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The Effects of Darkness and Lightness Cues in the Visual Depiction of Political Actors Involved in Scandals: An Experimental Study

Christian von Sikorski

Reports about political scandals have increased lately. Yet the general impact of news visuals and the specific role of lightness and darkness cues in images of scandalized politicians remain unclear. With the help of an experiment, the present pilot study examined the influence of candidate images and the effects of particular image backgrounds (light versus dark). While the foreground of the image depicting a politician involved in a scandal remained unchanged, the background was systematically altered. The results revealed that a light background had a positive effect on recipients’ attitudes toward the politician. In contrast, participants exposed to a dark image background demanded a more severe punishment for the politician.

Keywords: Lightness and Darkness Cues; Political Scandals; Visual Framing; Media Effects

Previous research shows that the media is increasingly reporting about political scandals (Allern, Kantola, Pollack, & Blach-Orsten, 2012; von Sikorski, 2017), which have been defined as “intense public communication about a real or imagined defect that is by consensus condemned, and that meets universal indignation or outrage” (Esser & Hartung, 2004, p. 1041). Previous examinations have extensively analyzed the effects of political scandals and how news reports about...
(alleged) norm transgressions affect citizens’ political evaluations and political behavior (e.g., von Sikorski, 2016; von Sikorski & Hänelt, 2016; von Sikorski, Knoll, & Matthes, 2017; Bowler & Karp, 2004; Kepplinger, Geiss, & Siebert, 2012; Kumlin & Essaiasson, 2012). However, these studies exclusively focused on the effects of textual information, while the potential influences of news visuals have been neglected (see Barnhurst & Quinn, 2012). Research in political communication has revealed that news images can be regarded as important framing devices (e.g., De Vreese, 2005; Entman, 2012) and can affect recipients’ opinion-forming processes (e.g., Arpan et al., 2006; Powell, Boomgaard, De Swert, & De Vreese, 2015). Visuals highlighting, e.g., specific facial appearances (Todorov, Mandisodza, Goren, & Hall, 2005) or particular colors or lighting (Lobinger & Brantner, 2015; Messaris & Abraham, 2001; Sullivan, 2015) can influence a recipient’s perception of political actors. Especially, specific lightness and darkness cues (e.g., light/dark image backgrounds) are regularly selected and used by journalists (Lobinger & Brantner, 2015) to depict politicians involved in scandals.

To analyze if and how news images of politicians involved in scandal affect news recipients and to examine the role of particular background colors and lighting, an experimental pilot study was conducted. The purpose of this study was threefold. First, it analyzed how an image depicting a politician (accused of corruption) against a dark (light) background affected a recipient’s attitude toward the political actor. Second, previous research showed that visual news reporting can affect news consumers’ attribution of responsibility (Ben-Porath & Shaker, 2010) and their demand for political action (Iyer & Oldmeadow, 2006). Furthermore, news reporting can influence recipients’ punishment preferences (Palazzolo & Roberto, 2011). Therefore, the present study also examined if a dark (light) background influenced a recipient’s demanded punishment (e.g., a prison sentence) for the politician. Third, it aimed at providing researchers with new insights that may be valuable for future projects in visual political communication.

**Visual Framing Effects**

In line with Entman (1993, 2012), visual news framing can be defined as the process by which specific (news) photos, and specific image details, are selected, thus making some information more salient and thereby promoting a particular problem definition, interpretation, moral evaluation, and/or treatment recommendation. According to Scheufele and Tewksbury (2007), applicability and accessibility effects—as psychological mechanisms underlying the framing effect—can be distinguished. It is assumed that salient (visual) information of a media message is rendered more applicable (framing effect) and that the activation of certain aspects of a media message—at the same time—increases the accessibility of particular information (accessibility effect).

Previous research showed that particular news images may elicit considerable news framing effects. Arpan et al. (2006) examined the influence of conflict-laden news photos in connection with social protests. Their results revealed that recipients
evaluated the depicted protest and the protestors more negatively when they were interested in the issue and when they were exposed to the news story accompanied by a conflict-laden news photo (compared to a more peaceful photo). Furthermore, exposure to visuals of victims in an ongoing conflict changed a recipient’s demand for a political reaction (Iyer & Oldmeadow, 2006), and specific news images of Hurricane Katrina victims affected recipients’ attribution of responsibility and their perceived accountability of the U.S. government (Ben-Porath & Shaker, 2010). Moreover, news visuals may activate (negative) stereotypes, and specific visual cues depicted in the background of a news photo can influence recipients’ evaluations (von Sikorski, Schierl, Möller, & Oberhäuser, 2012; Wittenbrink, Judd, & Park, 2001). Specifically, Wittenbrink et al. (2001) showed that negative context cues (photo background showing a street corner with a graffiti-covered wall) compared to positive context cues (photo background showing a Baptist church interior) presented in the image background significantly affected a recipient’s evaluation of a depicted person (African American) in a negative way. Thus, the identical person may be judged differently depending on the respective communicative context (established via the photo background).

Effects of Darkness and Lightness

In many cultures, white or brightness is positively connoted, while black or darkness is negatively connoted (Frank & Gilovich, 1988; Meier, Robinson, & Clore, 2004; Smith-McLallen, Johnson, Dovidio, & Pearson, 2006; Sullivan, 2015). From an evolutionary perspective, these associations are deeply ingrained in the human makeup, and fears are connected to darkness, the night, the unknown, and the unseen and are dissolved by the sun, brightness, and light (Mead & Baldwin, 1971). Meier et al. (2004) exposed participants to words via a computer screen and demonstrated that people were faster and more accurate in categorizing positive words when presented in white font compared to black font. According to the authors, the results thus revealed that individuals automatically perceive light objects to be good and dark objects to be bad. Furthermore, Frank and Gilovich (1988) showed that participants perceived black uniforms of American sport teams (NFL, NHL) more negatively and malevolent compared to nonblack uniforms. Sullivan (2015) exposed participants to images of an open book depicted against dark and light backgrounds and showed that people were less likely to assess the depicted book “to be a work of genius” when the book was depicted against a dark background.

Attitudes Toward Politicians Involved in Scandals

Based on these previous research results, it was expected that implicit darkness and implicit lightness cues may be regarded as relevant visual context cues that may
influence a recipient’s evaluation of a politician involved in a scandal. Accordingly, the following hypotheses are proposed:

\textbf{H1a}: Participants exposed to an image showing a politician involved in a scandal against a dark background will evaluate the politician more negatively compared to participants exposed to a control condition (no image).

\textbf{H1b}: Participants exposed to an image showing a politician involved in a scandal against a light background will evaluate the politician more positively compared to participants exposed to a control condition (no image).

\textbf{H1c}: Participants exposed to an image showing a politician involved in a scandal against a light background will evaluate the politician more positively compared to participants exposed to a picture showing the politician against a dark background.

\textbf{Demanded Punishment}

Past research revealed that news visuals may affect an individual’s attribution of responsibility (Ben-Porath & Shaker, 2010) and may change a recipient’s demand for certain political actions (Iyer & Oldmeadow, 2006). Furthermore, it has shown that particular media representations can affect recipients’ punishment preferences (Palazzolo & Roberto, 2011; Stalans, 1993). For example, exposure to negative media reports (crime news stories) increased a media recipient’s demand for a more severe punishment, e.g., prison sentence (Stalans, 1993). Furthermore, a relationship between an “unethical deed” and perceived darkness has been demonstrated in psychological research (Banerjee, Chatterjee, & Sinha, 2012). In line with our earlier reasoning, and based on past research results consistently revealing negative effects of available darkness cues (Frank & Gilovich, 1988; Sullivan, 2015), the following hypotheses (H2a–H2c) were formulated:

\textbf{H2a}: Participants exposed to an image showing a politician involved in a scandal against a dark background will demand a more severe punishment for the politician compared to participants exposed to a control condition (no image).

\textbf{H2b}: Participants exposed to an image showing a politician involved in a scandal against a light background will demand a less severe punishment for the politician compared to participants exposed to a control condition (no image).

\textbf{H2c}: Participants exposed to an image showing a politician involved in a scandal against a light background will demand a less severe punishment for the politician compared to participants exposed to a picture showing the politician against a dark background.

\textbf{Method}

\textit{Participants and Procedure}

An experiment (between-subjects design) with 78 participants (German students, age \(M = 22.5\) years; \(SD = 2.67\), 37.2\% female) was conducted. A power analysis (G*Power)
revealed that the sample size was adequate to test for respective effects and that a potential Type II error thus was not an issue in the present study. The participants were randomly assigned to one of three groups (see following details) and subsequently completed a questionnaire and were then informed about the true nature of the experiment.

**Stimulus Materials**

Similar to previous research (e.g., Domke, Perlmutter, & Spratt, 2002), a bogus news article served as a text stimulus. The article described an emerging scandal in which the mayor of a city in southern Germany was accused of (allegedly) being involved in a corruption scandal. The case was depicted in a neutral manner and—typical for an emerging scandal—it was stated that investigators were still examining the case and that the factual situation remained unclear. Participants were informed that the article was previously published on the Web site of sued.deutsche.de, a leading German quality news outlet. All participants were exposed to the identical textual information. However, the visual information was systematically altered (Figure 1). Group 1 participants ($n = 25$) were exposed to the article in combination with an image depicting the politician against a dark background. Group 2 participants were exposed to the identical photo depicting the politician against a light background ($n = 28$). Group 3 served as the control condition (news article without a visual, $n = 25$).

![Figure 1](image.png)

**Figure 1** Experimental stimuli. News article depicting the politician against a light (left) and dark (right) background. Control condition without a visual (middle).
Measurement

Attitudes toward the politician

Five items (Frey, 1999) were used—competent–incompetent; likeable–not likeable; honest–dishonest; fair–unfair; modest–arrogant—and rated on a scale from 1 (very negative) to 7 (very positive). Cronbach’s α = .72; factor analysis (maximum likelihood) with oblique rotation (direct oblimin) suggested a one-factor solution, and the Kaiser-Meyer-Olkin measure verified the adequacy of this sampling for the analysis (KMO > .65) and combined to an attitudinal index (M = 3.54, SD = .77).

Demanded punishment

Based on previously used single-item measures regarding individuals’ punishment preferences (e.g., Palazzolo & Roberto, 2011; Stalans, 1993), participants were asked to rate the following statement: “The usual punishment for corruption as in the current case ranges from a financial penalty to a prison sentence of three years. Should the politician be proven guilty, how severely should he be punished in your opinion?” on a scale from 1 (not severely [a financial penalty]) to 7 (severely [prison sentence of three years]), M = 3.05, SD = 1.52.

Control Variable: Prior Attitudes

Individuals’ prior attitudes have proven to be important in studies on political scandals (Bowler & Karp, 2004) and visual framing effects (Arpan et al., 2006). Therefore, participants rated the following prior attitude item—“How would you describe your attitudes toward German politicians in general?”—on a scale from 1 (very negative) to 7 (very positive; M = 3.95, SD = 1.33).

Manipulation Check

All participants assigned to the two experimental conditions reported that they had detected a visual (none in the control condition did). Furthermore, dark background participants (M = 3.76, SD = 1.64) perceived the image background to be significantly darker compared to light background participants (M = 6.04, SD = .94), t(50) = −6.08, p < .001, Cohen’s d = 1.78. Moreover, dark background participants (M = 4.00, SD = 1.44) compared with light background participants (M = 4.93, SD = 1.49) perceived the depiction of the politician to be significantly less favorable, t (50) = −2.27, p = .027, Cohen’s d = .65. Additionally, the correlation of the two aforementioned variables was examined (bias corrected and accelerated bootstrap 95% CIs are reported in square brackets). Perceived darkness/lightness of the image background was significantly correlated with perceived favorability, r = .51 [.297, .711], p < .001, suggesting a successful manipulation.
Results

To test H1a–H1c, an univariate analysis of covariance (ANOVA) with the condition as the factor and the participants’ attitudes toward the politician as the dependent variable was conducted.² The analysis showed a significant main effect for the condition, $F_{(2,74)} = 5.16, p = .012, \eta^2_{\text{part}} = .113$. Post hoc tests (Bonferroni) revealed that the participants’ attitudes toward the politician were significantly ($p = .009$) more positive with the light background condition ($M = 3.84, SD = .14$) compared with the control condition ($M = 3.22, SD = .15$). No significant differences could be detected between the dark background condition ($M = 3.51, SD = .15$) and the control condition ($p = .513$) and between the two experimental conditions ($p = .320$). Thus, H1a (effects of dark background) and H1c (differences between experimental groups) were not supported. However, H1b (effects of light background) received support. Furthermore, an ANOVA was conducted (the condition served as the factor, demanded punishment as the dependent variable) to test H2a–H2c.³ The analysis revealed a significant effect for the condition, $F_{(2,74)} = 5.73, p = .005, \eta^2_{\text{part}} = .137$. Post hoc tests (Bonferroni) showed that participants exposed to the dark background condition ($M = 3.68, SD = 1.46$) demanded a significantly more severe punishment for the politician ($p = .006$) compared to participants exposed to the control condition ($M = 2.28, SD = 1.08$). No significant differences could be detected between the light background condition ($M = 3.11, SD = 1.62$) and the control condition ($p = .161$) and between the two experimental conditions ($p = .485$). Therefore, H2a (effects of dark background) was supported. However, H2b (effects of light background) and H2c (differences between experimental groups) could not be supported.

Discussion

The results of the present study show that light (positive) and dark (negative) image backgrounds influenced a recipient’s perception and evaluation of the politician. Thus, the results of the current study corroborate and extend previous research (e.g., Arpan et al., 2006; Ben-Porath & Shaker, 2010; Sullivan, 2015). However, not all of the hypotheses were supported. While the dark image background resulted in a negative effect regarding a recipient’s demanded punishment, it did not influence an individual’s attitudes toward the politician. In contrast, recipients exposed to the light background condition evaluated the politician more positively but were not affected regarding their punishment preferences. Furthermore, no significant group differences could be detected between the two experimental conditions. Initially, the results show that integrating a portrait image of the politician (by trend) improved recipients’ attitudes toward him. This is in line with previous research (Grabe & Bucy, 2009). It is possible that a portrait image of the actor depicting him against a light background—due to the positive associations connected to light colors (Smith-McLallen et al., 2006)—improved recipients’ evaluations by implicitly offering them with a rather new perspective contrasting the negative textual information and accusations brought up against the politician in the news article. This assumption is supported by the result of the manipulation check showing that participants perceived the light background image version as significantly more favorable compared with the dark
background condition. The more favorable depiction of the politician then obviously improved the participants’ attitudes toward him. In contrast, the dark background condition did neither result in positive effects nor—as one may argue—was this darkness frame strong enough to cancel out the rather positive portrait image effects.

The effects regarding the recipients’ demanded punishment for the politician may be explained in a slightly different way. To begin with, recipients exposed to a news photo (by trend) tended to demand a more severe punishment compared to recipients who read the news story without an image. This supports previous findings by Ben-Porath and Shaker (2010). However—in line with the aforementioned argumentation—it is possible that a light image frame was not strong enough to significantly decrease a participant’s punishment preferences compared with participants in the control condition.

Finally, it may be argued that the present results were generated under rather conservative conditions because journalists tend to select darkness frames that are even more unambiguous and extensive compared to the light or dark backgrounds used in the present study (see Lobinger & Brantner, 2015). News images consisting of more pronounced darkness or lightness cues may trigger even stronger effects than the visuals used in the present study. This may especially be true when dark image backgrounds are combined with other visual cues, e.g., negative facial displays and or unfavorable camera angles. Thus, this pilot study offers several meaningful new avenues and starting points for future research.

Limitations and Conclusion

There are noteworthy limitations of this pilot study. First, a student sample was used. Future studies should employ different samples (e.g., older, less-educated participants). Second, a specific scandal (corruption) was used, and it remains unclear if the present results can be generalized for other types of scandals (e.g., sex scandals). Third, a particular type of imagery (portrait picture) was examined, and future studies should analyze different types of images, e.g., with varying field sizes.

In summary, the present pilot study reveals that lightness or darkness cues can be regarded as relevant context cues in mediated scandals. Thus, news images do not (only) serve decorative functions but can systematically influence a recipient’s evaluations. Based on the present results, journalists as well as recipients need to be aware that certain forms of visually representing politicians accused of wrongdoing may result in relevant influences and the fact “that the audience falls short of a comprehensive view of the issue or person” (Lobinger & Brantner, 2015, p. 35).

Notes

[1] Based on the factor analysis, one item—compassionate–cold—was dropped because it did not load on the factor examined.

[2] An additional analysis (ANCOVA) with participants’ prior attitudes as the covariate showed no significant effect, $F_{(1, 74)} = .05, p = .473, \eta^2_{\text{part}} = .007$, and no respective interaction effect, $F_{(2, 74)} = .52, p = .118, \eta^2_{\text{part}} = .013$. 

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An additional analysis (ANCOVA) with participants’ prior attitudes as the covariate showed no significant effect, $F_{(1, 74)} = .124, p = .726, \eta^2_{\text{part}} = .002$, and no respective interaction effect, $F_{(2, 74)} = 1.89, p = .158, \eta^2_{\text{part}} = .052$.

References


