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Enjoyment of arousing television news: The role of age and sensation seeking

Abstract: This study investigated the role of television news as entertainment by focusing on the enjoyment that viewers experience while watching television news stories. In particular, the study examined the relationship between arousing news stories and enjoyment, and explored the potential moderating role of age and sensation seeking. Participants ($N = 288$) watched four news stories and reported both their feelings of arousal and their enjoyment of each story. An \cap -shaped relationship between arousal and enjoyment was found. This relationship was not moderated by sensation seeking, but it was moderated by age: The level of arousal at which enjoyment reached its maximum was higher in younger viewers.

Keywords: negative content, tabloid packaging, enjoyment, age, sensation seeking

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1 Introduction

Over the last decades, interest in assessing the social significance of entertaining media messages for media users has widely increased. This might be due to the proliferation of new media services, such as mobile entertainment and social network sites, and to the advent of new technologies (Oliver and Bartsch, 2010). Various researchers have argued that for many media users, entertainment simply means enjoyment (Bryant and Miron, 2002; Sherry, 2004). Hence, enjoyment is considered by many scholars to be a central concept in explaining mass media entertainment (cf. Nabi and Krcmar, 2004; Vorderer, Klimmt, and

Ritterfeld, 2004). Nabi and Krcmar (2004, p. 296) consider enjoyment as an attitude that may be based on affective, cognitive, and behavioral assessments; and that may involve message-related and experience-related aspects of, for instance, particular elements within a program.

Mass media enjoyment has mainly been studied in the context of media genres that are primarily meant to entertain, such as movies, quiz programs, and video games (cf. Bryant and Miron, 2002; Sherry, 2004). Previous studies also paid attention to the enjoyment of television news (cf. Grabe, Lang, Zhou, and Bolls, 2000; Hendriks Vettehen, Nuijten, and Peeters, 2008). This may seem surprising, given the informative function that is attached to news. However, news gratification studies have shown that viewers watch television news also to be entertained (Rubin and Perse, 1987; Sherry, 2004). In addition, public debates in which critics argued that news producers increasingly aim to entertain viewers might have stimulated attention for the enjoyment of news (cf. Kleemans, 2013).

There are indications that message-evoked arousal is a crucial factor in explaining the enjoyment of news (Grabe, Zhou, Lang, and Bolls, 2000; Hendriks Vettehen et al., 2008). Previous research has also suggested that the relation between news characteristics and enjoyment may be moderated by individual viewer characteristics such as gender or level of education (cf. Grabe, Lang et al., 2000; Kamhawi and Grabe, 2008). It is unknown, however, whether age might also play a moderating role. This question is of particular relevance as television news has lost young viewers. This study therefore investigates age differences in viewers' enjoyment of arousing television news.

1.1 Arousal and enjoyment

As early as 1874 Wundt argued that a positive feeling is the result of an optimal level of arousal that produces an optimal experience. In other words, if an experience is above or below the optimal level, it is perceived as less positive. This general idea is incorporated in various theories, such as flow theory (Csikszentmihalyi, 1992), Berlyne's (1960) optimal level theory, and the study of sensation seeking (Zuckerman, 1994). It is stated that the positive feeling that comes with an optimal level of arousal results in audience reactions such as flow, exposure, and pleasantness. Hence, in line with these responses, the level of enjoyment experienced by viewers might be seen as a reaction to a stimulus.

Applying these ideas to news stories, it may be expected that viewers experience enjoyment of stories that elicit arousal in accordance with their individual need for arousal. News stories elicit arousal through content and packaging characteristics. Studies showed that the presence of negative topics and pic-

tures increases the arousal potential of the content of a message (e.g., Grabe, Lang, and Zhao, 2003; Lang, Bolls, Potter, and Kawahara, 1999). Moreover, tabloid packaging characteristics such as a greater number of camera shots, special effects, and music make stories more arousing than standard-packaged stories (Hendriks Vettehen et al., 2008; Morgan, Palmgreen, Stephenson, Hoyle, and Lorch, 2003).

As Hendriks Vettehen et al. (2008) already showed, an increase in emotional arousal elicited by news story characteristics may increase the viewer's enjoyment of the story, but only up to a certain point. Beyond that point, a further increase in arousal decreased the enjoyment of the news story. We thus expect to find that:

[H1] The relationship between arousal evoked by news stories and the enjoyment of these stories takes the form of an \cap .

1.2 Sensation seeking and age

Zuckerman's concept of sensation seeking may be helpful to explain age differences in the need for arousal. Zuckerman (1994) argued that some people seek to achieve or maintain low levels of arousal (i.e., low-sensation seekers), while other people prefer high levels of arousal (the so-called high-sensation seekers). High-sensation seekers search in their daily lives for experiences that are, for instance, novel, complex, or intense, since these have more arousal potential. Therefore, people with a strong need for arousal will enjoy highly arousing messages more than low-sensation seekers.

Sensation-seeking literature predicts that young adults enjoy higher levels of arousal elicited by news stories compared to older adults. The sensation-seeking trait was shown to peak in adolescence or the early twenties and decline with age thereafter (Zuckerman, 1994), implying that younger viewers have a greater need for arousal than older viewers. Klein (2003) provided preliminary support for this expectation. He found that senior citizens were less likely than younger ones to report that they watched the news to see violent content. Older viewers also more often reported that they turned off the television because of violent content. As violence is a frequently used example of arousal-eliciting content, the results suggest that younger viewers are more likely to enjoy arousing news stories. Assuming that the relationship between arousing characteristics in news stories and enjoyment is moderated by the viewers' age as they differ in their need for sensation, we expect:

[H2] The level of arousal at which enjoyment reaches its maximum is higher when viewers are younger.

[H3] The moderating effect of age on the relationship between arousing news characteristics and enjoyment can be explained by viewer differences in need for sensation.

2 Method

2.1 Stimulus materials

An experiment was conducted with 16 news stories as stimulus materials¹. Eight stories with negative content (i.e., a negative story topic and pictures), and eight stories with neutral content (i.e., stories about nature or economics) were selected. The results of a pilot study in which participants ($N = 51$) rated the valence of the stories on a scale from 1 (negative) to 7 (positive) showed that the stories were correctly assigned to the neutral ($M = 4.41$; $SD = .95$) or the negative ($M = 2.85$; $SD = .81$) content categories. Regarding packaging characteristics, half of the neutral and half of the negative stories had a tabloid, arousal-eliciting style of packaging, including a large number of camera shots per minute ($M = 14.08$; $SD = 1.26$), music onsets, sound effects, fades, wipes, and dissolves. The other eight stories included standard packaging, that is, a small number of camera shots ($M = 7.79$; $SD = .56$), no music, and no decorating editing techniques.

A number of factors were held constant to prevent contextual factors from distorting the results. All stories were broadcast in the Dutch evening news program *NOS Journaal* during a limited time period. They contained local news, had little variation in story duration, did not include an extremely controversial topic or a topic that had received extraordinary media attention. Potential effects resulting from anchorpersons were eliminated by replacing their spoken introductions by written introductions.

2.2 Participants and procedure

The stories were divided into four groups of news stories. Each group consisted of four stories, one of each combination of content (negative or neutral) and packaging (tabloid or standard). Participants watched the stories of one group

¹ The data used in this study were collected as part of a larger data-gathering procedure (cf. Kleemans, Hendriks Vettehen, Beentjes, & Eisinga, 2012). We here describe only the parts of the procedure that are relevant for the current study.

in a random order. We recruited 288 participants, 140 males and 148 females. They were equally divided over three age categories: young viewers (18–26 years), middle-aged viewers (30–50 years), and old viewers (60–89 years). All participants had a high educational level. The youngest group consisted of 96 university students ($M_{age} = 21.70$; $SD_{age} = 2.05$). To represent the middle-aged people, 96 academic employees took part in the study ($M_{age} = 41.91$; $SD_{age} = 4.85$). The oldest group consisted of 96 highly educated elderly people ($M_{age} = 68.82$; $SD_{age} = 6.98$).

At the beginning of the individually performed experiment, participants answered questions about, for instance, their age and gender. Thereafter, they watched the first story and answered questions that were, for instance, used to measure enjoyment and arousal. This procedure was repeated until the participant had watched four news stories.

2.3 Variables

Nabi and Krcmar (2004) defined *enjoyment* as an attitude with respect to the extent to which both the content and experience of media use are evaluated positively. Accordingly, enjoyment was measured using the statements “this was an attractive story” and “I liked watching this story” (cf. Hendriks Vettehen et al., 2008). Participants had to respond to the statements on a scale ranging from 1 (totally disagree) to 7 (totally agree). Cronbach’s alphas were calculated separately and independently for each type of news stories. The values ranged from $\alpha = .83$ to $\alpha = .91$. The mean scores on enjoyment varied between $M = 3.21$ ($SD = 1.58$) and $M = 3.94$ ($SD = 1.81$).

Sensation seeking was measured using the Brief Sensation Seeking Scale (Hoyle, Stephenson, Palmgreen, Lorch, and Donohew, 2002). This revised version of Zuckerman’s (1994) sensation-seeking scale consisted of eight items, for instance, “I like to do frightening things” and “I would love to have new and exciting experiences, even if they are illegal”. Participants responded on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). To construct the variable sensation seeking, we calculated the participant’s mean score on the eight items (Cronbach’s $\alpha = .75$). The mean score for sensation seeking was 2.65 ($SD = .76$).

Arousal was measured using the emotional arousal scale employed by Hendriks Vettehen et al. (2008), a slightly modified version of a measure developed by Morgan et al. (2003). The scale consisted of six statements, with responses ranging from 1 (totally disagree) to 7 (totally agree). Examples are: “I felt involved in the event in the news story” and “the images in this news story

shocked me". A factor analysis of the statements yielded a single factor. We calculated the participant's mean score on the statements to construct the variable arousal. Cronbach's alpha for each type of story varied between $\alpha = .82$ and $\alpha = .88$, with mean scores ranging from 3.25 ($SD = 1.22$) to 4.73 ($SD = 1.33$).

The arousal scores were used as a manipulation check of the expected arousal potential of different types of content and packaging of news stories. We found a strong main effect for content ($F(287,1) = 283.71; p < .001; \eta^2 = .50$), indicating that negative stories indeed elicited more arousal ($M = 4.61; SD = .06$) than neutral stories ($M = 3.30; SD = .06$). The main effect for packaging did not reach significance. Only a weak interaction between content and packaging was found ($F(287,1) = 6.37; p < .01; \eta^2 = .02$), but the results did not confirm the expectation that tabloid packaging increased self-reported arousal. An explanation for this may be that Dutch television news seems to be relatively calm and that, compared to the US, for example, the differences between standard- and tabloid-packaged stories are less substantial. We conclude that the variance in arousal is largely due to the differences between negative and neutral stories.

3 Results

Repeated measures analyses were performed with the mixed-effects model procedure using an unstructured covariance matrix. Likelihood ratio tests were performed to test models that are nested in, and simplifications of, other models. We controlled for the two content and the two packaging categories.

Regarding the expectation of an \cap -shaped relationship between arousal evoked by news stories and enjoyment (H 1), we found a significant negative value of the quadratic term (see model 1, reported in Table 1). This indicates the existence of a curvilinear relationship between arousal and enjoyment. Dropping the quadratic term from the model results in a significant decrease in model fit ($-2\Delta\ell\ell = 76.116, df = 1, p < .001$). These results thus provide strong support for the first hypothesis.

Model 2 tested the arousal by age interaction with regard to enjoyment of news stories. The likelihood ratio test indicated that dropping the constraint of invariant effects of arousal and arousal-squared on enjoyment by age, as in model 2, resulted in a significant improvement in fit over model 1 ($-2\Delta\ell\ell = 64.266, df = 6, p < .001$). Further, the parameter estimates for young, middle-aged, and older viewers displayed in Table 1 are rather different. The results are in accordance with our second hypothesis: The level of arousal at which enjoyment reaches its maximum is higher when viewers are younger.

Table 1: Repeated measures regression of enjoyment of television news stories on arousal for total sample, by age and sensation seeking, controlled for tabloid packaging and negative content of news stories ($N = 288$).

model	sample	intercept	arousal	arousal ²	tabloid packaging	negative content	-2ℓℓ
1	total	-.131 (.269)	1.796 (.143)***	-.160 (.018)***	.122 (.078)	-1.168 (.101)***	4069.322
2	young	-.036 (.460)	1.541 (.257)***	-.093 (.033)***	.151 (.078)	-1.221 (.095)***	4005.056
	middle	.619 (.458)	1.458 (.250)***	-.119 (.032)***			
	old	-.306 (.490)	1.914 (.241)***	-.195 (.028)***			
3	high	-.051 (.409)	1.639 (.220)***	-.124 (.028)***	.117 (.077)	-1.180 (.099)***	4051.616
	low	-.070 (.354)	1.849 (.187)***	-.179 (.023)***			
4	young:						
	high	-.003 (.554)	1.546 (.311)***	-.095 (.040)*	.147 (.078)	-1.226 (.094)***	3997.822
	low	-.118 (.827)	1.546 (.453)***	-.092 (.057)			
	middle:						
	high	.614 (.726)	1.342 (.392)***	-.089 (.049)			
	low	.608 (.589)	1.550 (.323)***	-.142 (.041)***			
	old:						
	high	-.143 (1.209)	1.689 (.580)**	-.155 (.065)*			
	low	-.336 (.534)	1.991 (.266)***	-.209 (.031)***			

Note: Standard error in parenthesis. * $p < .05$, ** $p < .01$, *** $p < .001$.

Our third hypothesis states that sensation seeking explains the moderating influence of age. We expected that younger viewers have a different maximum level of enjoyment for arousing television news stories compared to older viewers because younger viewers are mainly high-sensation seekers, while older viewers are predominantly low-sensation seekers. We first tested in model 3 the arousal by sensation seeking interaction for the enjoyment of television news stories. We distinguished between high- and low-sensation seekers by dividing the participants into two groups based on the median level of sensation seeking (2.63). Both the linear and the quadratic terms for low- and high-sensation seekers differ significantly. Compared to model 1, the likelihood ratio test showed a significant improvement in fit for model 3 ($-2\Delta\ell\ell = 17.706$ $df = 3$, $p < .001$). We might thus conclude that sensation seeking conceivably plays a role in explaining differences in enjoyment. In addition, we conducted an analysis of variance to test the assumption that younger viewers are higher sensation seekers than older viewers ($F(2,282) = 43.56$; $p < .001$; $\eta^2 = .24$). The results of a post-hoc Tukey-test shows that young viewers ($M = 3.21$; $SE = .07$) are significantly ($p < .001$) higher-sensation seekers than the middle-aged ($M = 2.55$; $SE = .07$) and older ($M = 2.28$; $SE = .07$) viewers ($p < .001$). The difference between middle-aged and old viewers is also significant ($p < .01$).

We tested in model 4 the age by arousal interaction for both high- and low-sensation seekers, and compared this model with the one which included only the arousal by age interaction (model 2). If sensation seeking explains the differences between the three age categories, an improvement in model fit for model 4 should appear. However, including sensation seeking in the model shows no improvement in fit over model 2 ($-2\Delta\ell\ell = 7.234$, $df = 9$, $p = .62$). We may thus conclude that sensation seeking has no effect independent of age. Opposite to the expectation (H 3), the differences between the age groups cannot be explained by differences in sensation seeking. The moderating effect of sensation seeking that had been found in model 3 appears to be spurious, as it is explained by age differences between low- and high-sensation seekers. Hence, we conclude that model 2 explains differences in the enjoyment of television news best.

The analysis controlled for the content and packaging of the news stories. As Table 1 shows, the packaging of the news story has no effect on enjoyment. Negative content, however, had a negative effect on news story enjoyment.

4 Discussion

This study aimed at investigating the role of television news as entertainment by focusing on the enjoyment that viewers experience while watching the news.

It showed that the enjoyment experienced depends on the degree to which the level of arousal elicited by negative news stories meets the viewers' optimal level of arousal. In addition, it showed that this optimal level of arousal was different for viewers of different ages.

The results of this study raise some queries. A first question is how the differences between the age categories can be explained, if not by sensation seeking. A generation effect may be the answer. Reactions to a stimulus depend not only on the interaction between an individual's need for arousal and the arousal potential of the stimulus, but also on how promptly and easily an individual has been able to alleviate the arousal induced by similar conditions in the past (cf. Berlyne, 1960: 212). This may point to an effect of the generation to which a viewer belongs. Since today's young adults were raised in an arousing, fast-paced media environment, they are more at ease with arousing messages than older viewers (cf. Tapscott, 2009). It is possible that younger viewers need higher levels of arousal to experience an optimal feeling of enjoyment because of their more frequent exposure to arousing stimuli. This may explain the differences between age categories that were found.

Second, the question arises why sensation seeking did not play a role with regard to the enjoyment of arousing television news. It might be that the sensation-seeking scale cannot grasp the subtle differences in arousal as elicited by news stories. The sensation-seeking scale distinguishes between high- and low-sensation seekers by determining an individual's need for arousal based on the extent to which they like highly arousing activities such as bungee jumping and exploring strange places (cf. Hoyle et al., 2002). Comparing these arousal-eliciting activities with arousing television news (e.g., fast-paced news stories about a fire in a museum), one might conclude that such news elicit relatively moderate levels of arousal. Even in its most arousing format, the television news genre may not be arousing enough to entertain high-sensation seekers at a different level compared to low-sensation seekers. This may explain why sensation seeking did not affect the relationship between arousal and enjoyment in this regard.

One might question how the higher educational level of the participants may have affected the results. As we know that higher educated viewers have generally more interest in news than lower educated viewers (cf. Liu and Eveland, 2005), further research should include lower educated participants to find out whether the age differences are consistent among viewers varying in educational level.

The current study adds to a line of research that discusses media messages like sad movies (Oliver, 1993) and horror films (King and Hourani, 2007) in terms of their puzzling appeal. These studies provide support to recent concep-

tualizations of media enjoyment that go beyond the notion of enjoyment as fun (e.g., Oliver and Bartsch, 2010). It is suggested that enjoyment encompasses at least two more dimensions beyond pleasure seeking. First, experiences that are related to appreciation (e.g., thought-provoking experiences, such as watching drama) may correspond to enjoyment. Second, experiences of thrill and suspense, characterized by emotional arousal and negative valence, may correspond to enjoyment (Oliver and Bartsch, 2010: 75). The findings from this study exemplify the latter dimension of enjoyment.

In all, this study offers some clues about the question of how to attract viewers. It showed that in particular young viewers enjoy arousing news stories. Recent developments in the news market, such as the emergence of highly arousing newscasts that especially aim at younger viewers (Vandebosch, Dhoest, and van den Bulck, 2009), seem beneficial to attract this viewer category. However, news producers should be cautious. The amount of arousal that young viewers experience as pleasurable is not unlimited. Moreover, older news viewers may tend to avoid newscasts with highly arousing stories since they enjoy these stories to a considerably lesser degree. Finally, the negative effect of negative content indicates that the valence of a news story affects enjoyment. However, as we studied only negative versus neutral stories, further research should also include positively arousing news stories to be more conclusive regarding the question of how news producers can serve the audience.

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