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Stories can influence the self-concept

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The present work examined the influence of stories on the self-concept of femininity. A mixed sample of female respondents ($N = 689$) participated in a web-based experiment. Self-reported femininity was assessed after reading a story that featured a protagonist with a traditional gender role (focused on motherhood) or a control story. The experimental story increased femininity only among readers who were more deeply transported into the story world. Moreover, the experimental story increased femininity among respondents who were unlikely to engage in social comparison (had no children of their own), whereas no such effect was observed for respondents who were demographically more similar to the protagonist (had children of their own).

Much of the information communicated to us by the media or in conversations is communicated in the form of stories. A story (or narrative) can be defined as a linguistic or iconic "representation of an event or a series of events" (Abbott, 2002, p. 12) which follows one or more plot lines with certain schematic elements (e.g., setting, event, attempt, reaction, and consequence; Rumelhart, 1975) and typically involves one protagonist and several other story characters. The research reported here is concerned with the effect of stories portraying a traditional gender role on recipients' gender-related self-concept. This effect will be examined taking into account recipients' transportation (Gerrig, 1993) into the story world and the congruency of the recipient and the main character as potential moderators.

A large body of research has shown that nonfictional as well as fictional stories can alter beliefs that recipients hold about the world. Such persuasive effects have been demonstrated for information that was central to the theme of a story (e.g., a

dangerous psychiatric patient; Green & Brock, 2000) and for peripheral details that are not of particular relevance to the causal chain of events (e.g., Prentice, Gerrig, & Bailis, 1997; Wheeler, Green, & Brock, 1999; for an overview, see Green & Donahue, 2009), and they seem to be long-lasting (Appel, 2008; Appel & Richter, 2007; Jensen, Bernat, Wilson, & Goonwardene, 2011). For explaining the persuasive impact of stories, several theoretical models have been proposed which start from the idea that the comprehension of narratives can involve the experience of being transported into the narrative (Gerrig, 1993; Green & Brock, 2000, 2002). The concept of *transportation* is based on the metaphor that readers undertake a mental journey into the world of a narrative (Gerrig, 1993), with the result that "all mental systems and capacities become focused on the events occurring in the narrative" (Green & Brock, 2000, p. 701). Accordingly, transportation is conceived as a broad experiential state that incorporates attention, cognitive processes, imagery, and emotions (Green, 2004). A number of experiments suggest that transportation might indeed be the key to understand the persuasive impact of narratives. Most of these experiments use a retrospective self-report scale developed by Green and Brock (2000) to assess different facets of attentive and absorbed reception including emotional responses (e.g., "The narrative affected me emotionally"), cognitive aspects ("I was mentally involved in the narrative while reading it"), and visual imagery ("I had a vivid mental image of [character name]"). In several studies, readers reporting high levels of transportation on the transportation scale were persuaded to a greater extent than recipients who reported low levels of transportation (e.g., Appel & Maleckar, 2012; Appel & Richter, 2010; Green, 2004; Green & Brock, 2000; Vaughn, Hesse, Petkova, & Trudeau, 2009).

STORIES AND THE SELF

In contrast to many beliefs we hold about the world, the beliefs that we hold about ourselves and which together form the self-concept are relatively stable. Of course, beliefs that are part of the self-concept can be altered by autobiographical events, by reflecting about oneself, by communications in which one is involved, and by developmental changes (McAdams & Olson, 2010). But can these beliefs also be influenced by reading or watching stories that feature other, often fictitious protagonists? Several recent studies suggest that this might indeed be the case. For example, in an experiment by Djikic, Oatley, Zoeterman, and Peterson (2009), participants read either the short story *The Lady with the Dog* by Chekhov or a documentary with the same content and completed the Big Five inventory before and after reading. Participants who had read the short story showed greater changes in their self-ratings of the Big Five personality traits (extraversion, conscientiousness, agreeableness, emotional stability/neuroticism, and openness to experience) than participants who had read the control story although the directions of these changes were idiosyncratic. Gabriel and Young (2011) presented participants with

excerpts from a book about wizards (*Harry Potter*) or a book about vampires (*Twilight*). Afterward, they collected explicit measures of how strongly participants ascribed characteristics of wizards or vampires to themselves (for example, one vampire question was, "How sharp are your teeth?") as well as implicit measures (implicit association test with "me" and "not me" words and words associated with vampires vs. wizards). On average, participants scored higher on explicit as well as implicit measures that referred to the group of fantasy characters they had just read about. An experiment by Sestir and Green (2010), which focused on personality traits rather than traits of fantasy characters, sheds light on the mechanisms that might be relevant here. In their experiment, participants watched a movie clip and their identification with story characters as well as their transportation into the story world were manipulated by written instructions. Before and after watching the movie, they judged in a reaction time task (me/not-me task) whether traits displayed by the movie characters applied to themselves or not. Both the identification and the transportation instructions led to a greater proportion of switches from not-me-judgments to me-judgments for character-relevant traits from the pretest to the posttest. Moreover, when participants were instructed to identify with the movie characters, reaction times for me-judgments of character-relevant traits were faster in the posttest than in the pretest but slower for not-me-judgments of character-relevant traits.

Media influence on gender-related self-concept

The work reported here extends the research on stories and the self to the field of gender roles. If stories can shape how recipients think and feel about themselves, stories with protagonists showing a traditional gender role might influence the postexposure feminine gender role self-concept (Bem, 1974). Plenty of the evidence available from content-analytic research points at the prevalence of traditional gender roles of women and men depicted in the mass media (Collins, 2011). Not only television programs and feature films (e.g., Emons, Wester, & Scheepers, 2010; Finger, Unz, & Schwab, 2010) but also best-selling novels have been described as portraying traditional gender roles (cf. Hayes-Smith, 2011; Kramer & Moore, 2001). This research raises the question of to what extent the display of traditional gender roles in the media contributes to the way recipients view their own gender roles. Despite the fact that this topic has been of substantial interest for scholars in the social sciences, the humanities as well as the general public, surprisingly little is known in this regard. Correlational studies suggest that the way women are portrayed in the media might be related to the way female recipients view themselves (e.g., Greenwood, 2007, 2009). However, to the best of our knowledge, there are no experimental data available on the impact of media products on the self-concept of one's own gender role, i.e., self-reports on traits associated with womanhood, such as ratings on the femininity subscale of the Bem Sex-Role Inventory (BSRI; Bem, 1974).

Moreover, experimental research on attitudinal measures (e.g., the appropriateness of certain behaviors for each gender) is rare and inconsistent (Durkin, 1985; Ward & Harrison, 2005). Some findings supported the hypothesis that traditional content yields more sexist attitudes and/or egalitarian content yields less sexist attitudes (Johnston, 1983; Lanis & Covell, 1995; MacKay & Covell, 1997), whereas other studies found no treatment effects (Schwarz, Wagner, Bannert & Mathes, 1987) or effects contrary to what was expected (Kilbourne, 1984; Matteson, 1991). As Ward and Harrison (2005) conclude particularly with respect to children's attitudes, "causal connections between media use and viewers' gender role attitudes are unconfirmed" (p. 6).

Two possible directions of influence: Assimilation and contrast

Previous research on the influence of stories on perceptions of the self—along with the great majority of studies on narrative impact in general—was guided by the assumption that a recipient's self-concept becomes more similar to the attributes featured in the plotline and/or the protagonists' characteristics during exposure. In other words, assimilation effects were expected. Picking up the idea that story elements can serve as a standard of comparison, rather than an interpretative framework (Biernat, 2005; Festinger, 1954), we suggest that under certain conditions assimilation effects are unlikely. Rather, recipients' self-concepts might even be contrasted away from the traits depicted (Appel, 2011). Contrast effects have been observed in a number of fields ranging from psychophysics to judgment and decision-making (cf. Biernat, 2005). Previous theory and research suggest that traits likely function as a standard of comparison when they are displayed by a distinct exemplar that belongs to the same category as oneself (Biernat, 2005). According to social comparison theory (Festinger, 1954), individuals are motivated to gain self-knowledge, which makes similar others likely comparison standards, because only individuals who are similar to oneself provide diagnostic information for the self-evaluation. For example, in recipients who do not paint, a story about a successful painter may activate general self-relevant content consistent with the traits displayed (creative, successful), which, in turn, affect subsequent judgments and behavior, including one's self-concept (more creative, more successful; Wheeler, DeMarree, & Petty, 2007). However, the same story may yield reverse effects for recipients who are painters themselves: In that case, the successful painter in the story can serve as a standard of comparison for recipients' own painting, activating traits such as *blocked* and *unsuccessful* and leading to a more negative self-concept.

Such a moderating role of protagonist–recipient congruence has been demonstrated in experiments on the influence of media portrayals on self-concepts of slimness and attractiveness. Several studies suggest that social comparisons with particularly thin and/or beautiful people in the media make white females perceive themselves as rather overweight and unattractive

(e.g., Groesz, Levine, & Murnen, 2002; Lavine, Sweeney, & Wagner, 1999; cf. Ward & Harrison, 2005). Such effects were often smaller or even absent for black female recipients (Greenwood & Dal Cin, 2012; López-Guimerà, Levine, Sànchez-Carracedo, & Fauquet, 2010). The predominantly white females depicted in the media serve as a standard of comparison for recipients who are white and female themselves but not for those recipients who lack the sociodemographic similarity (e.g., DeBraganza & Hausenblas, 2010; Frisby, 2004).

Previous findings on the influence of stories on the self-concept mostly revealed assimilation effects. This may be due to the fact that the story protagonists (e.g., Harry Potter; Gabriel & Young, 2011) were situated in a fantasy world and were most likely perceived as different-category exemplars. Likewise, a recent study on media priming found that students' performance in a knowledge test was impeded after reading a story about a stupid soccer hooligan (unless they were explicitly instructed to compare themselves with the hooligan protagonist; Appel, 2011). Again, this behavioral assimilation effect may have been facilitated by the fact that the distinct protagonist had little overlap with the student participants. One may suspect that the story effects would have differed remarkably if the recipients were soccer hooligans themselves.

Study overview and predictions

The present experiment aimed at investigating the impact of the narrative on the self-concept in the naturalistic setting of reading a story such as those provided by online magazines on the internet. In particular, we examined the influence of feminine gender roles portrayed in a written narrative on the gender roles that adult female readers attribute to themselves as part of their self-concept.

The experimental story was taken from an online column of a best-selling author and featured a mother who is engaged in childcare and shopping. We expected that this story would cause readers to report higher scores on the femininity subscale of the BSRI (Bem, 1974) as compared to readers of a gender-neutral control story if one of two conditions is fulfilled:

(1) In line with relevant theories on persuasion through stories (Gerrig, 1993; Green & Brock, 2000), we expected that the extent to which participants felt transported into the story world during reading would moderate the impact of a story with gender-stereotyped information on women's gender role. The story influence should be greater for those participants who were deeply transported into the story world.

(2) We further assumed that the similarity between the reader and the main protagonist would moderate the influence of the story in the way of assimilation versus contrast effects. In our study, having children of one's own should affect the likelihood that the recipients perceive the protagonist as a standard of comparison. Thus, we expected that women

who differed in this key aspect from the protagonist (had no children) were influenced to perceive themselves as more feminine (assimilation), whereas this influence should be absent or even reversed for recipients who shared this key aspect (had children).

Gender roles evolve during childhood and adolescence and are usually regarded as relatively stable personality characteristics in adulthood (e.g., Kirchmeyer, 2002). Given the high stability of beliefs about one's own gender roles and the minimalistic intervention, the size of the hypothesized effects was expected to be in the range of small effects.

METHOD

Due to our assumption that the story influence would differ for women who were mothers themselves versus women who were not, we could not rely on an undergraduate student sample. To reach a more heterogeneous participant pool, we made use of an online access panel (Göritz, 2007). The panel is operated by a commercial company and consists of registered volunteers who occasionally take part in web-based studies. Commercial online panels can provide access to high-quality data, but one has to keep in mind that members of such panels are typically younger and better educated than the general public (Göritz, 2007; Reips & Birnbaum, 2011). Only women were invited to participate and a substantial number of participants were required due to the expected small effects and the need to reach enough women with children.

Participants

The experiment was conducted on the Internet. Participants were 841 women drawn from a German online access panel (www.respondi.com). Participants who took less than 1 min to read the experimental text (95 participants) or whose reading time exceeded the mean reading time in the sample ($M = 212$ s) by more than three standard deviations ($SD = 272$ s; 13 participants) or for whom the total study duration exceeded the mean study duration ($M = 840$ s) by more than three standard deviations ($SD = 531$ s; 19 additional participants) were excluded from the data-set. In addition, 25 participants who provided inconsistent responses to the sociodemograpic questions (e.g., responding "no" to the question of whether they had children but providing a number other than 0 as response to the question of how many children they had) or had missing data on any of the study variables were excluded from the data-set. The remaining sample consisted of 689 women with an average age of 32.5 years ($SD = 11.6$, $Min = 17$, $Max = 77$). Of these participants, 26.4% reported having 10 years or less of school education, 47.4% reported having 12 or 13 years of school education, and 26.2% reported having obtained a bachelor's or master's degree. One-quarter of the women ($n = 173$)

reported having one or more children. Parent status was only weakly related to inclusion in the sample ($\phi = .08$), with mothers being slightly underrepresented in the final data-set.

Text material

The experimental story was based on an online column by von Kürthy (2008) published in a popular magazine on parenthood (*Eltern* [Parents]), which is targeted at a female readership. The column was a first-person narrative written in a neorealistic style, i.e., it created a sense of real-life authenticity and progressiveness, and situated the plot in a particular social context. The narrative involved a female protagonist who was the mother of a young baby and narrated unpleasant everyday experiences related to childcare, mother-to-mother conversations, and shopping. These experiences were described in a funny, self-ironic way which signals that the protagonist was actually enjoying them. With its focus on motherhood and traditional gender roles, the experimental story put a strong emphasis on femininity. The control story was also based on an online column (modified for this study) written as a first-person narrative describing day-to-day events in an urban setting (Uhlig, 2007). In particular, the protagonist told the story of being accused of free-riding in a subway and having heated discussions with the conductor. Similar to the experimental study, the control story described unpleasant everyday experiences in a funny way. However, no explicit or implicit reference was made to the protagonist's gender. The experimental story and the control story were comparable in writing style, length (experimental story: 65 sentences, 675 words; control story: 62 sentences, 626 words), and difficulty as operationalized with Flesch's Reading Ease Index (experimental story: 69; control story: 76; cf. Amstad, 1978; Flesch, 1948). An expert rating was conducted to validate the differences in gender role portrayal between both texts. Nine female researchers with a research emphasis on gender studies (postgraduate to professor level) were recruited from two universities. The experts read both stories and were asked about their impression of the texts (within-subjects design). On a seven-point Likert-type scale ($1 =$ do not agree; $7 =$ completely agree), they judged the assertion that *The text conveys a traditional female gender role "in a modern fashion"* to be more accurate for the experimental story ($M = 6.11$, $SD = 0.60$) than for the control story ($M = 2.78$, $SD = 1.56$), $Z = 2.67$, $p = .002$ (Wilcoxon Z-test, one-tailed). This result supports the validity of our stimulus texts, indicating that the experimental text involves the portrayal of a traditional feminine gender role, whereas our control text does not.

Assessment of femininity

As the dependent variable, we used the femininity score of the BSRI (Bem, 1974; German version by Schneider-Düker & Kohler, 1988). Participants working on

this version of the BSRI were requested to rate their own personality with regard to 28 adjectives. The adjectives describe personality traits that traditionally have been regarded as desirable characteristics of men, women, or both men and women. The femininity score is based on 12 adjectives representing personality traits traditionally regarded as desirable characteristics of women (e.g., *tender-hearted*, *caring*, *affectionate*). The internal consistency (Cronbach's α) of the femininity scale was .82 in the present sample. The femininity items were presented together with 16 items that represent traits traditionally regarded as desirable characteristics of men (e.g., *fearless*, *intelligent*, *with leadership qualities*; Cronbach's $\alpha = .90$).

Assessment of transportation

The moderator variable transportation was assessed with a German adaptation of the transportation scale developed by Green and Brock (2000) which is designed to measure the state of transportation experienced during reading a narrative via retrospective self-reports. It is based on 13 items (with seven-point response scales, ranging from 1 to 7) that refer to cognitive, attentive, and affective aspects of transportation (Cronbach's $\alpha = .80$). The traditional gender role story yielded somewhat less transportation ($M = 3.91$; $SD = 0.89$) than the control story ($M = 4.40$; $SD = 0.81$). On average, recipients with children experienced more transportation ($M = 4.49$; $SD = 0.83$) than recipients without children ($M = 4.04$; $SD = 0.87$).

Procedure and design

The experiment was conducted as a browser-based experiment over the Internet. On the entry screen, participants were told that they were participating in a study concerned with the reading of texts and several personal and media-related attitudes. Afterward, they either received the experimental or the control story. In the next step, they responded to the items of the BSRI and the transportation scale. Between the BSRI and the transportation items, 38 filler items on an unrelated topic (attitudes toward the computer; Richter, Naumann, & Groeben, 2000; Richter, Naumann, & Horz, 2010) were presented to minimize the risk of carryover effects. Finally, participants provided sociodemographic information and could request further information about the study by email.

The design was a single-factor between-subjects design with random assignment of participants to either the experimental story with gender-stereotyped information or the control story. The order of the BSRI and the transportation scale was counterbalanced between participants to control for carryover effects. Education level and age were accounted for as control variables. In addition, transportation and parent status were included as moderator variables in the model.

RESULTS

We used a linear model with categorical and continuous predictors and interaction terms to test the hypotheses that a gender-stereotyped narrative can increase women's perception of themselves given that readers get transported into the narrative world on the one hand and the main protagonist is an unlikely standard of comparison on the other (Aiken & West, 1991). The moderator variable transportation was *z*-standardized to avoid nonessential multicollinearity of main effect and interaction terms (Aiken & West, 1991). Parent status was included as a dichotomous variable. In addition, the order of presentation of the transportation and BSRI scales, education level, and age (as covariate) were included as control variables in the model. All significance tests were based on a type I error probability of .05.

Transportation as moderator

The story with gender-stereotyped information did not exert a significant overall effect on participants' self-ratings of femininity, $F(1, 675) = 0.09$, $p = .77$. However, there was an interaction of the story manipulation with transportation, $F(1, 675) = 4.30$, $p < .05$, $\Delta R^2 = .01$. In order to interpret the interaction, we estimated (1) the simple slopes of transportation in the two experimental groups and (2) the differences between the experimental groups at a high and a low level of transportation (one standard deviation above and below the mean) as recommended by Aiken and West (1991; Figure 1).

Transportation had an overall positive relationship with the dependent variable femininity ($F(1, 675) = 23.77$, $p < .001$, $\Delta R^2 = .03$), but the positive slope of transportation was steeper in participants who had read the experimental story
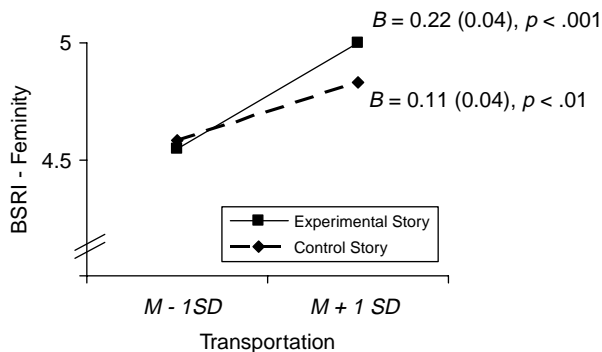

Figure 1. Estimates of the simple slopes (with standard errors) of the effect of transportation on self-rated femininity after reading the experimental story with gender-stereotypic information or the control story.

($B = 0.22$, $SE_B = 0.04$, $p < .001$, $\Delta R^2 = .04$) than in participants who had read the control story ($B = 0.11$, $SE_B = 0.04$, $p < .01$, $\Delta R^2 = .01$). More importantly, participants reporting a high level of transportation during reading rated themselves as more feminine after reading the experimental story compared to the control story (estimated difference between groups: $B = 0.15$, $SE_B = 0.08$, $p < .05$, $\Delta R^2 = .01$). In participants reporting a low level of transportation (one standard deviation below the mean), there was no difference in the femininity ratings after reading the experimental versus the control text (estimated difference between groups: $B = -0.04$, $SE_B = 0.09$, $p = .67$). Thus, the story featuring a gender-stereotyped female protagonist increased the extent to which the participating women viewed themselves as feminine, provided that they felt transported into the story world.

Parent status as moderator

Parent status yielded no main effect, $F(1, 675) = 0.6$, $p > .43$, indicating that being a mother had no overall influence on the feminine gender role. However, we found a significant interaction effect of the story manipulation with parent status, $F(1, 675) = 6.10$, $p < .05$, $\Delta R^2 = .01$ (Figure 2). As expected, participants who did not have children tended to rate themselves as more feminine after reading the experimental story with gender-stereotyped information compared to participants who had read the control story, $F(1, 675) = 4.86$, $p < .05$, $\Delta R^2 = .01$, for the simple main effect. By contrast, participants with children rated themselves as less feminine after reading the
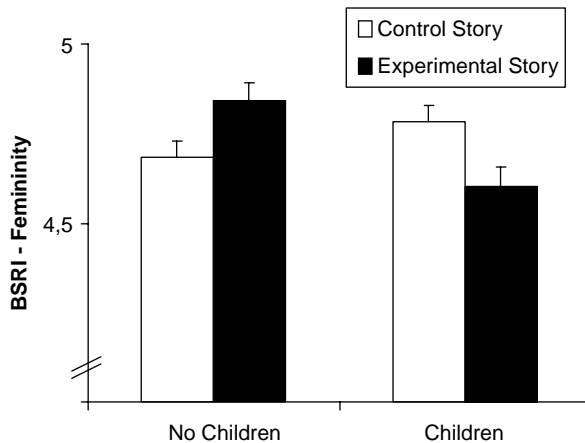
Figure 2. Effects of the story manipulation (experimental story with gender-stereotyped information vs. control story) on self-rated femininity in participants with and without children. Error bars represent the standard error of the mean.

experimental story compared to those who had read the control story, although the simple main effect did not reach significance, $F(1, 675) = 2.52$, $p = .11$. Thus, in participants with children, the experimental story with gender-stereotyped information seems to have exerted neither an assimilation nor a contrast effect. Finally, it should be noted that the three-way interaction of the story manipulation, parent status, and transportation was not significant, $F(1, 675) = 1.04$, $p = .36$, indicating that the observed moderator effect of transportation does not differ for participants with or without children.

Effects of the story manipulation on masculinity

Additional analyses were conducted repeating the analyses reported above but using the masculinity score of the sex-role inventory instead of the femininity score as the dependent variable. Neither the main effects for story, transportation, or parent status, nor any of the interactions of these variables reached significance (for all effects: $F < 1.0$, $p > .32$). This result suggests that the story influence observed applies specifically to the self-concept domain addressed by the feminine protagonist story.

DISCUSSION

A growing body of evidence indicates that mass-mediated stories can not only influence how we judge features of the outside world but also affect how we perceive ourselves. The present work extends previous findings in several ways. It contributes to general questions of gender-stereotyping and the media as it demonstrates that the gender role of adults is vulnerable to the influence of media fare that portrays traditional gender roles (cf. Ward & Harrison, 2005). More generally, our research suggests that two conditions seem to determine the strength and direction of the impact of stories on the self: In line with previous work (Sestir & Green, 2010), transportation was identified as a factor that facilitates a story's influence on the recipients' self-concept. Notably, transportation was positively associated with self-reported femininity in both the experimental and the control group, indicating that femininity is correlated with transportation irrespective of whether the story contains information related to a feminine gender role. Possibly, this is due to the fact that entering the world of a narrative typically involves perspective-taking and experiences of sympathy, empathy, and/or identification with the main protagonist (cf. Mar & Oatley, 2008). These experiences are arguably related to the femininity concept (e.g., caring, affectionate). Thus, even if the story world is unrelated to the female gender role concept, experiencing more transportation relates to more feminine self-ratings. However, in our experiment the strength of the association more than doubled in participants who had read the experimental story. Thus, transportation does not serve as a facilitator of the feminine self-concept change per se but those

immersed into the story world are particularly likely to adopt a self-concept that is in line with the attributes of the story protagonist. Future studies may provide additional support for this prediction by incorporating more protagonist-centered alternatives to transportation such as empathy (Zillmann, 1991) or identification (Oatley, 1994).

Our results further indicate that stories and their main protagonists may lead to portrayal-congruent effects only in a subsample of the audience that differs from the protagonist in a salient characteristic. In our study, media content elicited no such effects for participants who shared the characteristic of being a mother with the protagonist. However, we did not find evidence for a contrast effect. Nevertheless, the absence of a portrayal-congruent effect in participants who were mothers might be due to the fact that recipients perceived the protagonist as a standard of comparison rather than a frame of interpreting their own thoughts, feelings, and behaviors. In line with previous findings on self-perceptions of slimness and attractiveness, our study shows that the level of similarity between recipient and protagonist might affect whether self-perceptions are assimilated to protagonist characteristics (López-Guimerà et al., 2010). Interestingly, parent status exerted its moderator effect independently of transportation as there was no three-way interaction of story manipulation, parent status, and transportation. This leaves open the possibility that a mechanism other than (or in addition to) transportation accounts for the effect of the story with the female protagonist on femininity in participants without children.

The study's contribution notwithstanding, several limitations need to be discussed. First, the narrative impact observed in this experiment may appear to be little, as the reported effects, although significant, were quite small and story impact was assessed only in the short term. Compared to other types of attitudes and beliefs, gender roles can be considered to be rather stable personality characteristics once adulthood has been reached (e.g., Kirchmeyer, 2002). As a consequence, there are likely psychological limits in changing the adult gender role self-concept through stories. Nonetheless, one may suspect that a steady diet of traditional gender role stories leads to gender role shifts that are larger in size than observed in the present experiment, as the influence of similar stories may accumulate. Moreover, selective exposure can contribute to an upward spiral leading to the choice of media that provide traditional gender role fare and, in turn, intensify an existing traditional gender role self-concept. Correlational and longitudinal studies provide some evidence on the long-term convergence of the media used on the one hand and the recipients' gender role self-concept and related attitudes on the other (e.g., Frueh & McGhee, 1975; Morgan, 1982; Saito, 2007; see Durkin, 1985, for a critical review of early research).

Second, in the present study, transportation was included as a measured predictor rather than manipulated experimentally. Although previous findings suggest that state transportation can affect beliefs, whereas prior beliefs are less likely to influence transportation (Dal Cin, Zanna, & Fong, 2004), a stricter test of

the moderation hypothesis would involve an experimental manipulation of transportation.

Third, the second moderator parent status was a measured variable as well, which leaves room for alternative explanations for the interaction of story manipulation and parent status. Women with children differ from women without children in many respects. For example, they have greater knowledge about childcare or are aware of men who engage in childcare. In principle, all of these differences may contribute to the interaction of story manipulation and parent status so that it remains unclear whether the perceived similarity between recipient and story character accounts for these differences. Future research should clarify this issue by measuring this variable directly.

Fourth, the experiment reported here was based on only one experimental story with gender-stereotyped information plus one control story. Despite the fact that these stories were carefully selected, parallelized with respect to several important characteristics, and validated, it is difficult to predict whether and to what extent the effects found in this experiment generalize to other types of stories that contain gender-stereotyped information (or not). In addition, it would be interesting for future research to investigate whether the effects generalize to other aspects of the self-concept besides gender roles. The results of the present research give rise to optimism about this endeavor.

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