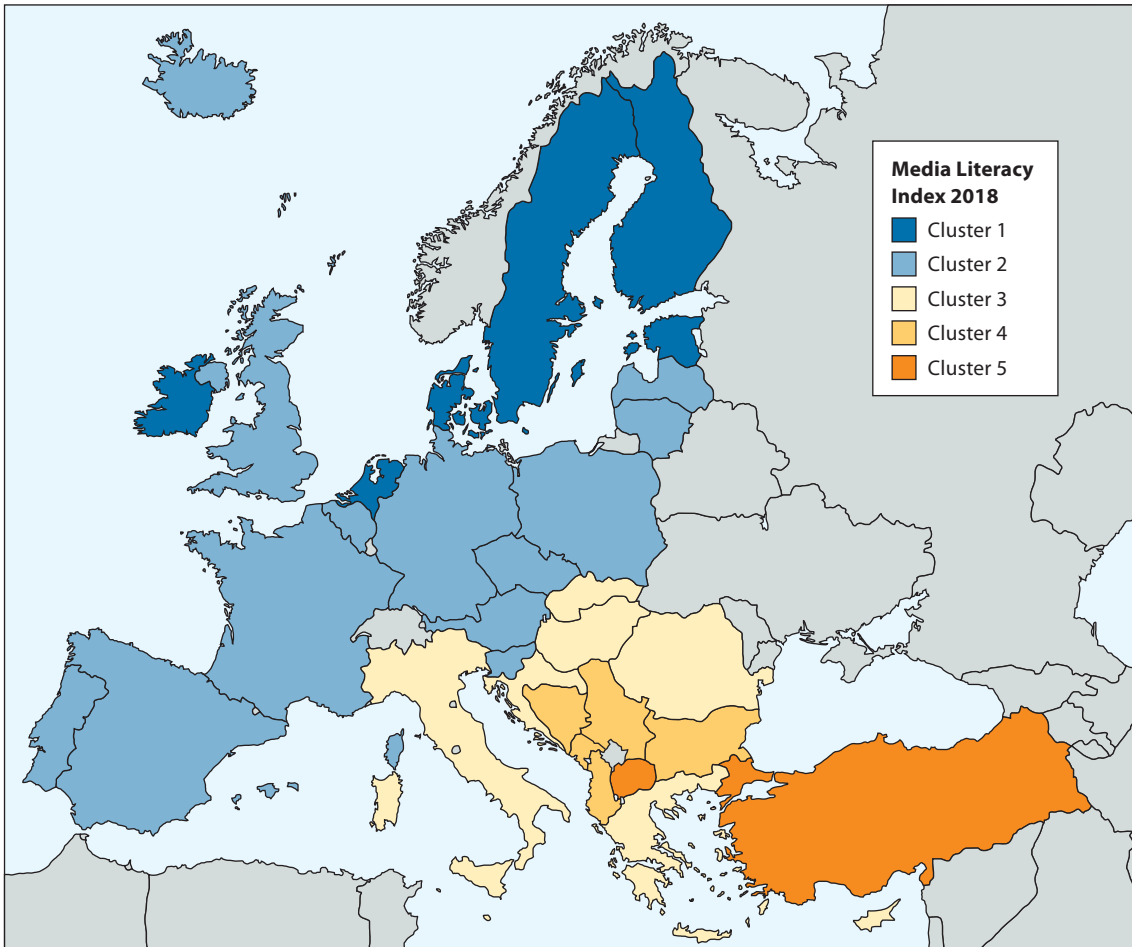
Figure 2. The map shows the results of a cluster analysis, based on the scores of the 35 European countries in the Media Literacy Index 2018. The cluster analysis sorts the countries into groups, where each country is more similar with those in its cluster than those in other clusters.

bia and Montenegro have each lost 2 points, among others. Improvements are registered in the case of Iceland with 3 positions and 3 points up, Spain and France with 3 positions and 2 points up, Sweden with 2 positions and 2 points up and so on. It is interesting to note that most of the improvements in the rankings take place in the first two clusters, while the deterioration in scores happens in the second half of the ranking. The main reasons for the changes in the index scores are the fluctuations in media freedom scores (as shown below in this text).

TRUST, POLARIZATION AND FRAGMENTATION OF TRUTH

Trust in others, which may reveal the level of social cohesion of all people living in society, is one of the used predictors of resilience to the post-truth phe-

nomenon. The lowest score stand for 'You do not trust any other person' and the highest represents the respondent's feeling that 'Most people can be trusted'.[6] The decline of trust in institutions has been documented – such as the decline of trust in parliament, government, judiciary, etc. With post-truth there is further decline of trust or even attacks on media, expert knowledge, surpassing every healthy level of questioning of authority.

The countries on the first positions of the Media Literacy Index ranking tend to have higher levels of trust among people (Table 3) and studies have asserted the correlation of these indicators with democracy and well-being.

Fake news erodes trust and is associated with the growing polarization in society. It is no coincidence

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[6] The Trust in others indicator uses Eurostat latest data, converted into standardized points (0-100). Missing data for some countries has been replaced by using imputation techniques as described here **www.thecatchupindex.eu**

MEDIA LITERACY INDEX 2018					
Cluster	Country	Score 2018 (100-0)	Ranking (1-35)	Change in score vs 2017	Change in rank vs 2017
1	Finland	76	1	0	0
1	Denmark	71	2	−1	0
1	Netherlands	70	3	−1	0
1	Sweden	69	4	2	2
1	Estonia	69	5	1	0
1	Ireland	68	6	0	−2
2	Belgium	64	7	1	0
2	Germany	62	8	0	0
2	Iceland	62	9	3	3
2	United Kingdom	60	10	1	1
2	Slovenia	60	11	0	−2
2	Austria	60	12	0	−2
2	Spain	60	13	2	3
2	Luxembourg	59	14	0	−1
2	Portugal	59	15	1	−1
2	France	56	16	2	3
2	Latvia	56	17	0	1
2	Poland	55	18	−3	−3
2	Czech Republic	55	19	−1	−2
2	Lithuania	55	20	0	0
3	Italy	50	21	1	1
3	Slovakia	48	22	−3	−1
3	Malta	47	23	0	0
3	Croatia	44	24	−2	0
3	Cyprus	43	25	0	0
3	Hungary	40	26	−2	0
3	Greece	39	27	1	1
3	Romania	38	28	0	−1
4	Serbia	31	29	−2	0
4	Bulgaria	30	30	0	0
4	Montenegro	28	31	−2	0
4	Bosnia and Herzegovina	25	32	1	0
4	Albania	22	33	1	0
5	Turkey	16	34	1	0
5	Macedonia	10	35	−1	0

Table 2. The table visualizes as follows: (a) The five clusters, based on the index scores of the countries. (b) The 35 countries in the index, ranked according to their index score. The standardized scores are from 100 to 0, highest to lowest. The ranking positions are from 1 to 35, highest to lowest. (c) The change, compared to the Media Literacy Index 2017, in terms of difference between scores and ranking positions.

TRUST IN OTHERS: RANKING			
Rank	Country	On a scale 10-0	In standartized scores 100-0
1	Denmark	8.3	100
2	Finland	7.4	83
3	Iceland	7.0	76
4	Netherlands	6.9	74
5	Sweden	6.9	74
3	Latvia	6.5	66
4	Slovenia	6.5	66
5	Ireland	6.4	64
6	Romania	6.4	64
7	Spain	6.3	62
8	Malta	6.2	60
9	United Kingdom	6.1	59
10	Lithuania	6.1	59
11	Poland	6.0	57
12	Austria	5.9	55
13	Estonia	5.8	53
14	Slovakia	5.8	53
15	Belgium	5.7	51
16	Italy	5.7	51
17	Germany	5.5	47
18	Luxembourg	5.5	47
19	Greece	5.3	43
20	Portugal	5.3	43
21	Czech Republic	5.3	43
22	Hungary	5.3	43
23	Croatia	5.1	40
27	France	5.0	38
28	Cyprus	4.5	28
29	Turkey	4.5	28
30	Bulgaria	4.2	23
31	Serbia	4.2	23

Table 3. The table shows the countries in the index, ranked according to their score in the Trust in others indicator. The table excludes the countries with imputed data. The table shows as the original scale from 10 to 0 points (highest trust to no trust) as well as standartized index scores from 100 to 0 (highest to lowest). Trust in others data is the latest available from Eurostat.

that "hybrid attacks" aimed at increasing polarization is inciting both or multiple sides in an argument. The quality of public and political debates has been worsening, no less thanks to the fake news. Opinion polarization is escalating and in turn eroding trust within society. A study on fake news found that they spread faster as they evoke emotions of surprise and disgust, while accurate news was associated with sadness and trust.[7]

Resilience to fake news and its consequences is related to the path of restoring trust and vice versa as the two are interconnected.

THE BAD NEWS: A SIDE NOTE ON THE NATURE OF FAKE NEWS

Before going further, it is necessary to look into the phenomenon as there are certain factors that at first sight foretell that fighting fake news is an uphill battle. In March 2018, a study found that fake news and false rumors outperform truth in every respect. A media headline "The Grim Conclusions of the Largest-Ever Study of Fake News" made addressing post-truth a seemingly an impossible to solve problem.[8] A false story reaches out six times faster on average and reaches much more people. Why is this happening? The researchers suggest two hypothesis – both related to psychological aspects more than anything. Fake news is considered more "novel" by being different and therefore attracts attention. Reportedly, fake news spread faster as they evoke emotions of surprise and disgust, while accurate news was associated with sadness and trust. This is "human nature", one of the researchers said in an interview. Furthermore, fake news is often novel and often negative, so it is attention grabbing and people tend to share it more.[9]

Then there is the confirmation bias, which says people are inclined to believe, repeat or even seek for information that is in line with their already established views, even if this is false information. The motivated

[7] "Study: On Twitter, false news travels faster than true stories", 8 March 2018, http://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308

[8] *Robinson Meyer*, "The Grim Conclusions of the Largest-Ever Study of Fake News", The Atlantic, 8 March 2018, https://www.theatlantic.com/technology/archive/2018/03/largest-study-ever-fake-news-mit-twitter/555104/

[9] Ibid.

reasoning is used as one of the coping mechanisms of cognitive dissonance, the psychological stress caused by having to deal with two or more conflicting be-lieves, values, ideas. One of the mechanisms for cop-ing with it is the motivated reasoning, where people selectively interpret data.

In the "Debunking Handbook"[10], the daunting task of debunking with the backfire effect is outlined, warn-ing that responding to fake news is difficult, time con-suming and might have unintended consequences.

But while somewhat disheartening, such findings are not very surprising and should not prevent from acting upon fake news.

DELIBERATING REGULATION RESPONSES

There are different approaches to fighting fake news and address the post-truth phenomenon, regula-tion being one of them. It may be for example self-regu-lation – such as existing media self-regulation as codes of ethics, as well as the newer self-regulation of social networks using reporting, flagging, etc. This includes terms of serve of Facebook that everyone accepts (and no one actually reads): "You will not post content that: is hate speech, threatening, or pornographic; incites violence; or contains nudity or graphic or gratuitous violence…. You will not use Facebook to do anything unlawful, misleading, malicious, or discriminatory."[11] The new attempts at regulation have been directed at social media, which is the source of most concerns, including because of disinformation campaigns or other offenses such as hate speech as the German "Netzwerkdurchsetzungsgesetz" – a law counteract-ing hate speech and fake news on the Internet. New regulations or special units have been deliberated in France[12] and the UK among others.[13]

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[10] *John Cook and Stephan Lewandowsky*, The Debunking Handbook, 27 November 2011, **https://skepticalscience.com/ Debunking-Handbook-now-freely-available-download.html**

[11] Facebook, Statement of Rights and Responsibilities, Date of Last Revision: January 31, 2018.

[12] Macron plans law to fight 'fake news' in 2018, 3 January 2018, Reuters, **https://www.reuters.com/article/us-france-macron/ macron-plans-law-to-fight-fake-news-in-2018-idUSKBN1ES1LJ**

[13] Evgeny Morozov has proposed to deal with the big data companies – "Data populists must seize our information – for the benefit of us all", 4 December 2016, **https://www.theguardian. com/commentisfree/2016/dec/04/data-populists-must-seize-information-for-benefit-of-all-evgeny-morozov**

A recent European Commission sponsored report outlines a number of measures to tackle "disinforma-tion", increasing transparency of ownership, sponsored content, etc. for digital media. The report recommends the creation of European centers for interdisciplinary and independent evidence-based research on prob-lems of disinformation among other measures.[14]

The debate for regulating social networks is still opened for discussion as they can be treated neither as media nor simply as neutral conduits (e.g. as postal services). While necessary, the regulatory approach – or rather various approaches – has its drawbacks and grey areas to cover. As pointed above, overregulat-ing social networks or the internet in general might silence valid criticism. This is even more important in countries with more controlled media landscape.

And while we are at it, despite that we are far from the point where the internet was considered a bastion of free speech, its beginnings should not be dismissed. In certain contexts, social media such as Facebook and Twitter, which cannot be controlled locally, still may remain part of the solution by providing platform for "normal" news and commentary. Overregulating so-cial media in such contexts may be paramount to cen-sorship.

LESS IS MORE: DOUBLING DOWN ON MEDIA FREEDOM TO TACKLE POST−TRUTH

Taking back control – in the case of fake news – is probably the way to go, in principle. Too much freedom, many grudgingly point out, has brought the current sorry state of affairs. But this may not be the case with media, where less media freedom may equal worse fake news impact. This necessitates a look at the debate on fake news, social networks and mainstream media.

While most 'fake news' debates tackle mostly online and social media, the current Media Literacy Index has a strong focus on traditional media. A recent survey

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[14] A multi-dimensional approach to disinformation: Report of the independent High level Group on fake news and online disinformation, 12 March 2018, **https://ec.europa.eu/digital-single-market/en/news/final-report-high-level-expert-group-fake-news-and-online-disinformation**

by Eurostat on "Fake News and Disinformation Online" found out that people in Europe still trust mainstream media more than online and social media. For example, radio (70%), television (66%) and printed newspapers and news magazines (63%) has more trust than social networks and messaging apps (36%). Another international survey showed that people tend to trust mainstream media more, despite fake news has hurt trust in both them and the social media.[15]

As regards the "techno-optimism" of yesterday, it has given way to an equally strong doom and gloom about the role of social media. Who remembers now the "Twitter revolutions" of 2009-2010 with even a "Twitter for Peace Noble" proposal?[16] There is a growing debate and body of research focusing on fake news and the post-truth phenomenon. However, much of it is preoccupied with the spread and reception of fake news (e.g. fabricated news) with the assumption that the main mechanism for distribution is through socialmedia. Indeed, social media has ever increasing share in information consumption and the bulk of research and proposed measures are dealing with it. They have been identified as one of the main culprits and therefore the measures are more geared towards them. Due to the nature of social media, information is spreading at unprecedented speed, there are few or no intermediaries – e.g. "gatekeepers" of information as everyone is an author, editor, etc. There are bots making especially unclear with who exactly is one communicating with. Another very serious concern is the role of algorithms – the ways social networks decide what content will be shown. What alarms probably more is that it is unclear how exactly these mechanisms work. They tend to create bubbles of communication, where the user is shown similar information to his or hers own believes and interests. It is little wonder that the EU hosted its response to fake news within the Digital Single Market directorate.[17]

But this approach sometimes overlooks the role of media as such – and the media freedom specifically - probably because in the Western context it is less of

a concern than in the rest of the world. Surely, there is the grave issue of decline of traditional media and the traditional business model. This opened the floodgates to post-truth and the rise of fake news through the new media and the new forms of monetization. In a vicious circle, fake news further undermines trust in media, exacerbating their situation.

But this situation is made even worse in contexts, where there is a problem with media freedom as indicated by the current index data (Figure 3).[18] Controlled media by default blur the boundaries of real and fake news and by definition manipulate news for a living. The more controlled the media landscape, the wider net of distortion and far less chances to access diversity of information and viewpoints. Fact-checking sections, otherwise one of the proven methods in tackling fake news by media, will be of dubious benefit in an overly controlled media.

Despite similarities, the situation in more established democracies and the fragile democratization processes – for example further east in Europe - is not equivocal. Much like other aspects of political culture, free media norms and practices remained more fragile further east. Editorial independence from the owner has been often exception, not a rule. The role of journalists as gatekeepers of information has been deeply compromised.

Therefore, media freedom is an important component necessary to fighting fake news. The public still trusts more traditional media more than social media as shown by public opinion. This entrusts more responsibility on the media, but there is so much to be done if there is a deep and wide media control. Even in established democracies this is a serious problem, but in the newer democracies weak media is a graver danger considering the other pillars – civil society, judiciary and public institutions – are equally fragile.

In this index, countries with higher media freedom are as a rule better equipped to address post-truth and the impact of fake news.

The table shows only the media freedom scores (based on two internationally recognized surveys)

[15] Fake news hurts trust in media, mainstream outlets fare better: poll, Reuters, 31 October 2017, https://www.reuters.com/article/us-media-fakenews/fake-news-hurts-trust-in-media-mainstream-outlets-fare-better-poll-idUSKBN1D002S

[16] *Mark Pfeifle,* A Nobel Peace Prize for Twitter?, The Christian Science Monitor, 6 July 2009, https://www.csmonitor.com/Commentary/Opinion/2009/0706/p09s02-coop.html

[17] Under Mariya Gabriel, EU Commissioner for Digital Economy and Society.

[18] Media Literacy Index 2018 uses Freedom House and Reporters without Borders latest data, with average of the two surveys, transferred into standardized scores from 0 to 100 (lowest to highest). For example, note that Turkey's 0 points denote the lowest score in the index, not total lack of media freedom. See https://freedomhouse.org/report/freedom-press/freedom-press-2017 and https://rsf.org/en/ranking

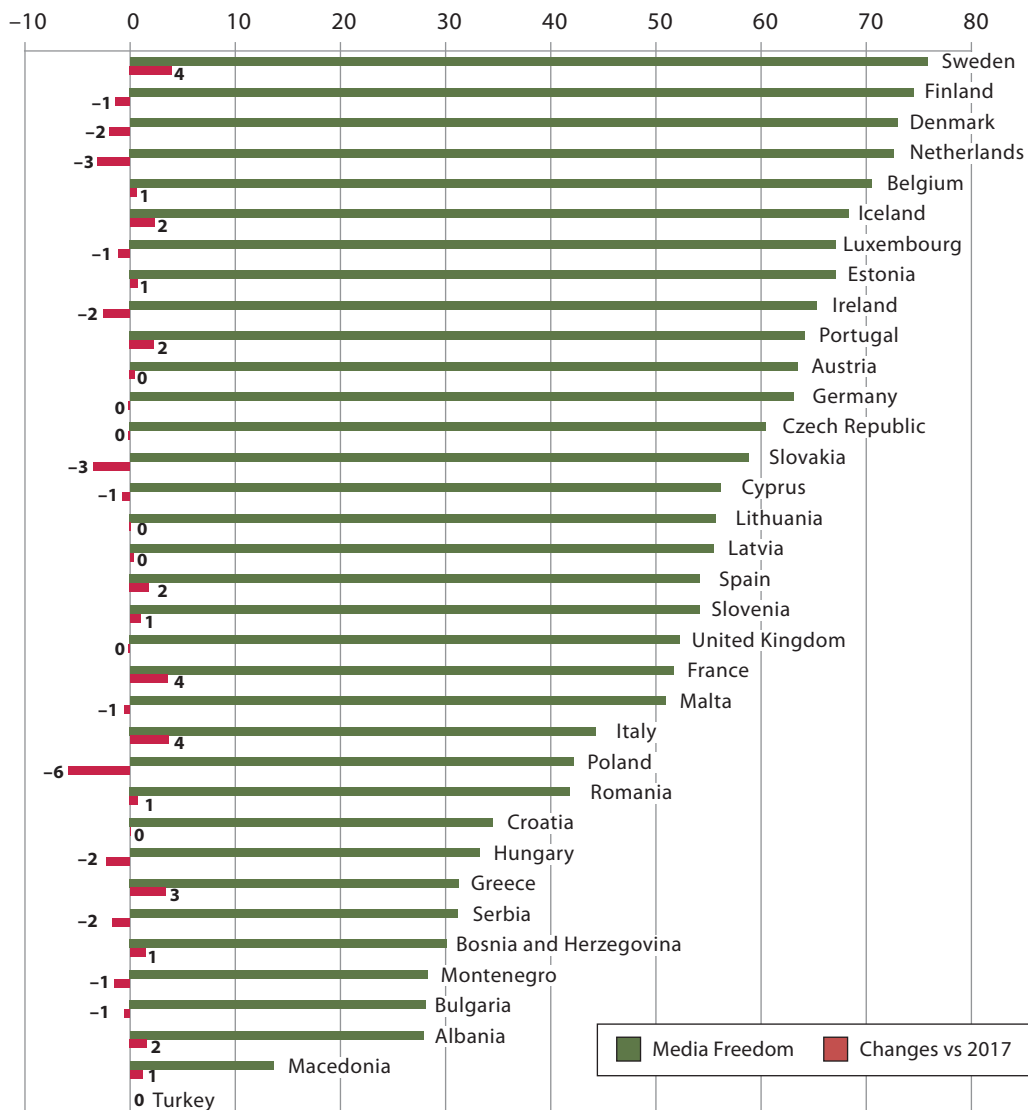## Media Freedom Score 2018 and Changes vs 2017

Figure 3. The figure shows the 35 countries in the index, ranked according to their Media Freedom score on a scale from 100 to 0 (highest to lowest) and positions 1 to 35 (highest to lowest). The Media Freedom uses the latest available data from Freedom House Freedom of Press survey and the Reporters without Borders

of the countries, ranked from highest to lowest. The countries with the highest score in media freedom are the Northwestern European countries with the Southeast European falling behind with the lowest scores.

The table also shows the changes in scores in regard to the index 2017. The countries that have regressed most in comparison to the previous index 2017 are Poland, which lost 6 points, Slovakia – 3, Hungary – down 2 points, BiH and Serbia – each 2 points down. The Netherland has also lost 3 points, Denmark and Ireland – each 2 points, but they are all well-ahead in the ranking, so this is not a worrying development. Sweden has

gained most points – 4, as well as Portugal, France, Italy and Greece, with the latter in need of even better performance to advance in media freedom.

Fake news: the education and media freedom intersection

"There are easy ways to fight this. Disinformation is ineffective against a well-educated citizenry. Finland, Sweden and Holland have all taught digital literacy and critical thinking about misinformation
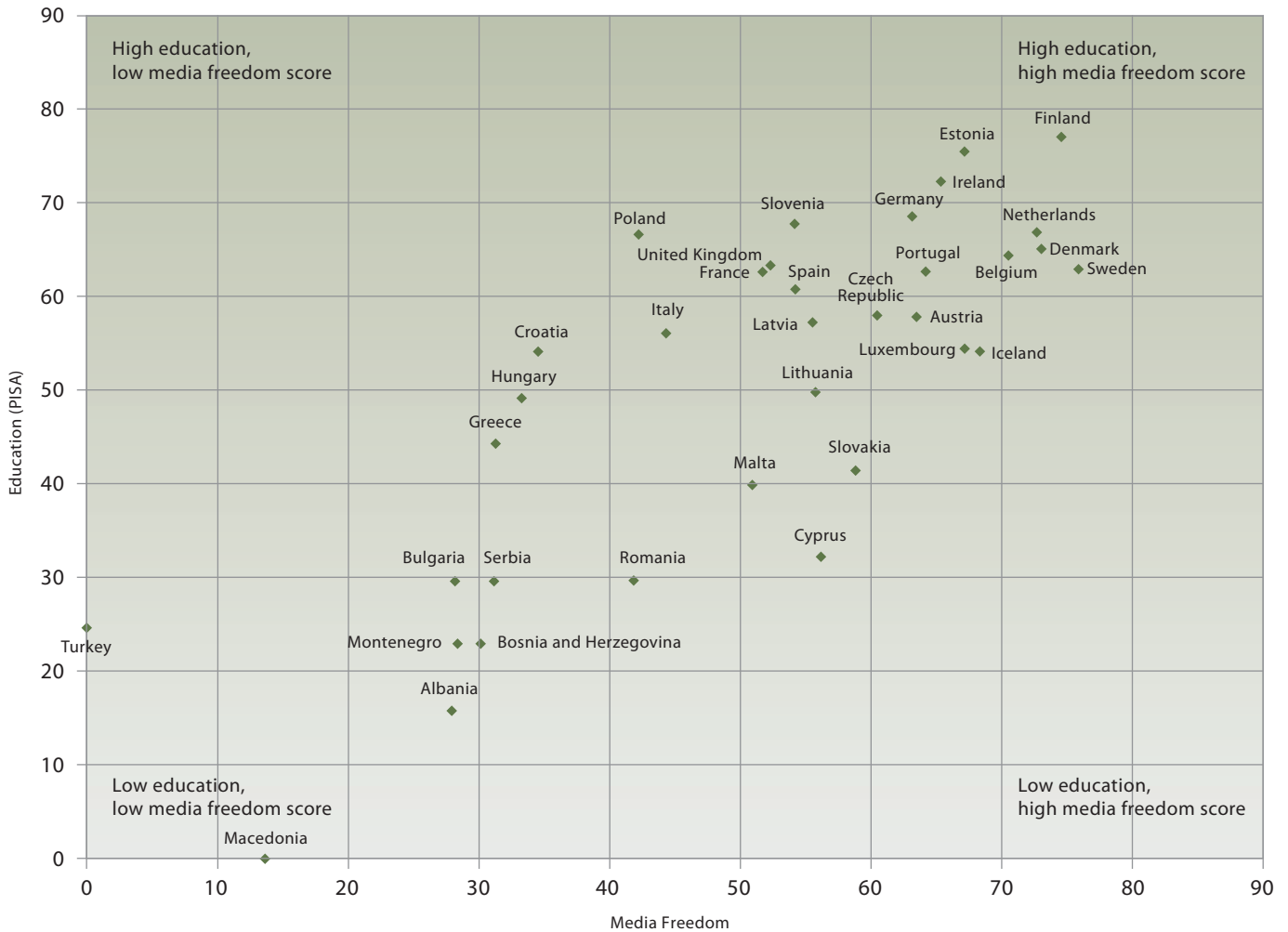
Media Freedom and Education

Figure 4. The graph shows the position of the 35 countries in the index on two axes, based on their education (PISA) and media freedom scores, which are on a scale from 100 to 0 (highest to lowest). The education indicator uses PISA latest results, with reading having the highest weight (70%), and science and math with 15% each. The media freedom is based on the data from Freedom House and Reporters without Borders annual surveys, converted into standardized scores from 100 to 0 (highest to lowest).

to great effect" Rob Goldman, VP in Facebook, wrote on Twitter on 16 February 2018 about the spread of fake news. Finland's government considers the strong public education system as a main tool to resist information warfare against the country[19] and "widespread critical thinking skills among the Finnish population and a coherent government response" is thought to be a key element for resisting fake news campaigns.

There are studies asserting there is a positive relationship between the level of education and disposition to fake news. More education guarantees more resilience to fake news. Probably more knowledge and

critical thinking skills help immune against fabricated and manipulated news. There is also a psychological mechanism at work. A study by Dutch scientists Jan-Willem van Prooijen on conspiracy theories has found that more educated people feel more in control of their lives, do not believe so much in easy solutions and have more analytical skills.[20]

In addition to this, there seems to be a link between quality of education and media freedom when the two indicators in the index are compared. Countries with better education tend to have more media freedom and vice versa. While the index cannot single

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[19] Foreign Policy, "Why Is Finland Able to Fend Off Putin's Information War?", 1 March 2017, available at **http://foreignpolicy. com/2017/03/01/why-is-finland-able-to-fend-off-putins-information-war/**

[20] *Jan-Willem van Prooijen*, "Why Education Predicts Decreased Belief in Conspiracy Theories" Applied Cognitive Psychology 31: 50-58 (2017), and also *James N. Druckman*, The Politics of Motivation, Critical Review 24 (2): 199-216 (2012).

out cause and effect, the very observation of a relationship is indicative.

The graph (Figure 4) visualizes the relationship between the quality of education (PISA) and the level of media freedom. As a rule, countries with better education scores have higher media freedom (or vice versa). Countries with low education scores have low level of media freedom. Countries such as Finland, Estonia, etc. have both among the highest education and media freedom levels. Some countries – such as Poland – have higher education and relatively lower media freedom, or Cyprus with lower education and higher media score, but these are still middle of the road situations.

As noted above, the cause and effect cannot be deduced, but it is clear that education and media freedom are in interplay with each other. This may be used when designing responses to fake news and its effects.

EDUCATION BEFORE REGULATION[21]: NO SILVER BULLET BUT STILL THE BEST SHOT

"No one wants government regulation led by reactionary press barons who have survived from the age of print" wrote one expert in the field of fake news and responses to them.[22] Indeed, while some regulation is necessary, education seems to be the best all-round solution to fake news and the post-truth phenomenon with less drawbacks and more possibilities to tailor it to different situations.

The current Media Literacy Index findings too suggest that education is the key ingredient. High quality education and having more and more educated people is a prerequisite for tackling the negative effects of fake news and post-truth.

A recent Eurobarometer survey on public opinion and fake news found out that respondents with a higher level of education tend to trust more various sources (radio, television, online, etc.). Also, respondents with a higher level of education say they come

across fake news more often and they feel more confident identifying it.[23]

More evidence might come soon. Dubbed a "fake news test", a student assessment similar to the PISA test, will be launched by the Organization for Economic Co-operation and Development (OECD) in 2018. The students will be asked "to use and connect multiple sources of evidence, identify biases and gaps in information, and manage conflicting arguments."[24] In fact, it is part of the OECD PISA framework on "global competence" defined as: "the capacity to examine local, global, and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development."[25]

Adopting an "education" route to tackling post-truth and fake news should be aware of limitations and as in other cases there is no one-size fits all solutions – these approaches will work most of the time and most cases, not in all cases.[26]

First things first, this should be the raising of general education quality as there is a clear relationship between it and the resilience to post-truth. There should be digital literacy training too as defined by the EU "digital literacy refers to the skills required to achieve digital competence, the confident and critical use of information and communication technology (ICT) for work, leisure, learning and communication."

Digital literacy is especially necessary to bridge the generation divide. But it will not suffice. Young people, who are digital natives may not be that better prepared to address the challenges of post-truth as it necessitates additional knowledge and skills.

[21] A "motto" by the International Federation of Library Associations and Institutions (IFLA) in fighting fake news, see news published on 1 March 2018, https://www.ifla.org/node/29021

[22] *Huw Davies*, New Statesman – NS Tech, "Why education is the only antidote to fake news? http://tech.newstatesman.com/guest-opinion/education-antidote-fake-news

[23] Flash Eurobarometer on Fake News and Online Disinformation, FL464, March 2018, https://ec.europa.eu/digital-single-market/en/news/first-findings-eurobarometer-fake-news-and-online-disinformation

[24] *Casey Bayer*, PISA 2018 Test to Include Global Competency Assessment, 12 December 2017, https://www.gse.harvard.edu/news/17/12/pisa-2018-test-include-global-competency-assessment

[25] OECD, "Preparing our Youth for an Inclusive and Sustainable World. The OECD PISA global competence framework", 2018, available at "Preparing our Youth for an Inclusive and Sustainable World. The OECD PISA global competence framework" http://www.oecd.org/pisa/Handbook-PISA-2018-Global-Competence.pdf

[26] For example, in the case of vaccines acceptance and resistance, surveys found out that "education does not always imply confidence", *Heidi J. Larson et all*, The State of Vaccine Confidence 2016: Global Insights Through a 67-Country Survey, EBioMedicine. 2016 Oct; 12: 295-301. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5078590/

MEDIA LITERACY INDEX 2018: SOURCES AND DATA

Index ranking and scores		Used sources and data	Freedom of the Press (Freedom House)	Press Freedom Index (Reporters without Borders)	PISA score in reading literacy (OECD)	PISA score in scientific literacy (OECD)	PISA score mathematical literacy (OECD)	Share of population (%) with university degree (Eurostat)	Trust in others (Eurostat, EQSL)	E-participation Index (UN)
Ranking (1-35)	Score (100-0)	Country/ Scale	On a scale from 0 to 100 (best to worst)	On a sclae from 0 to 100 (best to worst)	The higher score the better; 500 is very good and below 300 is a very poor result	The higher the better; 500 is very good and below 300 is a very poor result	The higher the better, 500 is very good and below 300 is a very poor result	In percentages from 100% to 0% (higher is better)	On a scale from 10 to 0 (highest to lowest)	On a scale from 1 to 0 (highest to lowest)
1	76	Finland	12	8.92	526	531	511	35.9	7.4	0.915
2	71	Denmark	12	10.36	500	502	511	31.2	8.3	0.814
3	70	Netherlands	11	11.28	503	509	512	31.0	6.9	0.949
4	69	Sweden	11	8.27	500	493	494	35.3	6.9	0.763
5	69	Estonia	16	13.55	519	534	520	34.1	5.8	0.814
6	68	Ireland	18	14.08	521	503	504	37.7	6.4	0.712
7	64	Belgium	12	12.75	499	502	507	33.2	5.7	0.644
8	62	Germany	20	14.97	509	509	506	24.4	5.5	0.763
9	62	Iceland	15	13.03	482	473	488	33.4	7.0	0.661
10	60	United Kingdom	25	22.26	498	509	492	38.4	6.1	1.000
11	60	Slovenia	23	21.70	505	513	510	27.2	6.5	0.729
12	60	Austria	22	13.47	485	495	497	28.9	5.9	0.881
13	60	Spain	28	18.69	496	493	486	32.7	6.3	0.932
14	59	Luxembourg	14	14.72	481	483	486	36.4	5.5	0.695
15	59	Portugal	17	15.77	498	501	492	21.5	5.3	0.661
16	56	France	26	22.24	499	495	493	30.9	5.0	0.898
17	56	Latvia	26	18.62	488	490	482	29.5	6.5	0.525
18	55	Poland	34	26.47	506	501	504	25.2	6.0	0.881
19	55	Czech Republic	21	16.91	487	493	492	20.6	5.3	0.559
20	55	Lithuania	21	21.37	472	475	478	34.1	6.1	0.831
21	50	Italy	31	26.26	485	481	490	15.7	5.7	0.915
22	48	Slovakia	26	15.51	453	461	475	19.7	5.8	0.542
23	47	Malta	23	24.76	447	465	479	18.8	6.2	0.780
24	44	Croatia	41	29.59	487	475	464	20.0	5.1	0.780
25	43	Cyprus	23	19.79	443	433	437	37.6	4.5	0.525
26	40	Hungary	44	29.01	470	477	477	20.6	5.3	0.492
27	39	Greece	44	30.89	467	455	454	26.4	5.3	0.610
28	38	Romania	38	24.46	434	435	444	15.1	6.4	0.627
29	31	Serbia	49	28.05	432	446	441	16.25	4.2	0.831
30	30	Bulgaria	42	35.01	432	446	441	24.4	4.2	0.695
31	28	Montenegro	44	33.65	427	411	418	17.0	4.2	0.831
32	25	Bosnia and Herzegovina	51	27.83	427	411	418	10.5	3.9	0.508
33	22	Albania	51	29.92	405	427	413	11.0	4.2	0.644
34	16	Turkey	76	52.98	428	425	420	16.0	4.5	0.627
35	10	Macedonia	64	35.74	352	384	371	17.9	3.7	0.610

Table 4. The data was converted into standartized z-scores and that missing data was imputed following the methodology described in the Catch-Up Index reports, available in the documents and links section of the website www.thecatchupindex.eu. The latest available data was used as of 30 January 2018.

This is what media literacy stands for – a concept that "includes all technical, cognitive, social, civic and creative capacities that allow a citizen to access, have a critical understanding of the media and interact with it".[27] There is already plethora of other national-level and international initiatives. For example, the US-based Newseum has launched a Media Literacy Booster Pack. There are eight overarching topics: (1) evaluating information, (2) filtering out fake news, (3) separating facts and opinions, (4) recognizing bias, (5) detecting propaganda, (6) uncovering how news is made, (7) spotting errors in the news and (8) taking charge of the role as a media consumer and contributor.[28]

In a sense, the role of education can be compared to inoculation against the fake news and post-truth phenomenon, where it would be building immunity to various strains and forms of false claims, disinformation, propaganda, etc. This approach has better chances in succeeding as it would prevent or at least allevi-

ate the effects of post-truth as fake news continue to spread through evolving forms and channels that are difficult to target by regulation.

CLOSING REMARKS: COMMON SENSE AND COMMON DECENCY

At the end of the day, the different approaches to building resilience to the post-truth phenomena is about bridging fragmented truths, decreasing polarization – and simply bringing back common sense.

The other thing that should not be forgotten along the way when looking into mostly "online" problems (that's TV and print too) is that they elicit "offline" reactions. The solution: best not forgo one's responsibility and educating about the "values of civility" and common decency, after all.[29]

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[27] European Commission, **https://ec.europa.eu/digital-single-market/en/media-literacy**

[28] Newseum Launches Media Literacy 'Booster Pack', 7 December 2017, **http://www.newseum.org/2017/12/07/newseum-launches-media-literacy-booster-pack/**

[29] *Jamie Bartlett*, "The offline solution to online hate", Demos quarterly, 1 November 2017, **https://quarterly.demos.co.uk/article/issue-12/the-offline-solution/**

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