

## Effects of Long-Term Exposure to News Stereotypes on Implicit and Explicit Attitudes

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A substantial body of research suggests that some news media outlets depict certain social groups stereotypically. We hypothesize that long-term exposure to such news influences viewers' automatically activated gut feelings (i.e., implicit attitudes) toward this social group, which, in turn, may be used as a basis for overtly expressed evaluations (i.e., explicit attitudes). This prediction was investigated in three empirical studies in two cultural contexts. In the United States and Austria, results suggest that regular exposure to stereotypical news coverage creates negative implicit attitudes, which, in turn, alter explicit attitudes. A better understanding of the news stereotype effects will allow us to develop strategies to reduce prejudice, which may contribute to the improvement of a humane and open society.

*Keywords: implicit attitudes, newspapers, local news, media stereotypes*

Kaspar Stieler (1632–1707) was one of the first scholars to consider the effects of exposure to the news media. He argued that one of the most crucial consequences of exposure to newspapers is that individuals can “investigate the world” (Stieler, 1695/1969, p. 44) through reading, thereby learning facts about social reality. Modern mass communication research has shown that these mediated “facts” often rely on stereotypes and that, more importantly, long-term exposure to such content can lead to the development of stereotypic memory traces, which, in turn, can influence individuals' thoughts, feelings, and behaviors (Mastro, 2009).

Stereotypic media content can influence overtly expressed evaluations toward social groups (for an overview, see Mastro, 2009). These overtly expressed evaluations are called *explicit attitudes* (Gawronski & Bodenhausen, 2006) and are measured by traditional self-report procedures. This type of explicit measurement can be confounded by factors such as self-presentational concerns or social desirability bias (Greenwald, McGhee, & Schwartz, 1998). In fact, it has been shown that a difference

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often exists between deep-seated emotional antipathies toward minority groups and modern egalitarian values such as the goal to appear unprejudiced (Gawronski, Peters, Brochu, & Strack, 2008). In other words, even if individuals have negative automatic gut feelings toward a specific social group, they may suppress them and express a more favorable explicit attitude judgment (Devine, 1989). Such automatically evoked gut reactions are called *implicit attitudes* (Gawronski & Bodenhausen, 2006) and can be measured with newly developed procedures (Uhlmann, Leavitt, Menges, Koopman, Howe, & Johnson, 2012).

The present research examines the long-term consequences of exposure to stereotypic news coverage on explicit attitudes and, especially, implicit attitudes. The consideration of news stereotype effects on implicit attitudes, including their interplay with explicit attitudes, is important for at least three reasons. First, implicit attitudes are often better at predicting spontaneous behaviors than traditional explicit self-report measures (Frieze, Hofmann, & Schmitt, 2008). Because automaticity pervades everyday life (Bargh, 1997), implicit attitudes may be especially important for the prediction of how we interact with out-group members. Second, considering implicit attitudes and their interplay with explicit attitudes allows for the investigation of media stereotyping's underlying mechanisms. Knowing such mechanisms can facilitate the development of strategies to reduce audience- and media-based prejudice (Ramasubramanian, 2007). Third, the consideration has enormous theoretical value. Given that during the last two decades, "virtually every intellectual question in social psychology" (Payne & Gawronski, 2010, p. 1) has been shaped by the theories and methods of implicit social cognition, it is surprising that little research has examined news stereotype effects on implicit attitudes. The scant research that does exist generally suggests that implicit measures may reveal (detrimental) media effects on individuals that otherwise would have been hidden had only explicit measures been used (e.g., Arendt, 2012).

This article first reviews the relevant research regarding implicit and explicit attitudes, because a thorough understanding of these two concepts is a prerequisite for the development of specific hypotheses regarding news effects. Next, we will discuss content analytic evidence that supports the idea that specific social minority groups are overrepresented as criminals in news coverage in several countries. We argue that long-term exposure to the news stereotype of minority groups as criminals has consequences on implicit and explicit attitudes. Finally, we present three studies, conducted in the United States and Austria, which test the predictions.

### **Implicit and Explicit Attitudes**

Several relevant theories address implicit and explicit attitudes, including the *associative propositional evaluation model* (Gawronski & Bodenhausen, 2006), the *unified theory* (Greenwald et al., 2002), the *MODE model* (Olson & Fazio, 2009), and the *meta-cognitive model* (Petty, Briñol, & DeMarree, 2007). All models focus on different issues such as attitude-behavior relationships (Olson and Fazio), the interplay of stereotypes, attitudes, self-esteem, and self-concept (Greenwald et al.), and the implications for attitude ambivalence, measurement, change, and strength (Petty et al.). The *associative propositional evaluation model* focuses on the interplay of implicit and explicit attitudes and how environmental input stimuli may affect them. Thus, this model fits perfectly with the needs of the present research and has

been used in previous media stereotyping research (see Arendt, 2013). Nevertheless, it should be noted that all four models are consistent with our hypotheses.

According to Gawronski and Bodenhausen (2006), implicit and explicit attitudes are indicative of two distinct mental processes. Whereas implicit attitudes are the outcomes of associative processes, explicit attitudes represent the outcomes of propositional processes. Implicit and explicit attitudes will be discussed in the context of these two constitutive processes.

Associative processes are defined as the *automatic activation* of mental associations in memory. Thus, implicit attitudes are interpreted as "automatic affective reactions resulting from the particular associations that are activated automatically when a person encounters a relevant stimulus" (Gawronski & Bodenhausen, 2006, p. 697). This process does not require much cognitive capacity or an intention to evaluate an object. Associations can be activated irrespective of whether a person considers these evaluations as accurate or inaccurate. Most important, specific associations, which get activated when encountering a social stimulus, are the basis on which automatic affective reactions are built.

For example, viewing local television news about a crime committed by an African American (news stereotype) may activate specific concepts in memory related to the "Black criminal" stereotype (Dixon & Maddox, 2005). It is assumed that the association between concepts is strengthened by simultaneous activation of both concepts. Thus, if *African American* and *criminal* are activated simultaneously, the strength of the automatic association between these concepts will increase. The strength of the automatic association can be understood as the potential for one concept (e.g., African American) to activate another (e.g., criminal; see Greenwald et al., 2002). The consequence is that, when a corresponding social stimulus is encountered in a subsequent situation, cues (e.g., skin color) that activate *African American* in memory will also activate *criminal* with an increased likelihood due to the increased strength of the automatic association (see Arendt, 2012). As a consequence, a person who has negatively valenced attributes associated to a group concept will have more negative implicit attitudes toward this social group (or a member of this social group) compared to a person who has more positive associations (Park, Felix, & Lee, 2007).

In contrast, propositional processes are defined as the *validation* of automatic affective reactions and are superordinate to associative processes (Gawronski & Bodenhausen, 2006). Their outcome is explicit attitudes, and it is assumed that automatic affective reactions are transformed into propositional format. This creates declarative knowledge by applying a relational schema (e.g., a strong negative automatic gut reaction toward African Americans may be transformed into the proposition "I don't like African Americans"). The resulting propositions are then subject to syllogistic inferences that assess their validity. The crucial point, according to Gawronski and Bodenhausen, is that the perceived validity of a proposition depends on the consistency of this proposition with other propositions that are momentarily considered. Thus, if other propositions (e.g., the goal to appear nonprejudiced) are in conflict with the propositional implication of the automatic affective reaction (e.g., "I don't like African Americans"), the inconsistency must be resolved to avoid aversive feelings of cognitive dissonance (Festinger, 1957). This, for example, can be done by reversing the subjective truth value of the propositional implication of the implicit attitude. For instance, the negative automatic gut reactions that result in the propositional

implication "I don't like African Americans" can be changed into the proposition "I like African Americans." This restores a state of cognitive consistency.

Therefore, explicit attitudes are overtly expressed judgments that are dependent on an individual's willingness to express the content of her thinking. A negative gut feeling toward a member of a specific social group may get automatically evoked when encountering this person. However, the individual can decide not to use her gut feeling as a basis for her explicit attitude judgment (Devine, 1989).

Both attitude concepts are important from a societal perspective when considering detrimental behavioral effects (Frieze et al., 2008). It has been shown that implicit measures primarily predict behavior under conditions of low motivation and opportunity to control, whereas explicit measures predict more controlled behaviors. Investigating media effects regarding both concepts is important from the perspective of a humane and open society. If media stereotypes have detrimental effects on implicit attitudes, then media content may presumably influence more impulsive behaviors such as social interactions with target group members in everyday life (see Bargh, 1997). Furthermore, if media stereotypes also influence explicit attitudes, they may additionally alter more controlled behaviors (see Nosek, Graham, & Hawkins, 2010). Nevertheless, even behaviors traditionally perceived as highly controlled (e.g., voting) can be predicted by implicit attitudes (Galdi, Arcuri, & Gawronski, 2008). In sum, media effects on both attitude concepts can have important behavioral consequences.

### **News Stereotypes and Their Effects on Implicit Attitudes**

#### ***Stereotypic Crime Coverage***

Content analyses have shown that some news media outlets overrepresent specific social groups as criminals. In the United States, a long line of research has demonstrated that, in local television news, African Americans are more likely to be depicted as criminals than Whites (Dixon & Linz, 2000a), are more likely to be discussed with prejudicial information (Dixon & Linz, 2002), and are shown at a rate inconsistent with real-world statistics (Dixon & Linz, 2000b). In Austria, the social category "foreigners" is overrepresented as criminals (Arendt, 2010) much in the same way as African Americans are in the United States on local television news. However, this was found to be the case in a highly circulated tabloid-style daily newspaper (around 3 million readers in a country with 8 million inhabitants). It is important to note that the overrepresentation of minority groups as criminals has been documented in other countries as well (see Vergeer, Lubbers, & Scheepers, 2000). The repeated pairing of a minority group with negative attributes such as "criminal" or "dangerous" may strengthen cognitive associations between this group and negative attributes in memory (Arendt, 2013). This may have consequences for the negativity of implicit attitudes toward this social group.

#### ***Effects on Implicit Attitudes***

Three recent discoveries contribute to our understanding of media effects on implicit attitudes. First, media stereotyping research has found that exposure to stereotypic media content can influence

implicit attitudes (Park et al., 2007; Weisbuch, Pauker, & Ambady, 2009). Park and colleagues found that reading only one print article about a social group can influence implicit attitudes toward this group. Although this study contributes to our knowledge, the researchers investigated only *short-term* effects in a lab experiment. Second, Weisbuch and colleagues showed that U.S. television viewers of entertainment programs are exposed to “nonverbal race bias” (i.e., nonverbal behavior that communicates favoritism of one group over another) and that long-term exposure to this *nonverbal* biased *entertainment* content can influence implicit attitudes toward this group. Third, political communication research has found that long-term exposure to news coverage representing a political concept in a biased way (i.e., negative coverage of the European Union) influences implicit attitudes toward this *political concept* (i.e., the European Union; Arendt, 2010).

We are interested in the missing link in these three streams of research: *Long-term* exposure to *stereotypic news* and its effects on implicit attitudes toward a *social group*. On a basic level, we assume that individuals incidentally learn some biased facts from long-term exposure to news stereotypes (Arendt, 2013). The cumulative exposure to these biased facts should influence associative processes and their outcome, implicit attitudes, by forming and altering the associative structure of human memory. Indeed, initial empirical evidence already exists of a long-term implicit media effect from exposure to news stereotypes. Northup (2010) found in a U.S. context that exposure to news media (television, newspapers, Internet) correlated with student participants’ negative implicit attitudes toward African Americans. Based on that research, we derived our first hypothesis.

*H1: Long-term exposure to news stereotypes will impact implicit attitudes.*

Although Northup’s (2010) study contributes to our knowledge, it investigated only bivariate relationships and used a “total news” measure that summed news content from different media. Thus, it is unclear whether these relationships hold under statistical control of third variables and when using a content-specific media exposure measure (i.e., local television news use). Because replicability of findings is “at the heart of any science” (Asendorpf et al., 2013), the primary goal of the present investigation is to replicate this relationship. Nevertheless, we will extend previous research on this important hypothesis by (a) investigating the relationship between long-term exposure to news and implicit attitudes in two different cultural context (the United States and Austria); (b) controlling for important third variables (e.g., individuals’ egalitarian-related nonprejudicial goals, which may be important for norm-driven correction processes); (c) studying the consequences of exposure on explicit attitudes through its influence on implicit attitudes (mediation); and (d) testing the boundary conditions for this relationship (moderation).

### ***Explicit Attitudes***

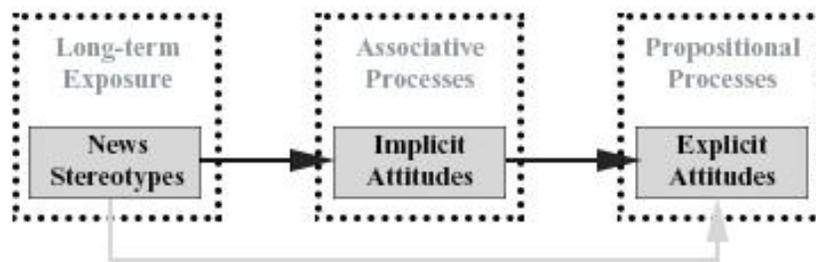
As noted, it is assumed that propositional processes transform automatic gut reactions into propositional format and, therefore, create declarative knowledge. Thus, there should be a correspondence between implicit and explicit attitudes. This is supported by previous implicit social cognition research. Hofmann, Gawronski, Gschwendener, Le, and Schmitt (2005) conducted a meta-analysis of the correlation between implicit and explicit measures and found, based on a sample of 126

studies, a mean effect size of 0.24 (mean population correlation). Thus, implicit and explicit attitudes are generally related, but higher-order inferences (e.g., propositional processes including the goal to appear nonprejudiced) can reduce the influence of implicit attitudes on explicit attitudes (see also Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Based on this research, we assume that recipients will build their explicit attitude judgment in part on the basis of their automatic gut reactions.

*H2: Implicit attitudes predict explicit attitudes.*

Because we expect that exposure influences implicit attitudes and that implicit attitudes, in turn, predict explicit attitudes, there should be an indirect effect of exposure on explicit attitudes through its impact on implicit attitudes (i.e., a mediation pattern; see Figure 1).

*H3: There is an indirect effect of long-term exposure to stereotypic news on explicit attitudes through implicit attitudes.*



**Figure 1. Theoretical model: Long-term exposure to news stereotypes influences implicit attitudes. Implicit attitudes, in turn, predict explicit attitudes.**

### **Additional Theorizing**

Although the main focus of our theoretical account can be found in the three hypotheses, it is important to discuss another possible path: the direct effect of long-term exposure on explicit attitudes. There is an important difference between exposure's direct effect on explicit attitudes and exposure's indirect effect on explicit attitudes through implicit attitudes: Associatively related memory traces are used for the automatic gut reaction irrespective of whether an individual perceives the memory traces as valid. If accessible memory traces are used for an explicit attitude, judgment depends on the subjective truth value. Thus, even if a highly accessible concept has an effect on implicit attitudes, there may be no direct effect of this concept on the explicit judgment. In other words, the direct effect path is related to propositional processes as individuals can decide which memory traces they use (Devine, 1989).

A direct effect of exposure on explicit attitudes is expected only when mass media directly influence propositional processes. As Gawronski and Bodenhausen (2006) noted, such effects on

propositional reasoning can be best explained by traditional theories of persuasion. This makes sense if we consider possible influences of mass media on propositional reasoning. First, exposure can have an impact on the decision about which propositions are momentarily considered for a judgmental decision. That is, individuals can choose which automatically activated thoughts they use for an explicit attitude judgment. Second, exposure can influence decisions by also affecting the subjective weight attributed to the considered propositions (see Nelson, Oxley, & Clawson, 1997, p. 225). These decisions regarding the mere consideration and the attributed subjective weight of the considered propositions are propositional because they are based on the *validation* of automatically activated thoughts. It is important to highlight the difference between this notion and that of the effects of media exposure on implicit attitudes, which are based on the mere automatic *activation* of concepts in memory.

No content-analytic empirical evidence exists regarding these two points. Data would have to document evidence pertaining to specific media content that can alter the validation process regarding the decisions of (a) which propositions are used and (b) how the individual weights the considered propositions. Because our main focus here is on the news effect on implicit attitudes, we put this possible third path into a research question:

*RQ1: Does exposure to a news stereotype have a direct effect on explicit attitudes?*

Some evidence exists for exposure effects on explicit outcomes outside the media stereotyping research. Shrum (2009) proposed a process model explaining the cultivation effect—possibly including stereotypic media content—by providing the boundary conditions for the effect to occur. Shrum argued that cultivation on (memory-based) explicit judgments are mediated by the accessibility of information in memory and are moderated by the motivation and ability to process information. In a related study, Valentino (1999) investigated the priming effects of news content containing minority subjects on explicit evaluations of the president. Valentino found supporting evidence for the political impact of stereotype-reinforcing news. Although these studies clearly contribute to our knowledge, they do not allow us to develop hypotheses specifying the relationship between the processes of validation and activation, and thus between implicit and explicit attitudes. Stated differently, although we know from previous research (e.g., Shrum, 2009; Valentino, 1999) that media exposure can influence explicit outcomes, it is not clear whether these effects directly affect the outcomes (direct effect path in Figure 1) or whether these effects are mediated by implicit attitudes (indirect effect in Figure 1).

### **Overview of the Empirical Work**

We tested the hypotheses in two cultural contexts: the United States and Austria. The main reasons for choosing these two countries are that reliable content analytic data for a comparable news stereotype exist for both (i.e., overrepresentation of a social group as criminals), and an investigation in a second country allows for a replication (Asendorpf et al., 2013).

In Study 1, the long-term consequences of regular exposure to local U.S. television news are investigated. As discussed, U.S. media have been shown to overrepresent African Americans as criminals. Study 2, a replication of Study 1, examines the effects of regular use of an Austrian tabloid-style daily

newspaper that is known to overrepresent foreigners as criminals. This will provide the opportunity to test the underlying processes in a different cultural context. In Study 3, we study the boundary conditions for the “exposure-implicit attitudes” relationship.

Based on previous media stereotyping research, we speculate that target group membership may substantially moderate the news effect on implicit attitudes. That is, the effect may be fundamentally different for minority group members (see Mastro, 2009). Therefore, associative as well as propositional processes during reception and judgment building may be different. For example, target group members may have a different overall set of propositions than nonmembers (e.g., nonprejudicial goals). They may also automatically process mass-mediated news differently. Because it was not possible to obtain enough participants from the target groups in both countries for meaningful statistical analyses, target group members are excluded from the analyses. Because all student participants received course credit, all individuals regardless of their self-rated target group membership could participate.

### **Study 1: Evidence From the United States**

In the United States, African Americans are more likely than Whites to be depicted as criminals on local television news (Dixon & Linz, 2000a), and African Americans are more likely to be discussed with prejudicial information (Dixon & Linz, 2002). Therefore, following the premise of the research outlined above, it would be consistent that heavy viewers of local television news would have negative implicit attitudes of African Americans. It is thought, then, that long-term exposure to local television news could influence implicit attitudes. We tested our hypotheses by using a cross-sectional design that reveals the relationships among long-term exposure, implicit attitudes, and explicit attitudes.

#### **Method**

##### ***Participants***

A total of 316 individuals participated in this research, all drawn from introductory communication courses at a large university located in the southwestern United States. In exchange for their participation, subjects received extra credit in their courses. There were more women (62%) than men. Participants ranged in age from 18 to 70 years ( $M = 23.00$ ,  $SD = 5.13$ ). The group was racially diverse, with most being White (37%), followed by Hispanic (24%), African American (23%), and Asian (11%); the remaining few stated that they were of mixed race or refused to answer. As noted, members of the target group (African Americans) were excluded from analysis; however, all other individuals remained in the analysis. There were no statistically significant differences among the remaining racial groups on any of the dependent variables.

### **Measures**

**Local news use.** The primary independent variable in this study was participants' local television news use. Participants were asked, on average, about how many minutes of local television news they watch per day ( $M = 25.39$ ,  $SD = 18.94$ ).

**Implicit attitudes.** The automatic affective reaction toward African Americans was measured with the Implicit Association Test (IAT; Greenwald et al., 1998). We used the seven-block standard procedure described by Greenwald and colleagues. The participants were directed to classify names into the categories of "White/European American" or "Black/African American." The names used for the White group were Jake, Connor, Luke, and Hunter. The names used for the Black group were DeShawn, Marquis, Terrell, and Jamal. Participants also were asked to categorize words into two attribute categories: "positive" (good, wise, happy, right, and beneficial) or "negative" (bad, foolish, unhappy, wrong, and harmful). The essential assumption is that categorization should be faster when the pairing of a concept with an attribute reflects a stronger association in memory. Thus, a person who has a stronger negative automatic affective gut feeling should more quickly categorize stimuli words when "Black/African American" and "negative" are paired as categories than when "Black/African American" and "positive" are paired. A validated scoring algorithm (Greenwald, Nosek, & Banaji, 2003) was employed. Higher values indicate a stronger negative automatic affective reaction toward African Americans ( $M = 0.53$ ,  $SD = 0.34$ ).<sup>1</sup>

**Explicit attitudes.** As in previous research (e.g., Hofmann et al., 2005), a feeling thermometer was used to measure explicit attitudes. Participants were asked whether they felt a general coolness/negativity (0) toward African Americans or a warmth/positivity (11). This item was reverse-coded, so higher responses indicate more negativity toward African Americans ( $M = 4.18$ ,  $SD = 2.79$ ).

**Controls.** Age, gender, and the 10-item nonprejudicial goals scale (e.g., "Negative evaluations of disadvantaged minority members are wrong", Cronbach's  $\alpha = .83$ ; Gawronski et al., 2008) were used as control variables. The nonprejudicial goals scale describes the general value orientation of being nonprejudiced.

### **Procedure**

At designated times, participants arrived at a computer laboratory outfitted to run experimental research. Participants were told that they were taking part in a research study that was assessing their views on several topics. After questions were answered, participants took the IAT, which was presented as a sorting task. Upon completion of the IAT, participants encountered a series of questions about their explicit attitudes toward African Americans, their use of local television news, and control variables.

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<sup>1</sup> Although an array of measures gauge implicit attitudes (see Uhlmann et al., 2012, for a critical discussion), only two consistently show reliability estimates that are "acceptable from a psychometric point of view" (Gawronski, 2009, p. 146). We decided to use the IAT because this procedure is the best studied implicit measure with regard to its psychometric properties (see also Greenwald et al., 2003; Greenwald et al., 2009).

## Results and Discussion

Path analysis with Amos was used to test the hypotheses. The model as outlined in Figure 1 was specified, controlling for age, gender, and nonprejudicial goals ( $df = 0$ ). All effects are expressed as unstandardized coefficients. Indirect effects are tested with bootstrapping using bias-corrected confidence intervals based on 2,000 samples.

Hypothesis 1 assumed that long-term exposure to local television news, which has been shown to overrepresent African Americans as criminals, increases the negativity of implicit attitudes toward African Americans. Consistent with this hypothesis, there was an effect of local television news on the negativity of implicit attitudes (coefficient = 0.0024,  $SE = 0.0012$ ,  $p = .048$ ). This effect reflects the idea that if an individual watches one hour more per day of local television news (compared to a reference person—that is, a nonuser), then his or her implicit attitudes increase by 0.144 units ( $0.0024 \times 60$  minutes). Given that the absolute values of the implicit attitude measure can be interpreted in terms of the criteria for small, medium, and large effects similar to Cohen's  $d$  (Greenwald et al., 2003), long-term exposure to stereotypical news can increase the already present moderate implicit bias (sample mean = 0.53) into a rather large bias.

Hypothesis 2 assumed that implicit attitudes, in turn, predict explicit attitudes. Supporting empirical evidence for this assumption was found (coefficient = 1.434,  $SE = 0.493$ ,  $p = .004$ ). We found a small indirect effect of exposure on explicit attitudes through its impact on implicit attitudes (coefficient = 0.003,  $p = .025$ , 95% confidence interval [0.0004, 0.0093]). This finding supports Hypothesis 3.

Research question 1 asked whether news exposure has a direct effect on explicit attitudes. Thus, it was questioned whether media exposure influences overtly expressed attitudes through propositional processes without a mediated influence through implicit attitudes. Media exposure did not show a substantial direct effect on explicit attitudes (coefficient = 0.002,  $SE = 0.009$ ,  $p = .816$ ). In addition, media exposure did not show a significant total effect on explicit attitudes (coefficient = 0.009,  $p = .347$ , 95% confidence interval [-0.0100, 0.0295]).

The findings from Study 1 support Hypotheses 1, 2, and 3: Long-term exposure to local television news, wherein African Americans are depicted stereotypically as criminals, predicted implicit attitudes. Thus, heavy viewers show more negative automatic affective reactions toward African Americans. Implicit attitudes, in turn, were used as a basis for explicit attitudes. Although media exposure had an indirect effect on explicit attitudes through implicit attitudes, there was no direct exposure effect on explicit attitudes. Furthermore, media exposure did not have a total effect on explicit attitudes. The findings indicate that stereotypical news content can influence implicit attitudes—our automatically activated gut reactions—even when there is no (total) effect on explicit attitudes—controllable overtly expressed judgments. Had we used only explicit measures of attitudes, we would not have found significant media effects. The implications and limitations of our findings are discussed below.

## Study 2: Evidence from Austria

Study 2 was intended to be a replication of the first study. In Austria, it has been found that foreigners are overrepresented as criminals in a tabloid-style newspaper much in the same way African Americans are treated in the United States on local television news (Arendt, 2010). If our account is right, the same processes should work irrespective of the specific social category, the specific cultural context, or the specific media outlet.<sup>2</sup>

### Method

The same data collection procedure was used in the Austrian study as was used in the U.S. study.

### Participants

A total of 489 students enrolled in an introductory lecture on communication research at a large European university participated in the study for extra course credit. Of these students, 79% were women. The students ranged in age from 18 to 57 years ( $M = 20.55$ ,  $SD = 3.36$ ). Based on the theoretical reasoning outlined above and consistent with the procedure used in Study 1, self-rated foreigners (31% of the sample declared that they were not Austrian) were excluded from further analyses.

### Measures

**Tabloid use.** Participants reported how many days per week they read the specific newspaper under investigation. About 33% were readers ( $M = 0.75$ ,  $SD = 1.51$ ).

**Implicit attitudes.** The same IAT as in Study 1 was used for this study. The participants were directed to classify names into the categories of "Austria" or "foreign country" (in German it is one word). The names used for the Austria category were Paul, Michael, Stefan, and Georg. The names used for the foreign country category were Mohamed, Stanislav, Dejan, and Ercan. Higher values indicate a stronger negative automatic affective reaction toward foreigners ( $M = 0.63$ ,  $SD = 0.30$ ).

**Explicit attitudes.** A feeling thermometer was used to ask whether the participants felt a general coolness/negativity (1) toward foreigners or a warmth/positivity (7). This variable was reverse-coded so higher responses indicate more negativity toward foreigners ( $M = 3.43$ ,  $SD = 1.14$ ).

**Controls.** The same control variables used in Study 1 were again used here: age, gender, and a German version of the 10-item nonprejudicial goals scale (Cronbach's  $\alpha = .80$ ).

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<sup>2</sup> Our goal was not to test the unique effects of the possible moderating effects of one of the three factors. This would be possible only when holding the others constant. For example, if we want to test whether our process model holds for local television news as well as daily newspapers, we would have to test this in *one* country using the *same* social group. However, our approach was guided by two real-world problems rather than by the goal to study possible effects of one of the mentioned variables.

### Results and Discussion

The same statistical analyses were conducted for this study as were conducted in Study 1. It was found that exposure to the tabloid overrepresenting foreigners as criminals did *not* increase the negativity of implicit attitudes (coefficient =  $-0.0042$ ,  $SE = 0.0098$ ,  $p = .670$ ). However, implicit attitudes predicted explicit attitudes (coefficient =  $0.794$ ,  $SE = 0.191$ ,  $p < .001$ ). Thus, we found supporting empirical evidence for Hypothesis 2 but not for Hypothesis 1. Not surprising based on the null finding regarding Hypothesis 1, there was no significant indirect effect as predicted by Hypothesis 3 (coefficient =  $-0.0033$ ,  $p = .626$ , 95% confidence interval [ $-0.0193$ ,  $0.0100$ ]). In addition, we found that exposure had a small effect on explicit attitudes (coefficient =  $0.067$ ,  $SE = 0.034$ ,  $p = .049$  (research question 1)). Finally, media exposure did not show a significant total effect on explicit attitudes (coefficient =  $0.064$ ,  $p = .090$ , 95% confidence interval [ $-0.0015$ ,  $0.1347$ ]).

It is important to emphasize that we detected no effect of regular tabloid exposure on implicit attitudes. This challenges our model, because it is not consistent with the first study. However, it is possible that the media use variable measured here—that is, the overall tabloid exposure—may not have captured exposure to the news stereotypes as effectively as Study 1. Indeed, there is an important difference that could provide a post hoc explanation of why Study 2 failed to find support for Hypothesis 1. In Study 1, the focus of the research investigated the genre-specific effects of local television news. Overall television use was not used in the analysis; rather, we focused on a specific genre and type of television use. The rationale behind this strategy was the assumption that it is important to investigate specific genres within television, because previous research suggests this is an important consideration (Bilandzic & Rössler, 2004). Based on this argument, for those who watch local television news, it was assumed that the exposure would affect them. This assumption was carried forward to the second study, wherein newspaper exposure was the measured variable. Unlike with television news, though, people have much more control over a printed newspaper because they are able to selectively expose themselves only to stories of interest. In other words, when watching television news, one has little control over what stories are presented, but with the printed newspaper, one has complete control over what stories are read. Therefore, it is possible that considering merely the amount of exposure to newspapers is not a nuanced enough variable; instead, it is important to consider what stories individuals are choosing to read.

It seems to have face validity that even if someone reads the newspaper (i.e., total tabloid exposure), this person has to read (crime) articles with stereotypic depictions of foreigners (i.e., stereotype exposure) to show any influence on implicit attitudes. Otherwise, this person does not encode the stereotypic information. Based on this idea, it is presumed that individuals who selectively expose themselves to crime articles and, therefore, to the news stereotype will show the proposed effect as outlined in Hypothesis 1. This leads to a further moderation hypothesis.

*H4: Genre-specific crime article exposure moderates the effects of total tabloid use on implicit attitudes.*

The assumption that any long-term effects of exposure to stereotypical media content is conditional is consistent with previous research. For example, Shrum (2009) found that the motivation and the ability to process information are effect moderators. This is in line with recent more general theorizing in the differential susceptibility to media effects model (Valkenburg & Peter, 2013).

It is necessary to acknowledge that this is only a post hoc explanation of Study 2's failure to find the effect proposed in Hypothesis 1. Thus, a further *independent* test of this post hoc explanation is warranted. To explore this moderation hypothesis, a third study was conducted that investigated not just how much newspaper exposure participants had but what stories each individual reads within the newspaper (i.e., crime articles). Hypothesis 1 regarding stereotypic content may be true only for those who actually read stereotypic newspaper content. Therefore, we investigated the boundary conditions of the relationship specified in Hypothesis 1.

### **Study 3**

Study 3 investigated whether there is an exposure effect on implicit attitudes for those who regularly read crime-related articles. It is expected that there will be an interaction effect between the amount of tabloid reading and reading content specifically about crime.

#### **Method**

##### ***Participants***

A total of 470 individuals participated in this study. Participants were recruited by students from an introductory course on communication research. Of the participants, 55 % were women. The participants ranged in age from 14 to 84 years ( $M = 27.83$ ,  $SD = 12.93$ ). Again, based on theoretical reasoning, self-rated foreigners were excluded (22% of the sample).

##### ***Measures***

**Total tabloid use.** Participants reported how many days a week they typically read the specific newspaper under investigation. Fifty-five percent were readers ( $M = 1.80$ ,  $SD = 2.40$ ).

**Reading content specifically about crime.** Participants were asked how often they typically read crime articles when reading the newspaper under investigation. Responses ranged from 1 (*never*) to 7 (*every time*). This measure produced enough variability for further analyses ( $M = 3.62$ ,  $SD = 2.44$ ).

**Implicit attitudes.** The paper version of the IAT was used (Lemm, Lane, Sattler, Khan, & Nosek, 2008). Names presented for the Austria category were Andreas, Michael, Stefan, and Paul. Names used for the foreign country category were Mustafa, Achmed, Hussein, and Dejan. A scoring algorithm for the paper IAT was used from previous research (Arendt, 2009). These values have a different scaling than the computer-administered IAT that were used in Studies 1 and 2. Values can range from -1 to +1. As in the

previous studies, higher values indicate a stronger negative automatic affective reaction toward foreigners ( $M = 0.15$ ,  $SD = 0.14$ ).

## Results

Hypothesis 4 posits that reading content specifically about crime moderates the effect of total tabloid use on implicit attitudes in that total tabloid exposure shows only an effect among those who regularly read crime articles. The Johnson-Neyman technique was used for testing the hypothesized interaction (Hayes & Matthes, 2009). This technique identifies regions in the range of the moderator variable where the effect of the focal predictor on the outcome is statistically significant (or not). In this case, it estimates regions in the range of content specifically about crime where the effect of total tabloid use on implicit attitudes is statistically significant. Age, gender, education, and nonprejudicial goals were controlled for.

Importantly, the interaction term produced a significant effect size estimate,  $F(1, 315) = 4.42$ ,  $p = .04$ , and it was found that the total amount of exposure had no effect on low values of reading content specifically about crime. However, a moderator value of 5.71 was found, which defines the Johnson-Neyman significance region (i.e., 5.71 – 7). For example, an individual who typically reads crime articles when reading (reading content specifically about crime = 7) has an estimated effect of exposure on implicit attitudes comparable to Study 1 (coefficient = 0.013,  $SE = 0.005$ ,  $p = .014$ , 95% confidence interval [0.003, 0.023]). This means that if an individual reads the daily newspaper seven days a week (a heavy reader compared to a nonreader), implicit attitudes increase by 0.091 units ( $0.013 \times 7$  days; please note the range –1 to +1). In summary, the total tabloid exposure measure had a significant effect on implicit attitudes when individuals indicated that they often read crime articles. This finding supports Hypothesis 4.<sup>3</sup>

## General Discussion

This research investigated the implications of recent implicit social cognition findings by emphasizing the importance of considering implicit attitudes within news stereotyping research. Based on the fact that human information processing relies on automatic and controlled components, the additional consideration of implicit attitudes seems to be an important supplement to traditional self-report measures. Specifically, it was hypothesized that long-term exposure to news stereotypes can influence implicit attitudes. Taken together, empirical data generally confirmed this prediction and therefore support previous findings (Northup, 2010).

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<sup>3</sup> For comparability to Studies 1 and 2, we ran a path model like those reported in Studies 1 and 2, where we specified implicit attitudes as a mediator. In addition to total tabloid use, we used reading content specifically about crime and the interaction term for the prediction of implicit attitudes. The interaction term predicted implicit attitudes (coefficient = 0.019,  $SE = 0.009$ ,  $p < .032$ ), and implicit attitudes predicted explicit attitudes (coefficient = 1.045,  $SE = 0.500$ ,  $p < .036$ ). This analysis supports the conclusions drawn. The entire analysis can be obtained upon request.

In the United States, African Americans are overrepresented as criminals on local television news. We tested whether increased exposure to this stereotype alters negative implicit and explicit attitudes. Empirical evidence confirmed this hypothesis. In Austria, the social category “foreigners” is overrepresented as criminals in a specific highly circulated tabloid-style daily newspaper. It was found that reading the tabloid influenced implicit attitudes, although only for those who regularly read articles about crime. That the implicit effect was only evident for those who read crime stories is an interesting finding, because previous research outside the media stereotyping context has documented an effect of total newspaper reading on implicit attitudes toward the European Union (Arendt, 2010). However, the EU topic received a vast amount of news coverage (during an intensive anti-EU campaign). Thus, it is possible that readers simply could not easily escape negatively valenced EU information during this campaign. By contrast, the “criminal foreigner” news stereotype is much more subtle. In most cases, the overrepresentation of foreigners is not vividly covered, for example, on the title page or in article headlines, as was the case during the anti-EU campaign. In contrast, readers have to *read* the crime articles, not simply *scan* the front page, the headlines, or the pictures.

This difference could explain why Study 1 found an effect of long-term media exposure on implicit attitudes whereas Study 2 did not. Study 1 investigated genre-specific local television news consumption. In contrast, Study 2 used a total tabloid exposure measure; for those who read the newspaper to show any effects, they would have to specifically read the content that contained the stereotypical representations of foreigners as criminals. Study 3 focused on those who consumed a great deal of that specific type of article. We found an exposure effect on implicit attitudes only for those reading crime articles. Of course, future studies should investigate this moderation hypothesis more thoroughly.

The difference between Study 1 and Study 2 also might relate to differing exposure levels. Participants in Study 1 watched approximately 25 minutes of local television news per *day*. Most of the participants in Study 2, on the other hand, were light users of the newspaper, reading it a few days per *week*. Thus, individuals in the European samples might have simply encoded less biased information. Behind the read/scan differentiation, we could assume that heavy readers may be more likely to incidentally absorb mass-mediated stereotypic news content even if they do not selectively expose themselves to stereotype-relevant content.

### ***Limitations***

This investigation has several limitations. First, we discussed only the effect paths from stereotypical media content to attitudes. We did not investigate the possibility of selective exposure or reinforcing spirals (see Slater, 2007). However, we assume an interaction between recipient and mass medium over time. That is, associative and propositional processes can also influence processes such as selection, encoding, elaboration, interpretation, and storage of media content. For example, it has been shown that implicit attitudes influence the interpretation of media content (Eno & Ewoldsen, 2010). Therefore, we do not play down a dynamic process combining selective exposure and media effects. Rather, we focus on the effect perspective.

Second, we discussed an additional path wherein media exposure influences explicit attitudes directly through propositional processes. However, we were not able to predict a priori whether there should be only an indirect effect of media exposure on explicit attitudes through implicit attitudes or additionally a direct effect of media exposure on explicit attitudes. Unfortunately, no data were available that allowed the formulation of a specific hypothesis. Future research should broaden the perspectives of content analyses: Only by exactly knowing the message system can we predict whether a stereotypic metanarrative (Bilandzic & Rössler, 2004) may be effective in directly changing a recipient's overall set of momentarily considered propositions. For example, if stereotypical news content decreases a person's nonprejudicial goals (i.e., alter the considered proposition; see Gawronski et al., 2008), there might also be a direct effect of exposure on explicit attitudes.

Third, we did not investigate the specified process for self-rated target category members (Study 1: African Americans; Studies 2 and 3: foreigners). Future research should test whether target group membership moderates the implicit media stereotyping process (see Mastro, 2009). As previous research indicates, target group members differ with respect to the extremity of implicit and explicit attitudes, although they typically do not show a strong in-group preference comparable to non-target group members (see Olson, Crawford, & Devlin, 2009). Unfortunately, our sample did not allow for moderation tests because few participants were members of the target group. Nevertheless, this would be a good starting point for future research.

Fourth, student samples were used based on economical reasoning. Although student samples can be problematic (for a discussion, see Meltzer, Naab, & Daschmann, 2012), we think news stereotype effects on rather automatic stages of processing (i.e., implicit attitudes) can be successfully investigated by using student samples (see, e.g., Arendt, 2013; Northup, 2010). Nevertheless, news effects on controllable overtly expressed judgments (i.e., explicit attitudes) may be influenced by the sample. Communication students may read the stereotypic content rather critically. This may be the reason that we did not find total effects of news exposure on explicit attitudes. This is worth investigating in future research.

Finally, as it is the case with all cross-sectional evidence, the data do not allow causal inferences. However, causal effects of mass-mediated content on implicit measures could be documented in the past using laboratory experiments (e.g., Arendt, 2012; Park et al., 2007). Therefore, the model's causal assumptions are supported by the literature. Nevertheless, one can overcome this drawback by using longitudinal designs.

### **Conclusion**

Stereotyping, prejudice, and discrimination based on race, ethnicity, gender, obesity, sexual orientation, and age (among others) are real global problems. Thus, it is important to understand the processes that lead to these undesired outcomes. Although a quick, spontaneous evaluation of others has been adaptive for our hunter and gatherer ancestors when processing complex social information (and it still has its uses in some situations), it can be harmful in today's world when it influences negative outcomes such as discriminatory behaviors. Given that long-term exposure to media stereotypes seems to

influence such spontaneous evaluations of minorities, more research investigating this implicit effect is needed.

Previous scholarship has found that implicit attitudes will primarily predict behavior under conditions of low motivation and opportunity to control (Frieese et al., 2008). Thus, the implicit effect documented here could have negative societal consequences under certain circumstances. Better knowledge of this process, including the mechanisms underlying it, will allow us to develop recipient- and media-based reduction strategies (Ramasubramanian, 2007). For example, some psychological research suggests that negation ("NO! This is not true") during encoding (not later) can substantially reduce a treatment's effect on implicit attitudes (Peters & Gawronski, 2011). However, before an earnest attempt to reduce these negative outcomes can be undertaken, the important step of studying the phenomenon and its underlying mechanisms is necessary. Only then can researchers test different strategies to deal with these negative media effects, thereby enabling society to adequately resist the possible detrimental consequences of news media consumption. By further studying this phenomenon, mass media research can contribute to the maintenance and improvement of a humane and open society.

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