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News Consumption and Its Unpleasant Side Effect

Studying the Effect of Hard and Soft News Exposure on Mental Well-Being Over Time

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Abstract: Following the news is generally understood to be crucial for democracy as it allows citizens to politically participate in an informed manner; yet, one may wonder about the unintended side effects it has for the mental well-being of citizens. With news focusing on the negative and worrisome events in the world, framing that evokes a sense of powerlessness, and lack of entertainment value, this study hypothesizes that news consumption decreases mental well-being via negative hedonic experiences; thereby, we differentiate between hard and soft news. Using a panel survey in combination with latent growth curve modeling ($n = 2,767$), we demonstrate that the consumption of hard news television programs has a negative effect on the development of mental well-being over time. Soft news consumption, by contrast, has a marginally positive impact on the trend in well-being. This can be explained by the differential topic focus, framing and style of soft news vis-à-vis hard news. Investigating the effects of news consumption on mental well-being provides insight into the impact news exposure has on variables other than the political ones, which definitively are *not* less societally relevant.

Keywords: news consumption, mental well-being, hedonic experiences, negativity, hard versus soft news

February 16, 2015, just another broadcast of the Dutch evening news: A terrorist attack in Copenhagen; domestic Jews feeling threatened in their neighborhoods; killings of Egyptians by ISIL and subsequent revenge threats; an increasing number of refugees on the (dangerous) way to Italy; the Amsterdam police fighting drugs-related crime; an 11-year-old boy who stabbed two other boys in Landgraaf; the war in Ukraine; more children being hospitalized for alcohol abuse; Ebola in Liberia; financial problems of the European Union regarding Greece; the development of artificial skin for people with health problems. Except for the last, a long list of stories that probably do not leave the viewer with feelings of joy and hope (i.e., hedonic experiences) but instead may evoke anger and fear.

Following the news, nevertheless, is generally understood to be a desirable behavior as it is crucial for the functioning of democracy (Althaus, 2012). For example, it evokes political interest (Strömback & Shehata, 2010), increases knowledge about politics (Eveland, Hayes, Shah, & Kwak, 2005), and motivates political participation (McLeod, Scheufele, & Moy, 1999). Although following the news might be democratically desirable, one may wonder about the *side effects*

it has on people's mental well-being. While uses-and-gratifications research shows that people, in the first place, consume television news for surveillance (Diddi & LaRose, 2006) and information-driven motivations (Lee, 2013), this does not exclude the possibility of additional influences.

Generally, television watching can be used as a source of relaxation and may thereby restore a positive mood (Zillmann, 1991). The use of entertaining media formats helps to recover from stressful situations experienced in daily life (Reinecke, 2009; Reinecke, Klatt, & Krämer, 2011). Recent research established strong relationships between the use of certain media types and the positive outcomes for mental well-being (Rieger, Reinecke, Frischlich, & Bente, 2014). This well-being consists of two components: hedonia and eudaimonia (see Deci & Ryan, 2008). *Hedonic experiences* mainly relate to boosting a positive affect, minimizing negative affect, and evoking pleasure, whereas *eudaimonic experiences* are mainly about satisfaction with life and goals of self-acceptance, personal growth, relatedness, and mastery (Deci & Ryan, 2008). The current study focuses on the first component – hedonic experiences – which offers positivity and psychological

detachment, and thereby contributes to the vitality and increased mental well-being of citizens.

Although positive effects of entertainment have been found (Rieger et al., 2014), how citizens' mental well-being may be affected by the consumption of *news programs* is still unknown. News is a genre pivotal in the media effects literature, but mostly related to political outcome variables. When investigating the reasons for declining news audiences, research of news outlets themselves has found that (former) audiences tune out because they do not want to be confronted with too much negativity (Kist & Nieber, 2016; Klein, 2016). The existence of such so-called news resisters has also been verified empirically (Woodstock, 2014). Instead of offering psychological detachment as entertainment does, news may do the opposite, alerting citizens to the dangers and misery in the world, and thereby evoke negative hedonic experiences.

News Consumption and Mental Well-Being

Several psychological studies looked into the effects of televised exposure to *specific* major news events. These studies show that television viewers run the risk of becoming a "secondary victim" of terrorist attacks due to indirect exposure to such events through the media (Shoshani & Slone, 2008). Schuster et al. (2001), for example, found that increasing exposure to television news in the days following 9/11 was related to substantial stress reactions indicative of posttraumatic stress disorder (PTSD). This effect was also found over longer periods of time (Schlenger et al., 2002) and regarding other terrorist events (Pfefferbaum et al., 2000), demonstrating increased stress levels and negative emotional reactions due to news about terrorism.

Although much more specific, such findings correspond with the "media malaise" hypothesis that television would negatively affect the public. Diminishing civil engagement, declining public trust, and increasing levels of political cynicism have, for example, been attributed to the inherent entertaining nature of television (Postman, 1986). Reliance on public affairs television with its emphasis on negativity, conflict, and violence would evoke the impression that policies do not work nor that public institutions respond effectively (Robinson, 1976).

Moving to effects on perceptions of society more broadly, work on cultivation theory puts forward the argument that prime-time television, both in the form of fictional and non-fictional portrayals of reality, causes negatively valenced world views. Demonstrating that "television cultivates common perspectives" (Gerbner, Gross, Morgan, & Signorielli,

1986, p. 31), evidence was found that more television viewing positively predicted scores on a so-called Mean World Index. Additionally, public perceptions of crime have been shown to be mostly driven by the prominence of this topic on the (television) news agenda rather than by actual crime rates (Lowry, Nio, & Leitner, 2003). Viewing the (local) news, therefore, has been shown to cause concerns about and fear of crime (Gerbner, 1988; Romer, Jamieson, & Aday, 2003).

Characteristics of Television News

Multiple well-established characteristics of news coverage substantiate the expectation that consumption of television news may *harm* mental well-being. First of all, the assumption is often that (traditional) news broadcasts especially carry "bad" news; fully in line with the journalistic principle that "if it bleeds it leads" (Johnson, 1996). Lengauer, Esser, and Berganza (2012) conceptualize negativity in (political) news on two dimensions: Whether news (a) focuses on *topics* of conflict, incapability, or misconduct and (b) whether it is covered with a negative *tone*.

An investigation of Belgium TV news shows that crime was the most salient issue (18% of news time) with excessive attention to severe acts of crime (De Smedt, Hooghe, & Walgrave, 2011). Also prominent were war (and peace; 9%) and disasters (8%). Similarly, the most salient stories in news coverage from the United States include war, terrorism, and news from conflict areas (Maier, 2010).

Besides the dominance of inherent negative topics, studies find that politics and the economy are among the most covered issues (De Smedt et al., 2011; Maier, 2010). Whereas coverage of presidential candidates increasingly turned negative (Patterson, 2000) and political stories are regularly framed in strategic, conflict, and game-framed manners that evoke cynicism (Cappella & Jamieson, 1996), the focus in economic news is skewed to the negative as well (Damstra & Boukes, 2017; Soroka, 2012).

Altogether, Johnson (1996) found a majority of news items (> 50%) to be bad news with depictions of violence, conflict and suffering – the other news items most likely being neutral of tone (i.e., not necessarily positive). He also found that the proportion of negativity in news is about 2.5 times the amount of negativity in entertainment television (Johnson, 1996). Moreover, negative issues were especially prominent in news broadcasts by featuring these as lead stories in the beginning of the program.

With negativity being one of the key news values of journalists (Harcup & O'Neill, 2001), "television can hide by showing" (Bourdieu, 2001, p. 247). Journalistic coverage in hard news that is so full of conflict, negativity, and rivalries will *not* show how well things actually are going; after all, "no news is good news" and positive stories will be

less likely to be distributed to the audience. Therefore, “the world outside and the pictures in our heads” (Lippmann, 1922, p. 3) may not correspond and the news audience may get the impression that things are worse and more depressing than they actually are.

If media exposure may affect mental well-being via exposure to sustained affective (i.e., hedonic) experiences, the characteristics of traditional news coverage will arguably cause news consumption to negatively impact mental well-being for at least three reasons. First and most obviously, the strong focus on misery and negativity will not lead to hedonic experiences, but rather the opposite, which is negative affect (Deci & Ryan, 2008).

Second, the ideal in news production to be balanced and objective (Tuchman, 1972) leads to the impression that the truth is always somewhere in the middle without any clear solution for societal problems (Woodstock, 2014). As news stories rarely apply to one’s own circumstances and often deal with rather abstract topics (Bird, 1998), many news consumers, hence, experience a negative feeling of powerlessness (Woodstock, 2014). Third and final, the lack of absorption potential (see Bartsch & Schneider, 2014; Boukes, Boomgaarden, Moorman, & de Vreese, 2015) – hard news is not as distracting from everyday concerns as entertainment (Boczkowski & Mitchelstein, 2010) – makes that watching the news probably deteriorates rather than facilitates recovery of people’s psychological resources (Reinecke, 2009; Reinecke et al., 2011). Thus, we expect the following:

Hypothesis 1 (H1): Consumption of hard news negatively affects developments in mental well-being.

Hard News Versus Soft News and Mental Well-Being

Zooming-in on the relationship between news consumption and mental well-being, we differentiate between hard and soft news programs. Whereas most of the literature as well as the previous section leading up to Hypothesis 1 concerns traditional (i.e., hard) news, soft news differs from hard news on several aspects that may limit the negative effect on mental well-being.

Being a multifaceted concept (Otto, Glogger, & Boukes, 2017), Patterson (2000) identified soft news relative to hard news by (a) the topics it covers (i.e., without vs. with public policy component), (b) the perspective it takes (i.e., private vs. public), but also (c) the style with which it is covered (i.e., sensational vs. informal). Hence, “the difference between soft and hard news is one of

degree rather than kind” (Baum, 2003, p. 6). For example, the topic of a news story may lack a public policy component (e.g., a personal tragedy) but the journalist may report it informally and from a broader societal perspective, or vice versa. It is thus not only the news story topic that determines whether news is hard or soft (Curran, Salovaara-Moring, Coen, & Iyengar, 2010): News coverage that links crime to the public good, to policies, and to societal causes would be considered “hard,” whereas it would be considered “soft” when the story’s main focus is on the crime itself or on the specific victim or perpetrator.

Systematically analyzing the variety in operationalizations and definitions put forward in the literature, Reinemann, Stanyer, Scherr, and Legnante (2012) came to a definition for the difference between hard and soft news on three dimensions: (a) whether or not the topic is politically relevant or focuses on societal conflicts; (b) whether the focus is on society versus individuals by means of thematic versus episodic frames; and (c) whether the style is impersonal and unemotional or personal and emotional. Our argumentation for how hard and soft news would affect mental well-being follows this tripartite conceptualization of hard versus soft news.

Starting with the difference in topics, hard news is mostly negative as the review here explained, whereas there is more of a balance between negative and positive stories within soft news. While topics such as crises, scandal, violence, and human drama often feature in soft news as well (Baum, 2003), these are frequently mixed with news coverage on lighter and less serious issues (Lehman-Wilzig & Seletzky, 2010). Soft news programs therefore have proportionally *less* attention for the negative topics that dominate hard news (Baum, 2002; Grabe, Zhou, & Barnett, 2001). Soft news, instead, is relatively *more* likely to also report on celebrities (Grabe et al., 2001), heroism (Baum, 2003) or positive affairs (Brants & Neijens, 1998); therefore, being less negative overall.

Owing to the differential focus on topics, gaps in awareness of current affairs issues exist among the viewers of these news genres. Although soft news sometimes may contribute to knowledge of high-profile issues, such as political scandals or stories that involve celebrities (Baum, 2002), it rarely provides knowledge about, for example, (the war on) terrorism, or crime, while hard news audiences have been shown to learn about this (Prior, 2007). Thus, while soft news viewers are at times exposed to depictions of tragic events and a “mean world” due to the sensational nature of these programs (Baum, 2003), these news items are often mixed with lighter and positive stories (Brants & Neijens, 1998; Lehman-Wilzig & Seletzky, 2010), which arguably provide more of a means of relaxation and

break-away from current events than hard news provides (Boczkowski & Mitchelstein, 2010).

Regarding the second dimension to distinguish hard news from soft news (i.e., the focus in news coverage), events are more frequently portrayed in a human interest-framed, episodic manner in soft news than in hard news programs that, by contrast, tend to provide a (political) system-oriented perspective (Reinemann et al., 2012). Although also an element of hard news coverage (Iyengar, 1991), soft news *more regularly* exemplifies abstract topics by means of laypersons or with the help of an eyewitness camera (Grabe et al., 2001; Hendriks Vettehen, Beentjes, Nuijten, & Peeters, 2011). The focus on the individual rather than on society has been coined “a democratization of news” as it allows for more voices (i.e., those of ordinary citizens) to be heard and demonstrates the relevance of the individual citizen (Bird, 1998). Thereby, soft news may less strongly evoke a state of powerlessness than hard news does (Woodstock, 2014).

Simultaneously, soft news may, however, elicit emotions such as empathy or anger, because it more easily allows identification with exemplars (Gross, 2008). However, these negative emotions are probably directed at the news item rather than that these translate into personal feelings of fear and anger, because personification downplays both the perceived societal causes and societal consequences of news stories (Iyengar, 1991; Rucinski, 1992). Having (portrayed) causes and outcomes that are presented as individualistic rather than societal, soft news stories may be perceived as *less* threatening by the individual news consumer her-/himself. Combining this with evidence that personalized news stories are the least negative type of news items (Esser, Engesser, Matthes, & Berganza, 2017), this kind of reporting typical for soft news probably has less of a negative influence on mental well-being than hard news does.

The third dimension on which hard and soft news programs differ is that soft news especially relies on a sensational and more emotional production style (Reinemann et al., 2012). Music onsets and close-ups, obtrusive voice-overs, and more flashes, for example, are used to create a dramatic effect in soft news coverage (Grabe et al., 2001; Hendriks Vettehen et al., 2011). More than hard news, characteristics particular for soft news elicit emotional arousal (e.g., involvement) that results in a better appreciation of news items (Hendriks Vettehen, Nuijten, & Peeters, 2008) and thereby can provide a break-away from one’s daily concerns (Boczkowski & Mitchelstein, 2010). Containing more arousing features and dramatic elements than hard news, soft news probably evokes stronger hedonic viewing experiences than hard news.

Altogether, soft news epitomizes a shift “from programs in the public interest to programs the public is

interested in” (Brants & Neijens, 1998, p. 150), with topics (i.e., overall less negative), focus (i.e., more personal), and style (i.e., more emotional) that probably lead to a less negative impact on mental well-being than hard news:

Hypothesis 2 (H2): Consumption of hard news has a more negative effect on developments in mental well-being than the consumption of soft news.

Method

Data

Data were gathered by means of a three-wave online panel survey conducted in the first half of 2015 with a time lag of 10 weeks between each survey. Respondents had 24 days to complete the survey, but the vast majority did so in the first days after the survey was sent out. The survey was conducted by I&O Research, an ISO-certified research company.

In the first wave starting on February 23, 22,879 respondents were invited of whom 9,112 started the questionnaire (response rate, RR2 = 39.8%) and 6,386 completed the survey (RR1 = 27.9%; cooperation rate, COOP1 = 70.1%). In the subsequent waves, only respondents who participated in the previous wave were invited again. In Wave 2 (starting April 20), 4,301 respondents completed the questionnaire (RR1 = 69.0%) and 3,270 respondents also completed the third wave (RR1 = 77.0%), which began June 15, 2015.

The sample deviates from the Dutch population with an overrepresentation of male (69.6%), highly educated (50.9% obtained a university degree), and old respondents ($M = 61.58$, $SD = 11.04$) within the right-skewed age distribution from 18 to 90 years old (skewness = -0.66 , kurtosis = 0.716). As the purpose of this study is *not* necessarily yielding exact point-estimates for news consumption or mental well-being in the Dutch population, but rather investigating the causal mechanism between these variables, the sample is considered appropriate for the goal of our study.

Measures

Independent Variables

Media consumption data were tapped in Wave 1; subsequent waves did not measure media exposure because it is assumed to be a rather stable characteristic of individuals (see Jacobs, Meeusen, & d’Haenens, 2016, p. 649). Following the typology of Bos, Kruikemeier, and de Vreese (2014) and the empirically verified classification

of Boukes and Boomgaarden (2015), the (only) five daily broadcast news programs from The Netherlands were categorized as either hard or soft news.¹

A “hard news consumption” scale ($M = 10.32$; $SD = 4.92$) was created by summing responses to how often (0–7 days per week) people watched the following hard news programs: *NOS Journaal*, *RTL Nieuws*, and *Nieuwsuur*. These are the prime-time Dutch television news programs that cover the news of the day in a traditional hard news manner. Similarly, a “soft news consumption” scale ($M = 1.61$; $SD = 2.59$) was created by summing responses regarding the following programs: *Hart van Nederland* and *Editie NL*, two daily broadcasted prime-time soft news programs.

Dependent Variable

The mental well-being subscale, WHO-5 (Vander Zee, Sanderman, Heyink, & de Haes, 1996), part of the internationally validated Short-Form Health Survey, SF-36 (Ware & Sherbourne, 1992), was used to assess respondents' mental well-being in the three survey waves. WHO-5 has been found to accurately tap into the subjective well-being of respondents across study fields and is used as screening tool for depression (Topp, Østergaard, Søndergaard, & Bech, 2015).

This scale ($\alpha > .85$ in all waves) consists of five simple and noninvasive questions asking how much of the time in the last month (0 = *never*, 5 = *constantly*) respondents (a) “considered myself to be very nervous” (recoded), (b) “felt so down in the dumps that nothing could cheer me up” (recoded), (c) “felt calm and peaceful,” (d) “felt downhearted and blue” (recoded), and (e) “considered myself to be happy.” To ease interpretation, this mental well-being construct was rescaled to range from 0 (*lowest possible well-being*) to 100 (*maximum mental well-being*).

Control Variables

Analyses controlled for the potential confounding influence of age, gender, educational level (1–7 scale; $M = 5.03$, $SD = 1.55$), family income (1–12 scale; $M = 7.94$, $SD = 1.67$), political orientation on a left-to-right scale (0–10 scale; $M = 4.96$; $SD = 2.09$), and employment status (8.3% unemployed of the sample) or being retired (38.8% of the sample). All these control variables were measured in Wave 1 of the panel survey.

Analysis and Model Specification

Latent growth curve (LGC) modeling was applied as this structural equation modeling (SEM) technique allows for the analysis of longitudinal data: It estimates changes in a dependent variable over a period of time as a latent

construct that can be predicted by independent variables. LGC has several advantages over rival techniques for modeling change (Preacher, 2010, p. 185). Most importantly, it models change in the dependent variable as random effects; hence, the influence of stable individual differences between respondents (i.e., news consumption or demographics) on the intercept and slope of the dependent variable (i.e., well-being) can be estimated. Estimating an intercept and slope for the sample as a whole, the LGC model fully accounts for the larger trend in well-being during the period of study. A significant effect on the slope implies that an independent variable amplifies or restricts the growth.

An LGC model using maximum likelihood estimation in Amos 23.0.0 has been specified to estimate the intercept and slope (linear change) of respondents' mental well-being over the three waves. This LGC model yielded good model fit, $\chi^2(3) = 4.07$, $p = .254$; CFI = 1.00; RMSEA = .01, 90% CI = .00–.04.

Subsequently, the LGC was extended by including the control variables as predictors of the intercept and slope of mental well-being. This means that the intercept and slope became endogenous variables. As commonly done in moderation analyses (i.e., when the effect of the independent variable – slope – on the dependent variable – mental well-being – is influenced by a third variable), the control variables were centered to the mean (i.e., age, education, income) or recoded toward an easily interpretable scale (i.e., gender: 0 = *male*, 1 = *female*; left-right preference: –5 to 5; unemployed/retired: 0 = *no*, 1 = *yes*) to yield an intercept and slope of mental well-being that represents the trend in the sample of an average (male) respondent (without political preference). The Electronic Supplementary Material, ESM 1, presents the correlation matrix and descriptive statistics of the employed variables.

To create the optimal functioning model, all insignificant paths ($p > .05$) indicating a direct effect of the demographics on the intercept and slope were removed for reasons of parsimony and to avoid multicollinearity: Being insignificant, such relationships are unlikely to exist in the population and, therefore, unnecessary to statistically control for (Kline, 2011). This model also resulted in good fit, $\chi^2(16) = 21.37$, $p = .165$; CFI = 1.00; RMSEA = .01, 90% CI = .00–.02.

In the final model, hard and soft news consumption (mean-centered) were inserted to function as mediators between the demographic variables and the intercept and slope of mental well-being. This approach corresponds with the idea that media selection is (partly) the outcome of background characteristics and thereby functions as an intervening variable between demographics and the

¹ Broadcast at different time slots, participants would be able to watch all five news programs without time-shifting or recording.

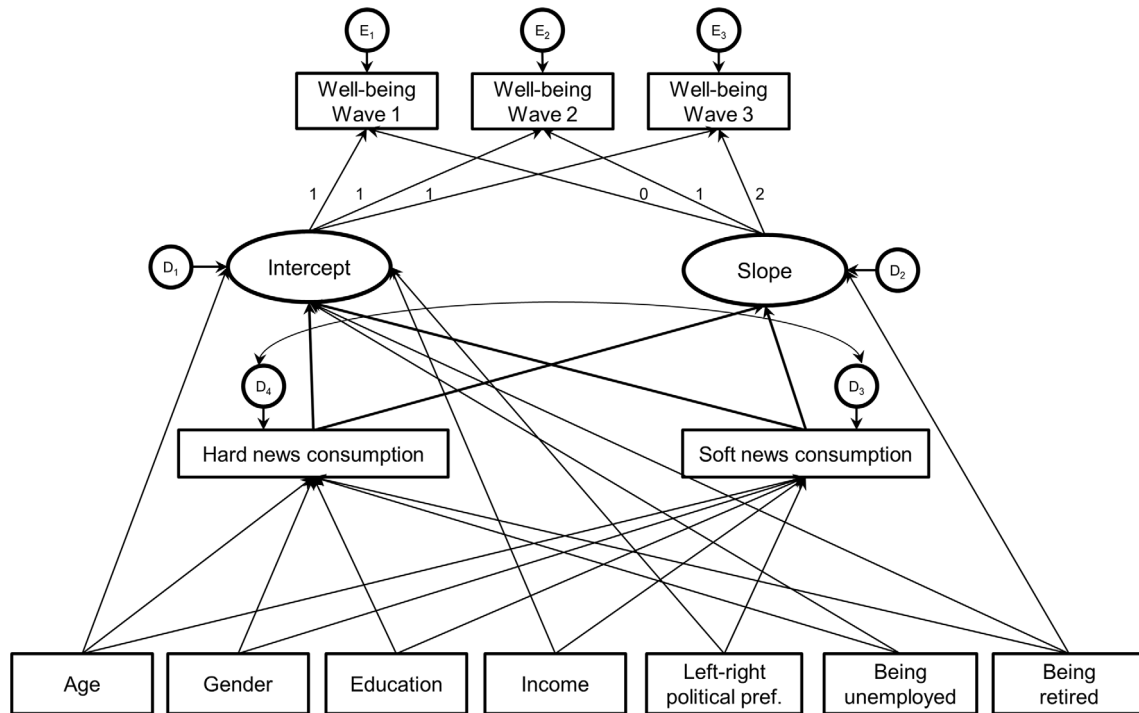


Figure 1. Latent growth curve model explaining the relationships between hard and soft news consumption and mental well-being (intercept and slope). For reasons of clarity, we did not depict the covariances that were specified between all the exogenous variables.

outcome of interest (Slater, 2007). This model (see Figure 1) also yielded a good model fit, $\chi^2(18) = 21.98$, $p = .233$; CFI = 1.00; RMSEA = .01, 90% CI = .00–.01.

Because the estimation method does not allow for missing values, 15% of the sample was excluded from the analysis ($n = 503$; remaining sample, $n = 2767$). Missing observations were especially due to the variable measuring income ($n = 478$; 95%). However, results are robust when this variable is either excluded or when missing observations are replaced by the sample's mean.

Time and Context of Study

The study ran from the end of winter to the beginning of summer – a period that is known to evoke a better mood among people because of weather changes (e.g., Denissen, Butalid, Penke, & Van Aken, 2008). Second, the period under study showed a first signs of recovery of the economy after years of crises, which arguably elicits positive affect. Finally, feelings of fear and anger about terrorism could have weakened, as the dramatic *Charlie Hebdo* shootings (January 7, 2015) and the Copenhagen shootings (February 14, 2015) might have faded from memory, while no new big terrorist incidents occurred in Europe before July 2015. These developments together would predict an upward trend in the overall mental well-being of the population

Results

Mental Health: Intercept and Slope

Using the latent growth curve (LGC) model without predictors, respondents' initial level of mental well-being (intercept) was estimated to be 75.83 ($SE = 0.28$, $p < .001$). This indicates that respondents on average had a mental well-being of 75.83 on the 0–100 scale at the initial time point (end of February, 2015). The variance of the intercept was significant ($\sigma^2 = 176.94$, $SE = 5.93$, $p < .001$), which implies that substantial variance existed between individuals around the sample's mean, which can potentially be explained by the independent variables.

The slope of mental well-being in the LGC differed significantly from zero and was estimated to be 0.54 ($SE = 0.10$, $p < .001$). This implies that the mental well-being on average *increased* by 0.54 points between each of the three waves, which can be explained by the context and timing of the study. The variance of the slope was also significant ($\sigma^2 = 3.16$, $SE = 0.97$, $p = .001$). This means that substantial variation existed between individuals in how mental well-being developed between the waves, which may be explained by the demographic and media variables.

The intercept and slope were uncorrelated ($r = -.08$, $p = .554$), meaning that the development of well-being was independent of the initial level of well-being. Hence,

Table 1. Results of the latent growth curve model predicting mental well-being (intercept and slope)

	Intercept			Slope		
	<i>b</i> (<i>SE</i>)	<i>b</i> *	<i>p</i>	<i>b</i> (<i>SE</i>)	<i>b</i> *	<i>p</i>
Age	0.18 (0.03)	.15	.000	-0.02 (0.01)	-.13	.097
Gender (0 = male, 1 = female)	-1.07 (0.56)	-.04	.055	-		
Level of education	0.35 (0.18)	.04	.054	-		
Income	1.59 (0.17)	.20	.000	-		
Left-right political preference	0.41 (0.12)	.07	.000	-		
Unemployed (dummy)	-6.15 (0.96)	-.13	.000	-		
Retired (dummy)	1.30 (0.72)	.05	.072	-0.56 (0.26)	-.16	.033
Hard news consumption (programs per week)	0.05 (0.06)	.02	.376	-0.05 (0.02)	-.13	.043
Soft news consumption (programs per week)	-0.29 (0.11)	-.06	.011	0.07 (0.04)	.11	.069
Squared multiple correlations (<i>R</i> ²)	.14			.10		

Note. Cells contain unstandardized (*b*) coefficients with standard errors (*SE*) in parentheses, standardized coefficients (*b**) and probabilities (*p*; two-tailed).

the covariance between intercepts and slope was excluded from the extended model that included the demographic and media variables. Including media consumption and control variables affected the initial level and change of mental well-being only weakly. In the final model, the intercept was 76.18 (*SE* = 0.45, *p* < .001) with a significant positive slope of 0.76 (*SE* = 0.14, *p* < .001).

The Influence of Demographics

Most of the demographic variables were strongly related to respondents' initial level of mental well-being (intercept): Older people, with higher income, right-wing political preference, who were not unemployed, of male gender, and highly educated on average had the highest level of mental well-being (see Table 1). These demographic variables, by contrast, hardly affected the slope of mental well-being. Only being retired and age had an effect on how people changed over the three waves; both causing a weaker increase of mental well-being.

The Effects of Hard News and Soft News

Hard news consumption did not have a significant impact on the intercept of mental well-being (see Table 1), which means that people do not differ on their initial level of well-being depending on how much hard news they consumed. Soft news consumption, by contrast, correlates negatively with mental well-being. Thus, the people who watch more soft news generally have a lower level of mental well-being. These findings are based on cross-sectional data (Wave 1 only) and could thus be the result of selection effects: Citizens with a lower mental well-being possibly especially *select* this kind of news, rather than that soft news would negatively *influence* their mental well-being.

To disentangle causality, one has to analyze the change over time in well-being, and assess how this relates to individual differences in news consumption. Both hard news (*b* = -0.05) and soft news (*b* = 0.07) consumption predict differences in the respondents' slope, while most background characteristics did not. For every additional hard news program people watched per week, mental well-being increased 0.05 points *less strongly* between the waves. So, while the average respondent increased his/her mental well-being with 0.76 points, this became 6.1% less (i.e., 0.05 points) for every additional hard news program a citizen watched per week. A citizen watching on average a little more than two hard news programs per day (i.e., more than 16 per week) would then even witness a decrease in mental well-being ($0.76 - 0.05 \times 16 = -0.04$). Exposure to hard news, thus, negatively affected growth in mental well-being, which confirms Hypothesis 1. Additional analyses employing 95% bias-corrected 10,000 bootstraps confidence interval of user-defined estimands showed that the positive trend of well-being becomes *insignificant* once people watch eight or more hard news programs per week (slope = 0.39, *SE* = 0.23, 95% CI = -0.07-0.85, *p* = .094), which is equal to more than one hard news program per day.

For soft news consumption, the opposite pattern was found: A positive effect on the slope was found of 0.07 points for every additional soft news program that people watch per week. However, this effect was only marginally significant (*p* = .069). Consumption of soft news, thus, seems to *amplify* the positive trend of well-being present in our sample.

Already obvious from the opposite effect directions, using 95% bias-corrected 10,000 bootstraps confidence interval of the user-defined estimand of the *difference* between the effect of hard news and the effect of soft news on the slope of mental well-being, findings show that the effect of hard news on the change in mental well-being was significantly

more negative than the effect of soft news ($\Delta b = -0.12$, $SE = 0.05$, 95% CI = -0.22 – -0.02 , $p = .024$). Analysis demonstrates that model fit indeed deteriorates when both effects are restrained to be equal, $\chi^2(1) = 5.81$, $p = .023$. This confirms Hypothesis 2.

Discussion

This study investigated how the consumption of television news affected citizens' mental well-being over a 20-week period. While people overall increased their level of well-being between the three survey waves, this growth was significantly weaker for individuals who consumed more hard news. For every soft news program that people consumed, by contrast, the increase in mental well-being was amplified. Hence, news consumption negatively affects mental well-being, but this is only the case for traditional (i.e., hard) news programs.

This negative effect can be explained by the dominant focus on negative stories (De Smedt et al., 2011; Johnson, 1996),² the sense of powerlessness that hard news evokes (Woodstock, 2014) due to its abstract and thematic framing (Bird, 1998; Graber, 2004), and its lack of entertainment value to distract citizens from their everyday concerns (Bartsch & Schneider, 2014; Boczkowski & Mitchelstein, 2010). These characteristics of traditional news coverage, arguably, decrease mental well-being via the negative *hedonic* viewing experiences that news evokes. The WHO-5 scale consists of items that indeed primarily reflect the hedonic aspects of mental well-being.

Yet, further research is needed to investigate the influence of news consumption on the *eudaimonic* aspects of mental well-being. The contribution of media use (including negatively valenced genres) to eudaimonic (entertainment) experiences has become generally accepted (e.g., Roth, Weinmann, Schneider, Hopp, & Vorderer, 2014), but has not yet been analyzed with regard to news consumption. It is unclear how news may affect experiences of personal growth, relatedness, or mastery. On the one hand, (hard) news coverage is normally difficult to relate to one's own life (Graber, 2004), which goes against the eudaimonic feelings of learning something relevant (Deci & Ryan, 2008). On the other hand, it may potentially influence eudaimonic aspects of well-being positively, because news consumption does make people (feel) more knowledgeable (Eveland et al., 2005) and benefits social interactions (Atkin, 1972).

The actual *content* of news programs that respondents consumed requires more scrutiny in future research;

so, one can move beyond a classification into hard and soft news and provide a more nuanced and precise picture of which content features exactly caused the negative effect. By following existing research (e.g., on cultivation or media malaise), the current manuscript concentrates on television news. Because of the audiovisual characteristics, denser format, and it still being the most popular source of news (Van Praag & Brants, 2014), this medium arguably has a more profound societal impact than print news. Future research, however, should consider studying the effects of online news consumption as it combines features of television and print news and becomes increasingly popular, especially among young citizens. Related to this, respondents in our sample were relatively old, making television news consumption more likely. Therefore, one should be careful drawing generalizable claims about the absolute values we found. Another limitation is that news consumption was only measured in the first wave of the panel survey; ideally one would like to measure it in all waves, so the trend of the independent factor can be modeled as well.

Although news consumption is primarily driven by information motivations (Diddi & LaRose, 2006; Lee, 2013) and considered to be crucial for the function of democracy (Althaus, 2012), this study demonstrates that one should be aware of the potential negative side effects news may have as well. Just in terms of sustainability of their business model, news corporations or journalists need to realize that with increasing media choice (Prior, 2007), citizens are unlikely to select the options that make them unhappy (Woodstock, 2014). A range of ideas have been put forward that would make news coverage less depressing. One option is simply to include more positive or optimistic stories in news coverage. *The Huffington Post*, for example, prominently features a category of news called "What's Working," including the section "Good News." By also displaying positive events, the negative balance in news could be compensated as is also found in soft news.

Yet, negative events can and should of course not be avoided in news coverage. What could, however, potentially alleviate the negative consequences is to place these stories into a context that traditionally would *not* be considered newsworthy (Harcup & O'Neill, 2001). When reporting on crime, for instance, journalists can cover an event in detail (soft) or report more abstractly about crime statistics (i.e., how often does this happen per year; hard). Simultaneously, however, one could also report how crime rates *declined* over the past decades. Such slower moving but positive processes often develop under the journalistic radar, but deserve their attention and may lead to more optimistic

² Esser et al. (2017) find that Dutch news coverage on average is less negative than news in most European countries. Hence, The Netherlands probably provides a conservative test case, and effects of news consumption on mental well-being may be stronger in other countries.

messages. Moreover, journalists can actively seek for solutions to the problems they cover by following the approach coined “constructive journalism” (Benesch, 1998). Initiatives like these may lead to “healthier” news and will decrease the likelihood that news consumers tune out. Yet, implementation will be difficult due to cultural constraints and the existing routines of journalists (Ryfe, 2009). Recommending any changes to how journalists should produce news is easily perceived as a threat to their autonomy and, therefore, may be counterproductive (Costera Meijer, 2003).

The decision to consume media content that negatively affects hedonic experience is up to the individual audience member. With the knowledge this study provides, citizens can consider whether the advantages of news consumption (i.e., being an informed citizen) outweigh the disadvantages of potentially harming one’s mental well-being, which for some eventually might result in the decision to “tune out.” In that sense, this study nuances overly optimistic views on the consumption of hard news and shows the usefulness of evaluating news consumption not only regarding its democratic merits, but in terms of consequences for mental well-being as well.

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Electronic Supplementary Material

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ESM 1. Table (xls).

Sample characteristics and correlation matrix of the variables used.

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