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Selective Exposure in the Context of Political Advertising: A Behavioral Approach Using Eye-Tracking Methodology

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Selective exposure refers to the tendency of individuals to attend to information that is in line with their political views. This study advocates a behavioral approach to selective exposure research by introducing eye-tracking as a straightforward measure of selection processes. We tested participants' selective exposure to political poster advertisements from one left-wing and one right-wing party. Individuals were simultaneously exposed to on-screen ads by the two different parties, and their eye movements were unobtrusively recorded. Findings indicate that the political orientation of the participants explained selective exposure in terms of the time taken to look at each ad. Implications for selective exposure research are discussed.

Keywords: *selective exposure, political advertising, eye-tracking, political predispositions*

The scholarly debate on selective exposure in the field of communication research has prospered considerably in the past years (e.g., Garrett, 2013; Knobloch-Westerwick, 2015; Sunstein, 2001). As part of this discussion, it has been argued that if individuals only attend to information that is in line with their own views, this may result in the proliferation of echo chambers (Jamieson & Cappella, 2008), in which one's opinion is amplified by media and personal networks consistent with their own position and conflicting points of view are less likely to be encountered. Such echo chambers could possibly threaten the diversity of opinions, with damaging consequences for deliberative democracies, but research mostly provides evidence for the fact that the majority of citizens still rely on a balanced diet of different news sources and information outlets (Chaffee, Saphir, Graf, Sandvig, & Hahn, 2001; Garrett, 2013).

Scholars have found accumulating evidence for the occurrence of selective exposure (e.g., Garrett, 2009, 2013; Knobloch-Westerwick, 2015), but research has been concerned mostly with the active selection of information, for example, by asking individuals retrospectively about their media use or recording their content choice. In contrast, little is known about selection at a comparably early stage of exposure. That is, how do people assign their (visual) attention according to their own (political) self and the information they are presented with? If we understand attention as a part of selective exposure and a

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precondition for any type of processing or effects (i.e., understanding, memory, learning, or persuasion) to occur, this issue clearly demands further investigation.

In this study, we asked whether individuals actively expose themselves to political messages that are in line with their own ideological predispositions. Specifically, we tested participants' selective exposure to poster advertisements from two opposing parties. By recording participants' eye movements, we specified the actual amount of time people award to different political ads, and tested our proposed effects with regard to posters by a left-wing (Green Party) and a right-wing (Austrian Freedom Party) party. For reasons outlined below, we believe the implementation of eye-tracking in selective exposure research to be an important methodological contribution, as it may help in determining whether selective exposure takes place at a very early level of content perception and selection. By testing this assumption in the context of poster advertisements, we further aimed to take a closer look at media content that differs from information normally tested in selective exposure research: We argue that messages that are looked at in passing demand less time and processing, but are hard to avoid. As a consequence, eye-tracking is especially well suited to address processes of selective exposure. To our knowledge, this is the first study to address the effects of political predispositions on selective exposure to political advertising with the help of eye-tracking methodology. Our findings are discussed with regard to the broader implications for selective exposure research.

Selective Exposure Theory

During campaigns, voters are confronted with a large array of political advertisements, both from candidates they sympathize with as well as those they dislike. In a surrounding where the amount of incoming information outnumbers individuals' cognitive capacity to process every message, people selectively expose themselves to some content while dismissing other. The attendance to and/or avoidance of (political) messages have been termed *selective exposure*. This process, in line with Festinger's (1957) theory of cognitive dissonance, is theorized to reinforce preexisting attitudes and beliefs. Most authors find support for the hypothesis that individuals pay greater attention to consistent information, but research has on some occasions been inconclusive (e.g., Donsbach, 2009; Knobloch-Westerwick & Meng, 2009, 2011; Matthes, 2012; Sears & Freedman, 1967).

In an attempt to embrace the diversity of research in the area, Knobloch-Westerwick (2015) proposed a framework addressing the different phases of selective exposure. The selective exposure self- and affect management (SESAM; Knobloch-Westerwick, 2015) model postulates that individuals' selection of media content is determined by the relevant self-concept that is activated when they are exposed to it: Depending on the working self accessible at the time of exposure, people attend differently to media. Importantly, self-concepts can be automatically activated by media stimuli and subsequently guide message exposure and attention: "Media messages represent social contexts that render particular self-concepts relevant, which in turn influence what messages are selected and how these affect media users" (Knobloch-Westerwick, 2015, p. 967). The model asserts that attention to a given stimulus leads to the recognition of content elements and determines which working self will be activated. This, in turn, affects exposure to (or avoidance of) and further processing of the message. On the one hand, the SESAM model conceptualizes selective exposure as a process in which media users turn to messages because they help

them maintain said self-concepts. On the other hand, merely encountering media content or new information may also activate relevant self-concepts (Knobloch-Westerwick, 2015). The dynamic-transactional character of this process (Früh & Schönbach, 1982) points to the interrelation of an individual and her surrounding, including the media message. It also emphasizes how the different stages of attention, selection, and message processing are intertwined: After a phase of—potential preconscious—attention, people identify the broad subject of the stimulus and anticipate possible outcomes of message exposure. They determine which self-concept is relevant, which further guides the selective exposure process, including prospective media impacts, interpretation, and response to the message (Knobloch-Westerwick, 2015). In a similar manner, McGuire (2013) characterized the first steps of a persuasion process as exposure to the content, followed by attention, liking/maintaining interest in the message, and comprehension. The discussed frameworks highlight the dynamic nature and connection of attention and processing stages in the interaction with media messages.

In line with these arguments, we believe exposure to political advertising, similar to other forms of media content, to be guided by (a) individuals' prior attitudes and predispositions as well as (b) characteristics of the message itself (i.e., the advertising party; Taber & Lodge, 2006). Exposure to attitude-consistent messages may increase the accessibility of partisanship in people, thus reinforcing their political self-concept (e.g., Knobloch-Westerwick & Meng, 2011). Along these lines, findings by Matthes and Marquart (2015) show that exposure to like-minded political advertising could accelerate the timing of citizens' voting decisions and increase political participation. Accordingly, the nature of a media stimulus in terms of its closeness to the individual may determine message exposure and (subsequent) effects. Although political content in general as well as campaign communication in particular have been studied in the context of selective exposure before (e.g., Garrett, 2009; Iyengar, Hahn, Krosnick, & Walker, 2008), no research so far has addressed the perception of political poster advertisements in this regard.

Political Poster Advertisements

Given the relevance of posters for political advertising in the European context (e.g., Kaid, 2012; Seidman, 2008), it is important to determine whether citizens expose themselves to these ads. During election campaigns, parties compete for voters' attention, and streets are virtually plastered with posters. Often, these ads are installed next to each other, and exposure to multiple posters by various parties can hardly be avoided (Matthes & Marquart, 2015; Plasser & Plasser, 2002). The specific characteristics of poster ads that are mostly attended to in passing and without investing much cognitive energy make them important media messages for studying the processes of selective exposure. Political posters have been found to successfully communicate a party's or candidate's issue position (Seidman, 2008), most notably because of their high visibility in the public sphere (Kaid, 2012). Given their comparably low complexity, the limited amount of space adjudged to textual information, and their reliance on visual content, political posters aim at gaining voters' attention for a very brief amount of time (Dumitrescu, 2010). This short attention span is used to convey the relevant information (candidate, party, or issue positions) as fast as possible and before—much as in conventional, nonpolitical advertising—individuals feel the need to avoid the persuasive content. Due to posters' relative unostentatious nature, voters report feeling less annoyed

by them compared with other forms of political advertisements, and the ads still have the potential to affect attitudes and vote choice (e.g., Johnston & Pattie, 1998; Seidman, 2008; van den Bulck, 1993).

Within the scope of this study and following the SESAM model (Knobloch-Westerwick, 2015), we conceptualize selective exposure to political posters as a continuous process that involves attention to the content, the activation of the relevant (here: political) self-concept by means of contact with the ad, and the subsequent guiding of exposure and information processing. However, as outlined above, the threshold of being exposed to such ads (be they like-minded or not) is low compared with forms of advertising that require more active engagement, such as TV spots or candidates' websites: Especially during national campaigns, the majority of voters notice poster ads on the streets (Schmitt-Beck & Wolsing, 2010). For that reason, asking people whether they have seen them potentially yields inconclusive results. Instead, we propose to employ eye-tracking technology to test how much voters actually expose themselves to such ads. Again, selective exposure in the context of political posters is a dynamic process: When encountering the ads in a given social context (e.g., while driving past them on the street), individuals' political self-concepts are activated, and will subsequently guide the (length and intensity of) exposure to the posters. Whereas studies in selective exposure in the past mostly focused on questioning individuals about their media use, researchers have increasingly turned their attention to behavioral measurements.

Measuring Selective Exposure

Clay, Barber, and Shook (2013), in a recent review on measuring selective exposure (see also Feldman, Stroud, Bimber, & Wojcieszak, 2013; Ryan & Brader, 2015), identified four main categories of measurement techniques. First, survey participants are questioned retrospectively about their behavior, for instance, with regard to news consumption habits (e.g., Garrett, Carnahan, & Lynch, 2013; Matthes & Marquart, 2015). For example, Chaffee and colleagues (2001) administered a cross-sectional survey measuring attention (i.e., recall) to media content about political candidates and testing selective exposure by means of political orientation and preference for specific candidates during an election. Although such recall measures mostly pertain to ongoing events, and therefore are highly relevant in terms of external validity, interpretation of their findings is not always conclusive (Bennett & Iyengar, 2008). Specifically, problems of selective attention and retention apply, which is to say that individuals have a biased memory when it comes to remembering messages that are in line or conflict with their own attitudes. In addition, ideological consistency may be a desirable goal in self-presentation, thus leading to a distortion in self-report measurements (Clay et al., 2013).

Second to addressing behavior retrospectively, questioning individuals about their intentional behavior with regard to selective exposure is a common technique: Participants are given a choice of, for instance, news articles from which to select, and asked about their interest in reading those articles (for a discussion, see also Feldman et al., 2013). The problems arising from such measurements are similar to the arguments outlined above. In addition, measures of intentional behavior mostly leave individuals to choose one message or another (i.e., as a dichotomous variable), limiting the transferability of findings. Moreover, researchers gain no information about how recipients attend to this material: When reading a

newspaper, one may simply scan counterattitudinal information, but closely read attitude-consistent paragraphs, or vice versa.

Third, studies recently have begun using behavioral measures to determine the actual selective exposure people engage in (see Garrett & Stroud, 2014; Jang, 2014; Knobloch-Westerwick, 2015; Prior, 2013; Vraga, Bode, & Troller-Renfree, 2016). An important advantage of such measurements is that they take into account the differences in actual exposure time allocated to the information. Such behavioral measures include the (unobtrusive) tracking of the time spent on reading news articles or the recording of interactive behavior in selecting pieces of information from websites (Jang, 2014; Knobloch-Westerwick & Meng, 2009; Valentino, Banks, Hutchings, & Davis, 2009) or CD-ROMs (Iyengar et al., 2008). Behavioral measurements, however, often rely on fake content (e.g., mock websites), with questions arising pertaining to the generalizability of findings. In addition, it can be argued that the time people spend on websites does not necessarily relate to the amount of reading one does when viewing such a website (e.g., Knobloch-Westerwick & Meng, 2009). Fourth, Clay and colleagues (2013) discuss the collection of aggregate data in large population samples (e.g., market data and population level estimates). Naturally, individual explanations for media selection become secondary to general explanatory factors in such larger studies, making it increasingly difficult to clarify motivations for attending to specific media.

Against the background of the discussed measurements techniques, we deem the recording of participants' actual behavior the most appropriate technique when researching selective exposure, as it allows for the identification of actual choices without having to rely on self-reports (Knobloch-Westerwick, 2015). In the present study, we operationalized attitude-consistent and -inconsistent messages as political advertisements promoted by a party that individuals either support (i.e., like and sympathize with) or dislike, and measured selective exposure to these ads by recording participants' eye movements when presented with two poster ads simultaneously.

Eye Movement as an Indicator for Selective Exposure to Political Posters

Eye-tracking is still not very established in communication research (Sandberg, Gidlöf, & Holmberg, 2011; but see Vraga et al., 2016). This may come as a surprise given that any "visual exposure (potential and actual) to a communication effort is a necessary but not a sufficient condition for a cognitive, attitudinal or behavioral effect to occur" (Sandberg et al., 2011, p. 24). In their study of children's exposure to online advertising, Sandberg and colleagues (2011) measured participants' fixations to determine the amount of time they adjudged different ads (see also Jansen, Nederkoorn, & Mulkens, 2005). In the realm of consumer research, scholars have identified a "positive feedback loop" (Gidlöf, Wallin, Dewhurst, & Holmqvist, 2013, p. 2) between what individuals look at and what they choose, which is to say that the more time participants award an item, the more likely they are to prefer it over alternative offers in a subsequent situation (see also Janiszewski, Kuo, & Tavassoli, 2013; Orquin & Mueller Loose, 2013). Similar findings stem from studies in the field of marketing and consumer research (e.g., Bebko, Sciulli, & Bhagat, 2014; Pieters & Warlop, 1999; Schotter, Gerety, & Rayner, 2012), showing that exposure (measured as the amount of time dedicated to a stimulus via eye-tracking) relates to important outcome variables such as attitudes or behavior. Investigating the visual exposure to (nonpolitical) poster ads in photographs displaying street sceneries, Maughan, Gutnikov, and Stevens

(2007) also established a link between the amount of fixations an ad received and its following evaluation in terms of liking. However, caution is warranted with regard to the causal interpretation of findings in this context (i.e., liking determining exposure or vice versa). In the field of political communication, hardly any comparable studies have been conducted so far, which may be because the effort in collecting and analyzing eye movements from large samples is enormous, as people need to be exposed to the stimuli in individual sessions in the laboratory.

Yet, information about the actual amount of time dedicated to different content is of vital importance, as it frees scholars from the burden of having to rely on self-report measures. Eye movements can be considered indicators of preferences at a very early stage of media reception (e.g., Higgins, Leinenger, & Rayner, 2014), thus preceding any possible effects. Although exposure time has been used as a dependent variable in determining selective exposure before (e.g., Knobloch-Westerwick & Meng, 2009), to our knowledge, no studies have employed the analysis of eye movements in this area. Yet, we believe that the documentation of perceptual processes in the context of political advertising would provide a valuable addition to the selective exposure literature. Using eye movements as indicators is a very direct and unbiased way of observing selective exposure. More specifically, eye-tracking observes single fixations that usually last 200 to 400 milliseconds, which is especially important when addressing media content that does not require much time and/or cognitive energy for processing. On the level of such short exposure, measuring study participants' time spent on a stimulus simply by recording, for example, how long the content was displayed on screen might yield inconclusive results. In contrast to that, eye-tracking can be considered an unbiased and straightforward measure of exposure.

Taken together, we identify two important shortcomings in the present literature: First, no investigations have addressed selective exposure to political poster advertising in a setting that is similar to a regular environment, that is, posters of several parties competing for potential voters' attention on the street. Second, self-report measures in selective exposure research may be susceptible to measurement errors, for which reason we suggest using a behavioral eye-tracking measure to determine the actual amount of time devoted to political ads from different parties. Both points are addressed in the research presented here.

Hypotheses

As this study was set in a Western European context, political advertising by numerous parties was relevant to our context. However, we decided to focus on two distinct parties (and their corresponding ads) that are positioned on the opposite ends of the political spectrum: the Austrian Green Party (designated left wing) and the Austrian Freedom Party (designated right wing). Our experimental design resembled the placement of political ads in the streets, with several posters placed next to each other. As people walk by, they quickly look at those advertisements for a couple of seconds. During this time frame, they can hardly process the full information displayed on the posters, as it is rather unlikely that people stop walking and start reading until every ad's content is fully understood (although this does happen, occasionally; see Lessinger, Moke, & Holtz-Bacha, 2003). By contrast, posters are often processed in passing without people investing much cognitive energy.

Our design allowed us to test selective exposure at a very basic level—the level of fixations in eye movements. Using an experimental paradigm and based on selective exposure research, we assumed that people who are left-leaning in their political ideology and who identify/sympathize with the Austrian Green Party would attend selectively to its poster ads. Reversely, people high in left-wing political ideology would expose themselves less to political posters by the right-wing Austrian Freedom Party. This led to our two hypotheses:

H1: Left-wing political predisposition positively affects selective exposure to left-wing political advertisements.

H2: Left-wing political predisposition negatively affects selective exposure to right-wing political advertisements.

Method

We employed a within-subject experimental study encompassing a short survey as well as the recording of eye movements while viewing political posters by the Austrian Green Party (left wing) and Freedom Party (right wing). Participants for the study (N = 57; 56% female; M_{age} = 31.33 years, SD = 10.21, range = 19–66 years; 49% without a university degree) were asked to attend individual data recording sessions in a laboratory at a large Austrian university; they did not receive any incentives for participating. They were recruited via personal networks and invited on the basis of political predispositions to balance the sample in terms of left- and right-wing political ideology. Because recruitment of right-leaning participants was comparably difficult, potential individuals were additionally addressed via party headquarters, student fraternities, and related community groups.

Stimuli and Procedure

The study used political posters from the Green Party and Freedom Party during the 2013 Austrian national election campaign (Election day September 29). Data collection lasted a week at the end of November 2013. The stimuli were similar in terms of format, major slogan, depiction of the party leader (Eva Glawischnig and Heinz-Christian Strache, respectively), and the party's logo (see Figures 1 and 2).

Up to one week before the study took place, participants answered a short questionnaire assessing their political ideology. A few subjects answered the survey at the laboratory shortly before starting the session, as they had not done so in advance. After arriving at the lab, participants were seated in front of the stationary eye tracker, where the investigator explained the procedure. Data collection started after an initial calibration phase; participants were advised to look at the ads on the monitor on the basis of their own interests: "Imagine you're walking down a street and pass by these ads on a billboard. . . ." No task was given to them for the course of the stimuli presentation. Individuals were aware that their eye movements were recorded, but they were advised to act as they would normally in the described situation. After an example ad for the purpose of making participants familiar with the device, the target ads were shown on the screen. Participants were told that, at any time during

recording, they could revoke their consent for participation, for example, if they felt uncomfortable with the procedure. However, this was not necessary.

Figure 1. The six poster ads by the Austrian Green Party used as stimuli in the experimental design (from top to bottom, left to right: Posters 1–6). Copyright: Austrian Green Party.

Participants saw a total of 12 different target posters (six left wing, six right wing; see Figures 1 and 2) taken from the national election campaign in 2013. Two ads—one of each party—simultaneously appeared on the screen, and participants were presented with six different dyads (within-subject factor) in random order, with Poster 1 by the Green Party always shown next to Poster 1 by the Freedom Party and so on. The two ads were set up on the left and right side of the screen and separated by a narrow bar of blank space; their left or right position was randomized and later statistically controlled for. In addition, the upper and lower portions of the screen were empty. Individual poster coverage thus varied between 25% and 26%, and an average of 48% of the screen remained empty (i.e., blank space).

Exposure time for each dyad was limited to 10 seconds. In their study on commercial poster ads, Maughan and colleagues (2007) displayed photographs of street scenes in which one poster ad was included for 5 seconds each. The average time awarded to political posters in passing is believed to range between 6 and 8 seconds for pedestrians and as few as 4 seconds for drivers (Lessinger et al., 2003). Our rather long time frame of 10 seconds was chosen because two ads were shown simultaneously, and subjects should be given enough time to read all slogans without being interrupted in processing.

Figure 2. The six poster ads by the Austrian Freedom Party used as stimuli in the experimental design (from top to bottom, left to right: Posters 1–6). Copyright: Austrian Freedom Party.

Poster presentation (left/right position on the screen) was inverted in two experimental groups to control for effects with regard to the ads' arrangement, and was later included as a control. In between the dyads, participants were shown a blank screen with a centered fixation cross for 3 seconds so as to not confound the gaze direction with fixation of the last advertisement. Presentation order of the relevant stimuli was randomized within groups, and distractor ads were randomly inserted in between the parties' posters. The distractors (i.e., poster ads for products such as chocolate, bottled water, or detergent, a charity organization, and service providers) served to veil the purpose of the study, and their eye-tracking data were not analyzed. After the recording of eye movements, participants were thanked, debriefed, and dismissed. For data analysis, survey and eye-tracking data were matched.

Measures

In addition to age and gender, participants were required to state their formal education (50.9% university degree or equivalent). Identification with the relevant political parties was assessed by asking individuals how strongly (1 = *not at all*, 6 = *very strongly*) they identified with the Green Party (M = 3.54, SD = 1.63) and Freedom Party (M = 1.68, SD = 1.13). Because all of the ads shown during the experiment pictured the respective party leader as well, we also asked participants for their liking of the politicians (1 = *do not like her/him at all*, 6 = *like her/him a lot*); individuals clearly favored the Green Party's chairwoman (M = 3.36, SD = 1.41) over the Freedom Party's leader (M = 1.77, SD = 1.17). For the subsequent analyses, two steps were taken in computing the final predictor: First, party identification and politicians' evaluation were summarized into two indices for each party (mean average of party identification and candidate liking), resulting in overall left-wing orientation (M = 3.44, SD = 1.43, α = .85) and overall right-wing orientation (M = 1.73, SD = 1.09, α = .89). The two indices were moderately

negatively correlated (r = −.35, p = .01), but a test for multicollinearity was negative (tolerance = 1.0, variance inflation factor = 1.0). However, to increase the variance for the predictor, we calculated a difference score: We subtracted overall right-wing orientation from overall left-wing orientation (left – right), with higher and positive values (maximum +6.5) indicating a more left-leaning as opposed to right-leaning (maximum –6.5) political orientation. The resulting score of general political ideology (M = 1.67, SD = 2.08, range = –4.0 to +4.5) shows that our sample was slightly more left-leaning in general. Yet, in contrast to the singular predictors for both ideological orientations, the mean indicates enough variance to estimate the effects of right- and left-wing political orientation. Participants were also asked for their agreement on a number of issue-specific statements. Because these items are not relevant for the scope of this article, their results are not addressed in the subsequent analysis.

The eye-tracking data were obtained with a stationary SMI iView X RED eye tracker, with each full poster defined as one area of interest. Eye positions were sampled at 120 Hz. As our dependent variable, participants' exposure to the political poster advertisements was operationalized as the total amount of time devoted to each individual ad in milliseconds (i.e., the fixation duration/time for each party's ads in the dyads; see Tables 1 and 2). Fixation time is an established and direct measure for exposure in eye-tracking research (e.g., Jansen et al., 2005), and participants in our study looked at ads by the Green Party for an average of 4.364 seconds (SD = 0.926), and spent an average 3.734 seconds (SD = 0.977) fixating the Freedom Party ads. Fixation time for the Green Party and Freedom Party ads was negatively correlated, ranging from $r(57)$ = −.53, p < .01, to $r(57)$ = −.69, p = .01, for the six dyads. However, of 10 seconds viewing time in total, subjects in our study also spent an average of M = 1.91 seconds fixating neither poster, which is to say that the 48% of blank space on the screen accounted for roughly 20% of fixations. Given that individuals actually did expose themselves to the neutral space, analysis for the ads is executed separately, as fixations did not necessarily center on either political ad.

Results

In our first hypothesis, we assumed that overall left-wing political orientation would positively affect fixation time for ads by the Green Party. To control for differences in the designs of the posters that could have an impact on eye movements, we estimated a repeated-measure analysis of covariance. Fixation time of the six Green Party posters was included as the within-subject factor, and ad positioning (left side–right sight), age, gender, education, and political orientation were entered as covariates. Regarding the within-subject factor, we did not find significant effects for the different levels, indicating that the six designs of the Green Party posters did not affect fixation time in different ways, $F(5, 240)$ = 0.57, p = .72, partial η^2 = .01 (see Table 1). In contrast, and supporting our first hypothesis, general political ideology was a significant and strong predictor for fixation time on the Green Party ads, $F(1, 48)$ = 9.35, p = .004, partial η^2 = .16. Importantly, we did not find an interaction effect of the within-subject factor and political identification, $F(1, 48)$ = 1.32, p = .257, partial η^2 = .03, which is to say that the impact of political orientation did not vary for the individual posters. None of the other covariates exerted a relevant impact (see Table 1).

Table 1. Repeated-Measure One-Way Analysis of Covariance of Fixation Time (milliseconds) for Ads by the Green Party.

Variable	*df*	*F*	Partial η^2	*p*
Green Party ads (RM)	5	0.57	.01	.72
Ad positioning	1	0.79	.02	.38
Gender	1	0.25	.01	.62
Age	1	0.25	.01	.62
Education	1	0.03	.00	.86
Political orientation	1	9.35	.16	.00

Note. RM = repeated-measure factor (party posters).

Hypothesis 2 stated that overall right-wing political orientation would positively influence participants' fixation time of political ads by the Freedom Party (given that our relevant predictor ranged from right to left wing with increasing values). Again, we did not see an effect of the six different levels of the within-subject factor, $F(5, 240) = 0.34$, $p = .89$, partial $\eta^2 = .01$ (see Table 2), whereas overall political orientation had a significant impact on fixation time, $F(1, 48) = 5.25$, $p = .03$, partial $\eta^2 = .10$. No interaction effect of posters and political orientation could be found, $F(1, 48) = 0.338$, $p = .563$, partial $\eta^2 = .01$. Age positively affected exposure to right-wing poster ads, albeit not on a significant level, $F(1, 48) = 3.94$, $p = .053$, partial $\eta^2 = .08$. Neither gender nor education or ad positioning affected viewing time (see Table 2). Thus, H2 was supported as well.[1]

[1] Following a reviewer's suggestion, we also computed the same repeated-measure ANCOVAs including not one general political orientation score, but the two separate variables for left- and right-wing ideology, which allows us to draw (cautious) conclusions about the possible selective avoidance of opinion-incongruent advertisement content as well. For posters by the Green Party, in line with the reported results, a positive evaluation of the party and her leader strongly and positively affects fixation time ($F(1, 47) = 10.99$ $p = .002$, partial $\eta^2 = .19$), but supporters of the Freedom Party do not selectively avoid the green content ($F(1, 47) = .08$, $p = .78$, partial $\eta^2 = .002$). Subjects in favor of the Freedom Party spend more time looking at their 'own' ads ($F(1, 47) = .1.32$, $p = .26$, partial $\eta^2 = .03$), but individuals supporting the Green Party do not avoid fixation the Freedom Party's ads $F(1, 47) = 2.53$ $p = .118$, partial $\eta^2 = .05$). However, note that the effects for the Freedom Party's posters are not significant, most likely due to the small sample size of right-wing-oriented individuals in our sample and accompanying small variance. We therefore refrain from making explicit claims about actual selective avoidance processes here.

Table 2. Repeated-Measure One-Way Analysis of Covariance of Fixation Time (milliseconds) for Ads by the Freedom Party.

Variable	*df*	*F*	Partial η^2	*p*
Freedom Party ads (RM)	5	0.34	.01	.89
Ad positioning	1	1.41	.03	.24
Gender	1	0.96	.02	.33
Age	1	3.94	.08	.05
Education	1	0.00	.00	.95
Political orientation	1	5.25	.10	.03

Note. RM = repeated-measure factor (party posters).

The overall effects as tested in the repeated-measure analyses of covariance show that political orientation was the most relevant predictor of fixation time for both left- and right-wing political poster ads, but this procedure in analysis did not allow us to interpret the magnitude of effects in terms of changes in milliseconds. Therefore, we also estimated linear regression models, analyzing fixation time for the six different dyads as dependent on the aforementioned variables, with general political orientation remaining the relevant predictor (and higher values indicating a more left-leaning identification; data not shown). For the Green Party, the impact of political orientation on exposure to the poster ads ranged from $b = 82.725$ ($SE = 104.593$, *ns*, Dyad 1) to $b = 327.193$ ($SE = 91.136$, $p \leq .001$, Dyad 6; unstandardized coefficients represent milliseconds). For the Freedom Party, political orientation (right wing) affected fixation time for the party's ads in a range from $b = -74.865$ ($SE = 102.932$, *ns*, Dyad 5) to $b = -235.493$ ($SE = 103.675$, $p < .05$, Dyad 2). The negative sign for right-wing ads corresponds to the predictor's opposite poling, as lower values represent higher right-wing orientation. Across all six dyads, political orientation (left wing) positively and significantly affected selective exposure to ads by the Green Party ($b = 201.331$, $SE = 65.856$, $p < .01$), and, reversely, negatively affected selective exposure to ads by the right-wing Freedom Party ($b = -157.475$, $SE = 68.753$, $p < .05$).

Discussion

This study has documented effects of political predispositions on individuals' selective exposure to political poster advertisements. Using eye-tracking methodology to measure actual viewing behavior rather than (potentially biased) self-reports, we found participants' left-wing orientation to significantly predict exposure (i.e., fixation time) to political ads by the Green Party. In a reverse relationship, individuals' left-wing orientation negatively affected the amount of time spent looking at ads by the Freedom Party. Neither age, nor education, nor gender (significantly) predicted fixation duration on any of the posters. Whether a poster was displayed on the left or right side of the screen was also unrelated to fixation duration.

Our measurement of overall political orientation allows us to conclude that an individual's evaluation of the advertising party as well as its respective chairman or chairwoman influences selective exposure at the level of eye movements: People spend more time looking at political ads that are in line with their own political view. This study is the first to detect such selective exposure effects at a

comparably early level (i.e., with the regard to eye movements). Moreover, the difference in exposure time we detected here (i.e., 3.2 seconds in between the two extremes on the ideological scale) indicates that political orientation plays a large role in the process of selective exposure, accounting for about half of the time individuals usually dedicate to posters.

However, recent research has argued that people do not necessarily avoid other, inconsistent messages (Garrett, 2009) while attending to like-minded information. That is to say that although selective exposure does take place (and encompasses an important strategy to address the modern world's huge amount of information; e.g., Bennett & Iyengar, 2008), the occurrence of simultaneous selective avoidance should, at the very least, be questioned. Indeed, a study by Garrett and colleagues (2013; see also Garrett, 2009; Garrett & Stroud, 2014; Jang, 2014; Knobloch-Westerwick & Meng, 2009) showed that American voters who visited like-minded political websites did not by all means avoid cross-cutting online information. Rather, both behaviors were positively correlated in terms of frequency. Accordingly, selective exposure and selective avoidance should be treated as distinct phenomena (Garrett, 2009; Jang, 2014). We were not able to directly test selective avoidance processes in this study, and we are cautious in making any inferences in this regard. However, future research is strongly recommended to distinguish between exposure and avoidance effects. To do this, a more diverse sample in terms of political orientation would be necessary: As outlined above, we experienced difficulties in the recruiting of (admitted) right-leaning individuals, although our sample offered a large enough range to distinguish left- from right-leaning participants by use of the difference score. We argue, however, that open support for the Austrian Freedom Party's positions (e.g., in terms of migration) still may be susceptible to a social-desirability effect, which made it difficult to recruit individuals for this study. For this reason, we strongly recommend that future studies on the selective exposure (and, possibly, avoidance) of political content use measurements of implicit attitudes in addition to explicitly asking individuals for their liking of the parties and leaders as well because they may add predictive value in the context of political behaviors such as voting, especially for undecided voters (e.g., Arcuri, Castelli, Galdi, Zogmaister, & Amadori, 2008). Although we were not able to implement such measurements here, they could prove useful when studying evaluations of political entities as a determinant of selective exposure to said content. To accurately address selective avoidance, it also would be necessary to present subjects with political stimuli next to unrelated (i.e., nonpolitical) ads to determine whether exposure and avoidance occur simultaneously.

In this study, we operationalized selective exposure to a political content by measuring participants' fixation times with regard to the poster ads, arguing that the time spent looking at poster ads is closely intertwined with content processing and precedes any possible effects. Yet, it should be noted that—in line with the processes encompassing selective exposure—eye movements are also at least in part guided by comparably pre-attentive and less conscious perceptions: During a very short period of time, people are able to gain a first impression as well as a general overview of a stimulus presented to them, without (yet) actively attending to the content. It is possible that individuals in our study switched back and forth between the two ads in each dyad simply to scan the content, identify or compare the respective positions, and make themselves familiar with the ads. However, research suggests that as little as 100 milliseconds are enough for individuals to get a general impression of a novel stimulus (Higgins et al., 2014). Moreover, work by Bar, Neta, and Linz (2006) showed that individuals are able to make

judgments about peoples' (threatening) facial expressions after only a brief exposure time of less than 40 milliseconds. Along similar lines, Ballew and Todorov (2007) proved that exposure to politicians' faces for 100 milliseconds is sufficient for individuals to form a judgment that would later predict election outcomes. Importantly, individuals need to at least briefly identify the context of a stimulus for a relevant self-concept to be activated (Knobloch-Westerwick, 2015). To account for such an orientation phase, we reran our analysis for the regressions, but deducted the first 100 milliseconds of exposure time in each dyad. No significant changes were detected with regard to our predicting variables: Left-wing political ideology still positively and significantly (b = 199.126, p < .01) affected overall fixation time on the Green Party ads, and negatively influenced exposure to the Freedom Party ads (b = −107.697, p = .078). These results give strong support to our claim that, after allowing participants to gain a first short overview, they were able to distinguish the presented parties and, accordingly, engage in active selective exposure behavior based on the activation of their political self-concept. Given the long exposure time of 10 seconds, we deem it unlikely that all of this time was devoted to gaining an overview of the presented positions only. Because exposure time was held constant across dyads and conditions, effects with regard to any pre-attentive orientation phase should also be invariable for all participants and posters. However, in our point of view, the aforementioned distinction between (selective) attention and exposure deserves closer scholarly attention. Future studies should therefore aim to measure study participants' depth of processing of a given message dependent on viewing time to better understand which phase of the selective exposure process is adjudged to orientation or initial attention before message processing begins.

Limitations and Future Research

As has been stated before, future investigations should aim to recruit a larger share of right-wing supporters. Alternatively, this research should be extended to parties from the moderate political spectrum. To test for processes of avoidance as well, future studies should not only contrast political information by two opposing parties but should also include neutral content. Such a design would allow for investigators to distinguish between the active exposure to like-minded and avoidance of incongruent information at the same time. Furthermore, the findings reported here need to be replicated for other countries with different party systems and in the context of other types of political advertisements. We used classic political poster ads with a party head and a simple slogan; however, political ads can differ in many aspects, such as negativity, emotional content, use of visuals, and so on. We aimed to present equal posters from two different but opposing parties that were similar in their visual design. As shown in the repeated-measure analysis, differences between the posters displayed in each dyad did not affect participants' viewing behavior. Yet, we encourage future studies to further examine the possibility that content-related differences in the ads affect fixation time, for example, with regard to the party leaders' genders, the size of slogans, or coloring. Of course, it also would be worthwhile to extend this research to other media, such as websites or newspaper advertisements: We argued that the specific characteristics of political poster advertisements provide an excellent opportunity to study selective exposure at the level of eye movements, as individuals only briefly encounter them in passing and hardly avoid them. However, these features can also be found in other content, not least commercial advertising or public communication campaigns (e.g., Pease, Brannon, & Pilling, 2006). Whether or not people actively expose themselves to such content as well, depending on the relevant self-concept that gets activated, warrants further research.

We operationalized eye movements as an indicator of selective exposure as the outcome variable in our design, which is to say that we did not aim to identify possible effects of fixation duration. Nevertheless, the outcomes of selective exposure processes may be versatile and deserve closer scholarly attention, and we strongly encourage future studies to address such potential effects in connection with eye-movement data and political ads. Within other areas of research, fixation duration has been found to significantly affect individuals' evaluation of a presented target stimulus as well as subsequent choices and behaviors (e.g., Schotter et al., 2012), and similar links should be investigated for the field of political communication. Moreover, additional variables might influence selective exposure to political content, both mediating and moderating the effect of political orientation on the time spent looking at such ads: For example, although we controlled for subjects' age, gender, and educational level (and did, indeed, not find any significant effects with regard to these factors), research indicates that conservative and liberal voters differ in their cognitive styles and brain activities (e.g., Garrett & Stroud, 2014; Schreiber et al., 2013). It was beyond the scope of this study to further address such variables, yet they may provide important explanatory power in the context under question.

This being said, another important limitation warrants attention: Unarguably, presenting political poster ads on a computer screen does not fully compare with a real-world situation on the street. We tried to partly account for this problem by limiting exposure time and simultaneously presenting two ads at a time to simulate an actual election campaign. Eye-tracking data could be obtained from mobile devices as well (and participants thus be tested, e.g., while walking down a street), but this was beyond our capacity. Yet, in our point of view, collecting behavioral field data in the context of real campaigns opens a promising field for future studies.

Finally, we strongly encourage researchers to replicate the findings reported here, be it with similar or advanced designs, different types of media, or in other countries. Although we argue that selective exposure to like-minded (or incongruent) content can be successfully measured with the help of eye-tracking, our results are limited in their ability to be generalized to other contexts, and this claim should thus be further tested, refined, and extended. Such extensions also should aim at validating the measurement: In relying on research from other fields, we claim eye-tracking to be a valid method for studying selective exposure. However, we did not directly ask participants whether they (consciously) sought out the opposing parties' poster ads; neither did we employ additional scales or other, established measures that directly connect to selective exposure as addressed in communication science. More work is definitely required here.

Conclusion

Besides our substantive findings on selective exposure in the context of political advertising, we have made a methodological contribution to the literature by introducing eye-tracking methodology as a straightforward measure of selective exposure processes. We believe that eye-tracking may overcome the perceptual biases of self-reports frequently employed in this literature, and that—depending on the stimulus in question—it may capture selective exposure more accurately than other forms of behavioral measures. This is especially relevant when it comes to media content that does not require much time or resources, and that is therefore hard to address with conventional behavioral measures that have been

applied in selective exposure research before. We do not wish to suggest that the recording of eye movements may replace such measurements, but we do believe that it may complement our methodological array in this area of research. Eye-tracking can be applied for studying selective exposure for all kinds of media, such as political poster ads, newspaper articles, online banners, TV spots, or social media posts. Given the comparable costly and complex data collection process, it may not be suitable for all areas of research and for any underlying questions. Yet, selective exposure is not a static yes/no decision, but is a complex process that unfolds over time. People read, stop reading, allocate their attention to something else, and may return again. Ignoring this complexity may lead to wrong or misguided conclusions about processes that may affect a variety of outcomes in terms of attitudes and behavior. We therefore believe that selective exposure scholars should carefully consider the expediency of eye-tracking measurement. We hope that our study provides a preliminary effort on this very promising new avenue of selective exposure research.

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