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Small Word Change, Large Effect on News Users? How the Use of Gender-Inclusive Language in News Articles Influences News Selection and News Engagement

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ABSTRACT

Gender-inclusive language (GIL) has been increasingly used in recent years (e.g., in journalistic news), but the effects are largely unexplored. We conducted two preregistered studies with samples representative of the German adult population to explore how GIL (i.e., gender star and pair forms in German) influences the selection of and engagement with news articles compared to the use of the masculine-only form. Study 1 ($N = 1,040$) showed that people with positive attitudes toward GIL are more likely to select news headlines with GIL, while those with negative attitudes tend to avoid them. Study 2 ($N = 812$) revealed that women did not experience more ostracism when reading articles that use the masculine-only form, but men felt more ostracism when reading the gender star. Experienced ostracism was associated with a lower intention to use the news source again. Furthermore, experienced inclusion, but not experienced ostracism, was significantly related to news engagement intentions. The findings offer practical insights for media professionals and extend research on selective exposure and ostracism by considering language as a key factor in news selection and engagement.

Although gender-inclusive language (GIL) has been increasingly used in recent years (e.g., in journalistic news; Jones et al., 2023), the effects on recipients are largely unexplored. GIL is used as a replacement for the *masculine-only form*, that is, instead of using grammatically masculine forms (e.g., he) for all persons regardless of their gender identity. A prominent example of GIL is using both feminine and masculine forms (e.g., he or she). GIL involves a minimal change in content – for example, within German news articles, less than one percent of the words are changed when switching to GIL (Müller-Spitzer et al., 2024). Nevertheless, GIL is controversial in society (Acke, 2023; Jones et al., 2023). A key argument in favor of GIL is that it could enhance the mental representation of women and non-binary persons (e.g., Jöckel et al.,

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2021). A common counterargument is that it would be unaesthetic and inconvenient (Vergoossen et al., 2020).

A question that has so far received little attention is whether and how the use of GIL changes the way individuals select and engage (e.g., sharing, commenting) with news. GIL is often understood as a political statement and triggers strong emotions (P. Johnson, 2024; Vergoossen et al., 2020). Therefore, the use of this language could cause a selective exposure mechanism, meaning that individuals with positive attitudes toward GIL might select news articles that use this language more frequently than those with negative attitudes. Furthermore, it is possible that women feel ostracized, that is, ignored or excluded, by the masculine-only form in news articles (Stout & Dasgupta, 2011; Williams et al., 2000). This could reduce their interest in reading this article and engaging with it.

We aim to examine how GIL in news articles, as opposed to the masculine-only form, influences news selection and engagement, contributing to the development of two research areas: First, attitudes toward the news topic and source have been identified as main triggers for selective exposure, but not attitudes toward language use (Westerwick et al., 2017). Thus, our research contributes to a better theoretical understanding of selective exposure and, in particular, to answering the question to what extent very fine-grained media features such as GIL also lead to selectivity via the same mechanism (i.e., attitude consistency; B. K. Johnson, 2020). Second, regarding ostracism research (Williams, 2007, 2009) and its application in media psychology, we test for the first time the extent to which ostracism toward women can arise through the use of the masculine-only form in news and how this helps to explain news selection and engagement. The idea that feelings of ostracism could lead to people turning away from certain news has been mentioned in previous research, but has not yet been systematically investigated (e.g., Ahmed et al., 2024; Holt et al., 2019).

Gender inclusion is discussed for many languages around the world – most strongly for grammatical gender languages, which are spoken by 39% of the world population (e.g., Spanish, Russian, Hebrew; Jakiela and Ozier (2018). In these languages, all nouns are given a gender (Stahlberg et al., 2007). In German and French, for example, the word citizen is assigned a masculine gender as standard. A common GIL alternative is the *pair form*, meaning that both masculine (_M) and feminine (_F) forms are mentioned, as in “Bürger_M und Bürgerinnen_F” in German and “citoyen_M et citoyenne_F” in French. In addition, special characters like the so-called *gender star* (e.g., “Bürger*innen”) or an interpoint (“citoyen-ne”) are used to include non-binary persons (Burnett & Pozniak, 2021; Waldendorf, 2024). In contrast, natural gender languages, such as Swedish and English, do not arbitrarily assign a grammatical gender to nouns (Stahlberg et al., 2007). Still, in English, for example, GIL has been proposed as an alternative to the generic use of masculine pronouns (e.g., he)

and specific nouns signaling a masculine gender (e.g., fireman, mankind). As our research focuses on GIL in German (i.e., pair form, gender star), in the General Discussion we discuss in what way our results can be generalized.

We conducted two preregistered studies with representative German samples: Study 1 focuses on news selection based on headlines, and Study 2 experimentally examines readers' responses to entire news articles.

Previous Research on the Use and Effects of GIL in the News

Previous studies have investigated when GIL is used in the news and the concerns news practitioners associate with it. Since only a few news organizations have guidelines for the (non-)use of GIL, many journalists have to decide for themselves whether and how to use GIL (e.g., Fried and Awad (2024). Importantly, GIL is often perceived as political. It is associated with a feminist left-wing political orientation and a request for others to use this language as well (Burnett & Pozniak, 2021; Decock et al., 2023; Gustafsson Sendén et al., 2021; Vergoossen et al., 2020; Waldendorf, 2024). In contrast, the use of the masculine-only form tends to signal a politically conservative ideology (Burnett & Pozniak, 2021). As a result of this politicization, conservative news users often react to the use of GIL with harsh, emotional criticism, leading journalists to fear a shrinking audience (Fried & Awad, 2024). The politicization is also reflected in the fact that right-leaning media use GIL less frequently than left-leaning newspapers (Waldendorf, 2024).

Regarding the effects of GIL in the news, research has so far focused on mental representations, readability, and comprehensibility (e.g., Blake & Klimmt, 2010; Decock et al., 2023; Jöckel et al., 2021; Klimmt et al., 2008), finding that GIL increases the mental representation of women and that newly introduced GIL forms tend to be more difficult to process. Effects on news selection and engagement have not yet been studied. In the following, we explain how GIL in news articles could shape both constructs.

How Attitudes Toward GIL May Lead to Selective Exposure

Research on selective exposure deals with the question of how individuals select media based on their predispositions and media characteristics. Numerous studies have shown that people prefer news that confirm their attitudes, resulting in less exposure to news in which opposing attitudes are expressed (e.g., Arendt et al., 2016; Feldman et al., 2018; Knobloch-Westerwick & Meng, 2009; Metzger et al., 2020). A meta-analysis found that people are almost two times more likely to select information that aligns with their preexisting attitudes, beliefs, and behaviors than those that do not (Hart et al., 2009). Importantly, it has been shown that people not only avoid dissonant information on specific topics on which they have a different position, but they also avoid information because

more general cues signal dissonant content (Westerwick et al., 2017). For example, source cues – that is, a conservative, liberal, or neutral news provider – lead news users to select articles from the sources they have the most positive attitude toward, even if the content is the same (e.g., Arendt et al., 2019; Iyengar & Hahn, 2009).

There are different explanations for attitude-based selective exposure to news. In his dissonance theory, Festinger (1957) assumes that when people behave in a way that is inconsistent with their beliefs, they experience a state of dissonance. When experiencing this unpleasant state, “the person will actively avoid situations and information which would likely increase the dissonance” (Festinger, 1957, p. 3). In a similar vein, Taber and Lodge (2006) postulate a confirmation bias in their theory of motivated political reasoning, meaning that “when free to choose what information they will expose themselves to people will seek out confirming over disconfirming arguments” (p. 757). The authors justify this with the general goal of people to defend their previous beliefs and thus their identity. They argue that selective exposure to information happens largely unconsciously.

We assume that the (non-)use of GIL in news articles can stimulate selective exposure to news. This effect could be triggered by two mechanisms. First, like source cues, people might use GIL in news articles as a mental shortcut that signals to them a left-wing political tendency, which presumably also affects the content of the reporting. People with a politically right-wing attitude tend to have a more negative attitude toward GIL (e.g., Gustafsson Sendén et al., 2021). As a result, they may tend not to select news articles with GIL to avoid left-wing content. Second, a negative attitude toward GIL might make people not want to read news articles with this language form because (repeatedly) reading GIL itself might induce dissonance (seems linguistically very unaesthetic or repulsive; Acke, 2023) and challenge their beliefs about the use of GIL. Both mechanisms could apply in reverse to people who have a positive attitude toward GIL. Hence, we hypothesize that attitudes toward GIL are positively related to the selection of news articles in which GIL is used. That is, the more positive the attitude, the more often people select such articles (H1).¹

Different GIL forms may have different effects. As explained above, this research focuses on the *pair* and *gender star* forms in comparison to the masculine-only form, which are frequently used in German news articles (Waldendorf, 2024). We will explore how the predictors of news selection differ for pair versus gender star form (RQ1).

How the Masculine-Only Form May Lead to Ostracism Among Women

In many countries around the world, including Germany, women use news less often than men, which is referred to as the “gender news gap” (Mak, 2021). Previous research has identified gender role socialization, structural inequalities,

and a lack of gender diversity in newsrooms as reasons for women's lower news use (Sui et al., 2024; Toff & Palmer, 2019).

A further explanation could be that women experience ostracism when the masculine-only form is used – that is, they may feel ignored and excluded (Stout & Dasgupta, 2011; Williams, 2007). Ostracism can be directed not only against individuals but also against groups of people, and it can occur regardless of whether the ostracism was intentional or not (Williams, 2007). According to the temporal need-threat model (Williams, 2009), experiencing ostracism is painful: It elicits, for example, sadness and anger, and threatens basic human needs such as belonging. One of the ways to cope with this experience is moving away from the source of ostracism to avoid further pain (Ren et al., 2016; Williams, 2009; Williams & Nida, 2011). According to the model, even minimal signals are enough to trigger ostracism (Williams, 2007, 2009), and initial studies indicate that the masculine-only form has such a signaling effect on women. Stout and Dasgupta (2011) found that the use of the masculine-only form in job descriptions and interviews as opposed to GIL significantly reduced women's sense of belonging in the workplace and their interest in pursuing the job. These findings have been successfully replicated in two further studies (Keener & Kotvas, 2023; Rosenberger & Claypool, 2023). Using the masculine-only form can be conceptualized as group-based ostracism directed against the group of women. According to Stout and Dasgupta (2011), even though the masculine-only form is still widely accepted and those who use it may not intend to exclude anyone, “at a subjective level, women may experience it as an active rejection of their ingroup” (p. 758). This form of ostracism overlaps with research on social identity threat, which indicates that situational cues can remind individuals of negative stereotypes attached to their group (e.g., “politics is not for women”), which in turn makes them want to remove themselves from that stereotyped environment (e.g., Dvir-Gvirsman, 2019; Steele et al., 2002).

Masculine-only language in news articles could trigger similar effects, presumably most strongly when the article is about a group of people to which the female reader belongs (e.g., citizens). If the masculine-only form is used to refer to this group, this could trigger ostracism in women and subsequently lead them not to select the article for reading to avoid further experiences of ostracism. Previous research has shown that the masculine-only form does not lead to ostracism among *men* (Rosenberger & Claypool, 2023; Stout & Dasgupta, 2011). Consequently, it can be assumed that women are more likely to be interested in reading news articles that use GIL than men because only they may experience ostracism in response to the masculine-only form. We thus hypothesize that women select news articles that use GIL more frequently than men (H2).²

Study 1

Study 1 focuses on how GIL in headlines influences the selection of news articles among people with diverse attitudes toward GIL and across different news topics.

Method

Following previous studies of selective exposure in news consumption (e.g., Arendt & Karadas, 2020; Arendt et al., 2019; Kroon et al., 2021), we conducted an online survey in which participants were asked to choose between two news headlines (“choice trials”). While the headline topics were the same for each selection, the use of GIL varied. We used headlines because they are relevant for making news selection decisions across different media channels (e.g., newspapers, news apps, teasers on linear TV, news postings on social media). The interviews lasted 13 minutes on average. We preregistered hypotheses, method, sample size justification (based on a power analysis), analysis plan, and exclusion criteria before data collection (<https://doi.org/10.17605/osf.io/cy7sb>). The study material (i.e., dataset, questionnaire, R markdown, and additional analyses) can be found on the open science framework (OSF; <https://doi.org/10.17605/osf.io/ug6ek>).

Participants

Overall, 1,037 people (50% female) who use news at least occasionally and correctly answered the attention check item (see below) completed the survey. They were sampled via a commercial online access panel operated by the market research company Bilendi to be representative of the German population in terms of age, gender, education, and geographical region (i.e., federal state). On average, participants were 45 years old ($SD = 14.55$, range: 18–69). Regarding education, 23% indicated a low (e.g., without completed professional training), 49% a medium (e.g., professional training), and 28% a high educational attainment (e.g., university degree).

Measures

News Selection. Participants were exposed to 20 choice trials (four of which were distraction trials). In each trial, they were presented with two headlines with short teasers and asked to choose the article they would most likely read if they encountered both in everyday life. In one of the headlines, the masculine-only form was used, and in the other, GIL was used. The two headlines and teasers referred to the same topic, but each used different wording to reduce the risk of participants guessing the goal of the study. The pair form was used in eight headlines, and the gender star form in eight further headlines. In the distraction trials, no

GIL was used at all. Both the order of the trials (i.e., topics) and the order of the language form within the headline pairs (i.e., whether GIL was on the left or right) were randomized. In addition, we randomly varied *between* subjects, which of the two wordings of each pair of headlines used GIL. The randomizations were designed to ensure that differences in the selection of headlines could only be attributed to the (non-)use of GIL.

For the preparation of the study material, we adapted headlines and teasers from leading German daily newspapers and magazines. We chose four topics typically associated with men (e.g., politics), four topics typically associated with women (e.g., education), as well as four neutral topics (e.g., environment; Cann & Mohr, 2001; North, 2016).³ Four additional choice trials directly addressed readers (i.e., with headlines about “citizens” or “readers”). The headlines were pretested ($N = 71$). The questionnaire, headlines and teasers, and pretest results can be found on the OSF (see link above).

In each trial, selecting the headline with GIL was coded as 1, and selecting the headline with the masculine-only form was coded as 0. We summed up all choice trials (excluding the distraction trials) so that higher values of the sum index indicate a stronger preference for news articles with GIL ($M = 7.26$, $SD = 2.74$, ranging from 0 to 16). Furthermore, we formed two sum indices for preferences for the pair form ($M = 3.75$, $SD = 1.65$) and gender star form ($M = 3.51$, $SD = 1.75$, both ranging from 0 to 8).

Attitude. Participants were asked to answer five items on a bipolar scale ranging from 1 to 7 (e.g., “What do you personally think about the use of GIL in written texts?”: bad – good, negative – positive, harmful – beneficial, unfair – fair, foolish – wise), following previous research (e.g., Arendt & Karadas, 2020; Arendt et al., 2016). We created mean indices for general attitudes toward GIL ($\alpha = .96$, $M = 3.75$, $SD = 1.74$) and specific attitudes regarding the pair form ($\alpha = .97$, $M = 4.75$, $SD = 1.75$) and gender star form ($\alpha = .97$, $M = 3.47$, $SD = 1.91$), with higher values indicating more positive attitudes.

News Use Frequency. The general frequency of news use was assessed by asking participants how often they usually read, hear, or watch current news on a ten-point scale, from 0 = *never* to 9 = *more than 10 times a day* ($M = 5.82$, $SD = 2.37$).

Finally, the questionnaire included a suspicion check (i.e., participants were asked to guess the goal of the choice trials) and an attention check item (i.e., an instruction to select the answer option “does not apply at all”).

Statistical Analysis

As preregistered, we used hierarchical regression analyses to test the predictors of the selection of news headlines with GIL. Education, age,

version (i.e., dummy-coded variable based on the randomized between-subjects assignment of which of the headlines used GIL), and frequency of news use were entered as controls in the first step of the model. Education was dummy coded into two variables (i.e., upper secondary/post-secondary education and first/second stage of tertiary education, with primary/lower secondary education serving as the reference group). Attitude toward GIL was included in the second step, and gender was entered in the final step.

We preregistered to exclude participants who guessed the aim of the choice trials if their choice trial responses significantly differed from the other participants. Only nine percent of participants correctly guessed the aim ($N = 97$). However, a Welch's t -test revealed that they selected headlines with GIL much less frequently ($M = 3.39$, $SD = 3.31$) than participants who did not guess the aim ($M = 7.66$, $SD = 2.33$), $t(106.06) = 12.37$, $p < .001$, $d = 1.75$. Moreover, participants who correctly guessed the aim reported a more negative attitude toward GIL ($M = 2.65$, $SD = 1.57$) than the others ($M = 3.86$, $SD = 1.71$), $t(1035) = 6.66$, $p < .001$, $d = 0.71$. In line with our preregistration, we conducted our confirmatory analysis based on a subsample consisting only of people who did not guess the aim ($N = 940$). Because we consider it useful to discuss differences between the samples in theoretical and methodological terms, we also report analyses for the full sample (see exploratory analyses).

Results

Confirmatory Analyses

Table 1 shows the results of the hierarchical regression analyses for the frequency of selecting headlines with GIL. As for the control variables, a higher level of education was associated with a lower selection of articles with GIL. Supporting H1, attitude toward GIL predicted news selection in that a more positive attitude led to a higher selection of headlines with GIL. Gender did not significantly predict news selection. Hence, H2 was not supported.

To answer RQ1, which asked for differences between GIL forms, we repeated the analyses using the indices of the selection of the pair or gender star form, respectively, as dependent variables. Instead of general attitudes toward GIL, we included attitudes toward the pair and gender star form. Attitudes toward the star form significantly affected the selection of headlines in which the star form was used ($\beta = .13$, $t(933) = 4.53$, $p < .001$), while attitudes toward the pair form did not affect the selection of headlines with pair form ($\beta = .01$, $t(933) = 0.46$, $p = .643$). There was no significant effect of gender in either analysis. The explanation of variance was greater for the star form (6%) than for the pair form (2%, full report in Table A2 in the online supplement on OSF).

Table 1. Hierarchical multiple regression analysis predicting the frequency of selecting news headlines with GIL (all trials).

	Model 1		Model 2		Model 3	
	Full sample β	Subsample β	Full sample β	Subsample β	Full sample β	Subsample β
Education 1 (1 = upper secondary/post-secondary education, 0 = primary/lower secondary education)	-.20**	-.12	-.16*	-.10	-.15*	-.11
Education 2 (1 = first/second stage of tertiary education, 0 = primary/lower secondary education)	-.37***	-.20*	-.33***	-.19*	-.33***	-.20*
Age	-.00	.01	.03	.02	.04	.02
Version (1 = headline version 2, 0 = headline version 1)	-.13*	-.09	-.13*	-.09	-.13*	-.09
News use	.04	.02	.02	.01	.02	.00
Attitude toward GIL			.27***	.12***	.26***	.12***
Gender (1 = female, 0 = male)					.03	-.06
R^2	.02	.00	.09	.02	.09	.03
ΔR^2			.07	.02	.00	.01
ΔF			77.21***	17.72***	.25	1.24

Note. Whereas the full sample consists of all $N = 1,037$ participants, the subsample consists only of participants who did *not* correctly guess the aim of the choice trials ($N = 940$). Standardized regression coefficients are reported. * $p < .05$, ** $p < .01$, *** $p < .001$.

Exploratory Analyses

We also conducted the above-described analyses for the full sample, which includes participants who guessed the aim of the choice trials. As Table 1 shows, the effects on news selection are similar, but stronger overall. The final regression model explained 9% of the variance in news selection for the full sample, compared to 3% for the subsample. The results on the selection of headlines with pair or gender star form for the full sample can be found in the online supplement (Table A3). In brief, attitude significantly predicted news selection for both the star and pair forms. However, the explanation of variance was significantly greater for the star form (11%) than for the pair form (4%).

Discussion

Results from the choice trials indicated that, as expected, people with a more positive attitude select articles with GIL slightly more frequently than those with a negative attitude. Thus, the findings are in line with previous studies on selective exposure (e.g., Arendt & Karadas, 2020; Knobloch-Westerwick et al., 2015; Westerwick et al., 2020). What is new, however, is that we showed that attitude-based selective exposure to news occurs due to the choice of language. Whereas previous research investigated the impact of attitudes toward news topics and news sources (Westerwick et al., 2017), our findings suggest that news

users also consider the (non)use of GIL as an indication of consonant or dissonant content. We found this effect in a sample in which the participants did not suspect that the study was about GIL, consistent with the assumption that selective exposure happens largely unconsciously (Arendt et al., 2019; Taber & Lodge, 2006). Furthermore, we found that the effect of selective exposure applies primarily to the use of the gender star and less to the pair form, which can be explained by the fact that the gender star is less common and more politically charged (Waldendorf, 2024). This finding thus underlines the importance of the political meaning of GIL for its impact on news users.

Our data did not support the assumption that women select articles with GIL more frequently than men. This assumption was based on the idea that women experience ostracism when reading the masculine-only form, as previous studies suggest (e.g., Rosenberger & Claypool, 2023; Stout & Dasgupta, 2011). It could be that women need to read a longer news text with the masculine-only form to experience ostracism, or that the topic of the reporting must affect them personally to a greater extent. It is also possible that our female participants who read the masculine-only form indeed felt ostracized, but that this experience did not influence their news selection.

The responses of the participants who guessed the aim of the choice trials strongly differed from those of the other participants. They had a much more negative attitude toward GIL and selected headlines with GIL less frequently. Moreover, the attitude-based selective exposure effect was stronger when participants who guessed the aim were included in the sample. There are several possible explanations for these findings. First, it could be that a particularly negative attitude toward GIL led participants to notice this language use and thus guess the study's aim. Second, the suspicion that the study is about GIL may have led to some kind of reactance (Brehm & Brehm, 1981), meaning these participants deliberately selected fewer articles with GIL. Third, it must be mentioned that research on selective exposure typically focuses on people with positive and negative attitudes, and that significantly stronger effects are found when people with neutral attitudes are excluded (Feldman et al., 2013). By excluding participants who guessed the aim of the trials, participants with rather negative attitudes were omitted from our subsample, which explains the weaker effects. Regarding the use of choice trials in selective exposure research, our results suggest that researchers should determine and justify their approach to aim guessing before collecting and analyzing data.

Study 2

Study 2 complements Study 1 in four ways. First, it examines the effects on news users when they read GIL in an entire news article and not just in the headline. On the one hand, the use of GIL could be less significant in an entire

article than in a headline due to a larger amount of non-gendered words (Müller-Spitzer et al., 2024). On the other hand, it is conceivable that if GIL occurs several times over many sentences, individuals may experience particularly strong dissonance due to the repetition. Furthermore, with the study design, we aim to clarify the open question from Study 1 as to whether women only experience ostracism when they read an entire article. Second, we test the hypotheses on selective exposure not based on article selection as in Study 1, but regarding the extent to which people intend to use the news source in the future (e.g., Metzger et al., 2020). The results could therefore provide an initial indication of how the use of GIL influences news selection in the long term. Third, we test for the first time to what extent women experience ostracism due to the masculine-only form in news articles and how this explains their news use behavior. We had assumed this mechanism for Study 1, but did not test the actual process. Finally, we also examine the intention to engage with the article as a further possible consequence of the ostracism experienced. News engagement exceeds mere selection and exposure and covers interactions between people that revolve around news content, such as sharing and discussing news with friends, as well as users' interaction with news content, such as rating, liking, and commenting, or searching for further information on the topic (Lu & Luqiu, 2020; Su et al., 2021). Overall, these extensions strengthen the generalizability of our findings and provide a test of the underlying mechanism of the effects of language use specifically on women.

Regarding the selective exposure effect, we are interested in what happens when users read an article in which the language use does not correspond to their attitude. Hence, Study 2 focuses on individuals with positive and negative attitudes toward GIL (Feldman et al., 2013). Due to the deviating measurement of selective exposure and the different methodological design compared to Study 1, we adapt H1: The effect of GIL (vs. masculine-only form) on participants' intention to use the news source again should be moderated by their attitude toward GIL in that individuals with a positive attitude report a higher likelihood of using the source than individuals with a negative attitude (**H1**, adapted).

Study 1 revealed that the effect of selective exposure applies primarily to the use of the gender star and less to the pair form. From the perspective of dissonance theory (Festinger, 1957), the gender star could evoke stronger cognitive dissonance for two reasons and, in turn, be more likely to influence news selection. First, the gender star is perceived as more political and can therefore be used more easily as a mental shortcut to a left-wing political tendency of the reporting (Burnett & Pozniak, 2021; Waldendorf, 2024). Second, the gender star is less common, so it may be perceived as more disturbing linguistically than the pair form (Acke, 2023; Waldendorf, 2024). We therefore hypothesize that the effect described in H1 is stronger when the

star form (vs. masculine-only form) is used than when the pair form (vs. masculine-only form) is used (**H3**).⁴

Regarding specific effects on women, we expect that GIL could help to flatten two divides. Previous research not only shows that women read news less often than men (Mak, 2021) but also that they engage less with news (e.g., Peacock & Van Duyn, 2023). As explained above, based on previous research (e.g., Rosenberger & Claypool, 2023; Stout & Dasgupta, 2011) and the temporal-need threat model (Hart et al., 2009; Williams, 2007), we assume that the masculine-only form in news articles can trigger ostracism in women. To avoid further experiences of ostracism, they may not want to engage with the article and avoid further reporting by the news source. Hence, we assume that when the masculine-only form is used in news articles, women experience higher levels of ostracism than when GIL is used (**H4**). Furthermore, when the masculine-only form is used, women should have lower intentions (**H5**) to use the news source again and (**H6**) to engage with the news than when GIL is used. Finally, ostracism should mediate the effects of using the masculine-only form (vs. GIL) on the intentions (**H7a**) to use the news source again and (**H7b**) to engage with the news.

Method

We conducted an online experiment with a 3×2 mixed factorial design (use of GIL $\times$ topic). Use of GIL was manipulated between participants, meaning that participants read two news articles, both with the same language form: either with the *masculine-only form*, the *pair form*, or the *gender star form*. Because in most of the data analyses, we compare the masculine-only form with GIL (without differentiation between GIL forms), the randomized assignment to the groups was based on the following distribution: 50% of participants read the masculine-only form, 25% the pair form, and 25% the gender star form. To test the generalizability of our findings, we varied the topic of the articles within participants. Participants were asked to read the two articles, with the order varying randomly. After reading each article, they answered all measures of the reading experience. Using the same items as in Study 1, the survey included a suspicion and an attention check. Completing the survey took 25 minutes on average.

Again, we preregistered hypotheses, method, sample size justification (based on a simulation-based power analysis), analysis plan, and exclusion criteria before data collection (https://osf.io/vnb6a?view_only=5fe907b443eb45ea8e69ac37db5edff3). The study material (i.e., dataset, questionnaire, stimulus, R markdown, and additional analyses) can be found on the OSF (<https://doi.org/10.17605/osf.io/et95u>).

Stimuli

For the preparation of the study material, we modified news articles from German newspapers. As explained above, feelings of ostracism due to the

masculine-only form are most likely when the news is (supposedly) about a group of people to which female readers belong. We therefore made sure that the articles deal with topics that affect most readers: Article 1 is about challenges for Germany's economy and what this means for citizens, and Article 2 is about the effects of artificial intelligence on everyday life. The word "citizens" appears several times in both articles in masculine-only form or GIL, depending on the experimental condition. To test the success of our manipulations, we asked participants to recall the use of language (single choice between four language forms and "don't know" option) and the contents of the articles (single choice between four topics and "don't know" option).

Participants

A total of 1,005 people ($N_{\text{Situation}} = 2,010$) who use news at least occasionally and correctly answered the attention check and the manipulation check item on recalling the contents of the two articles took part in the survey. A quota sample representing the German population was drawn in the same way as in Study 1. We excluded cases where participants had incorrectly answered the manipulation check on recalling the use of GIL. Language use was recalled best in articles with the pair form (75%), followed by the star form (72%), and the masculine-only form (55%). Following our preregistration, we did not exclude the 24 participants who guessed the aim of the study because their questionnaire responses did not significantly differ from the other participants. Our final sample consists of $N = 812$ participants (52% female; $N_{\text{Situation}} = 1,294$). On average, participants were 44 years old ($SD = 14.12$, range: 18–69). Regarding education, 20% indicated a low (e.g., without completed professional training), 49% a medium (e.g., professional training), and 31% a high educational attainment (e.g., university degree).

Measures

Ostracism. We measured experiences of ostracism while reading the articles with two items adapted from Williams et al. (2000). Due to a low correlation (Article 1: $r = 0.09$, $p = .023$; Article 2: $r = 0.04$, $p = .348$) between the items, we use the one that best reflects ostracism for the hypothesis tests: "To what extent did you feel that you were being ignored or excluded by the article?" (1 = *not at all*, 7 = *very much*; Article 1: $M = 2.41$, $SD = 1.58$, Article 2: $M = 2.35$, $SD = 1.54$). In our exploratory analyses, we mention the findings for the second item, which measured the opposite, namely the feeling of being included by the article (Article 1: $M = 3.90$, $SD = 1.69$; Article 2: $M = 3.89$, $SD = 1.66$).

Intention to Use the News Source Again. In line with previous research (e.g., Metzger et al., 2020), we measured participants' self-reported likelihood of using the news source again in the future ("How likely is it that you would read

more articles from this news source?,” 1 = *not at all likely*, 7 = *very likely*; Article 1: $M = 3.82$, $SD = 1.68$; Article 2: $M = 3.98$, $SD = 1.65$).

News Engagement. Following prior studies (e.g., Curry & Stroud, 2021; Lee et al., 2019), we measured news engagement intentions by asking participants to report their likelihood to engage in a range of activities: “How likely would you be to . . . ” (1) “. . . rate, like, or favorite the news article?” (2) “. . . comment on the article,” (3) “. . . share the news article with others,” (4) “. . . have conversations with others about the topic?” (5), “. . . seek out more information about the topic?” (1 = *not at all likely*, 7 = *very likely*; Article 1: $\alpha = .89$, $M = 2.72$, $SD = 1.45$; Article 2: $\alpha = .89$, $M = 2.84$, $SD = 1.49$). In addition, we assessed participants’ general frequency of news engagement as a control variable (five items; 1 = *never*, 7 = *always*; $\alpha = .86$, $M = 2.98$, $SD = 1.18$).

Attitude. We measured attitudes toward the use of GIL in written texts in general ($\alpha = .96$, $M = 3.60$, $SD = 1.92$) and specifically for the pair form ($\alpha = .97$, $M = 4.86$, $SD = 1.80$) and gender star form ($\alpha = .97$, $M = 3.31$, $SD = 1.99$), using the same items as in Study 1.

Using the item from Study 1, we also measured the general frequency of news use ($M = 5.69$, $SD = 2.36$).

Statistical Analysis

As preregistered, we conducted multilevel regression analyses to account for the nested data structure, with random intercept terms by participant and by topic, to account for intra- and interpersonal variance as well as variance explained by the articles (Hox et al., 2018). We ran the multilevel models for each dependent variable using the R package lme4 (Bates et al., 2023). Person-level predictors (Level 2) were grand-mean centered, and situation-level predictors (Level 1) were group-mean centered.

Following our preregistration and previous research, we excluded people with a neutral attitude toward GIL for the test of H1 because the mechanism of selective exposure is less applicable to them (i.e., dissonance unlikely; Feldman et al., 2013). The result from Study 1, that significantly stronger effects on selective exposure occur when people with strong (negative) attitudes are in the sample, supports this approach. We used the mean index of attitudes toward the use of GIL to create a subsample consisting only of participants with positive and negative attitudes ($N_{\text{Person}} = 572$; $N_{\text{Situation}} = 915$). To that end, we trichotomized the variable according to whether participants reported a positive (index score ≥ 5), negative (index score ≤ 3), or neutral attitude (index score > 3 and < 5).

Results

Confirmatory Analyses

To test the effects on the intention to use the news source again, we conducted a multilevel analysis with use of GIL ($-0.5 = \text{"not used," } 0.5 = \text{"used"}$), attitude toward GIL, and control variables (education, age, gender, and frequency of news use) as predictors, using the subsample of participants with positive and negative attitudes. Attitude toward GIL ($b = 0.17, SE = 0.05, t = 3.58, p < .001$), age ($b = 0.01, SE = 0.00, t = 2.65, p = .008$), and frequency of news use ($b = 0.14, SE = 0.03, t = 5.05, p < .001$) were significantly related to the intention to use the news source again. Use of GIL had no significant effect ($b = 0.05, SE = 0.14, t = 0.38, p = .702$). Unexpectedly, there was no significant two-way interaction between use of GIL and attitude ($b = 0.00, SE = 0.06, t = 0.04, p = .968$). Thus, H1 is rejected.

To test the hypothesis that the interaction effects are stronger when the star form is used (H3), we repeated the analysis twice, using the dummy-coded variables use of the star form ($-0.5 = \text{"pair form/masculine-only form," } 0.5 = \text{"star form"}$) and pair form ($-0.5 = \text{"star form/masculine-only form," } 0.5 = \text{"pair form"}$) as independent variables. Participants' specific attitudes toward gender star and pair forms were included in the models. Neither analysis showed any significant interaction effects, which is why H3 is rejected (Tables A2 and A3 in the online supplement on OSF).

To test the effects on ostracism, intention to use the news source again, and intention to engage with the news among women, we computed a multilevel model for each of these outcomes with use of GIL and control variables (education, age, frequency of news use, frequency of news engagement, and attitude toward GIL) as predictors, using a subsample of participants identifying as female ($N_{\text{Person}} = 419; N_{\text{Situation}} = 664$). Use of GIL had no significant effect on ostracism, nor on the intentions to use the news source again or to engage with the news (Table A4 in the online supplement). Thus, H4, H5, and H6 are rejected.

We repeated the analyses for news use and engagement intentions, adding ostracism as a predictor. As expected, ostracism was negatively related to the intention to use the news source again ($b = -0.18, SE = 0.06, t = -2.95, p = .004$). The effect of ostracism on the intention to engage with the news failed to reach significance ($b = 0.09, SE = 0.05, t = 1.96, p = .052$). Because GIL did not affect ostracism, the mediation hypotheses H7a and H7b are rejected.

Exploratory Analyses

Following our preregistration, we repeated the analyses described last for the subsample of male participants ($N_{\text{Person}} = 393; N_{\text{Situation}} = 630$). The general use of GIL had no significant effect on ostracism among men ($b = 0.30, SE = 0.16, t = 1.91, p = .057$). As in the sample of women, men who felt ostracized

had a lower intention to use the news source again ($b = 0.19$, $SE = 0.06$, $t = -3.40$, $p < .001$, Table A5 in the online supplement). In a further step, we repeated these analyses, using the dummy-coded variables use of the star and pair forms. This showed that the gender star ($b = 0.45$, $SE = 0.19$, $t = 2.32$, $p = .021$), but not the pair form ($b = 0.17$, $SE = 0.18$, $t = 0.92$, $p = .361$), had a significant effect on ostracism among men (Table A6 in the online supplement). Ostracism mediated the effect of the star form on the intention to use the news source again ($b = -0.08$, 95% CI $[-0.17, -0.01]$), but not on the intention to engage with the news ($b = 0.01$, 95% CI $[-0.02, 0.05]$).

Finally, we repeated the analyses for ostracism among women, using the item that focused on the opposite, that is, feelings of inclusion. In brief, GIL had no significant effect on inclusion, but inclusion was positively related to the intention to use the news source again ($b = 0.17$, $SE = 0.05$, $t = 3.07$, $p = .002$) and to engage with the news ($b = 0.15$, $SE = 0.04$, $t = 3.85$, $p < .001$).

Discussion

Study 2 complemented Study 1 in several ways: It tested the effects of GIL in full articles instead of headlines only and introduced two additional outcome variables of the use of GIL, namely the intention to select a news source in the future and to engage with an article. Moreover, it tested whether ostracism serves as a theoretical mechanism explaining the effects.

In Study 2, a positive attitude toward GIL generally increased the intention to use a news source again, independently of the GIL form used in the news. This suggests that news users with more liberal attitudes and a greater appreciation of non-traditional language forms are more inclined to future news use. More interesting for the aim of the present research, however, is the finding that the language form of the presented articles did not interact with the attitude toward GIL in their effect on news source selection or news engagement. Even when looking at the individual GIL forms, there was no significant effect for the star form, which had shown stronger effects in Study 1. Participants with a positive attitude toward GIL did not show increased intention to select the source or engage with a news article when this article was using GIL. This suggests that language effects of selective exposure are limited to short texts like headlines in which GIL is a more prominent heuristic feature. In comparison, full articles provide more text and more substantial information on an issue, in addition to linguistic markers. Another explanation of the divergent effects could be that the measure of intention to use a news source again, albeit common in selective exposure research, is rather hypothetical compared to the factual selection decision of Study 1.

Furthermore, we did not find any effects of language form on news engagement. This is in line with research on political online behavior showing that practical interaction is difficult to stimulate and is often determined by personal predispositions and previous engagement experiences (Kalogeropoulou et al., 2017). Moreover, as we measured news engagement on a behavioral level, future research could test the effects of GIL on cognitive (e.g., mental effort) and affective engagement (e.g., interest; Fredricks et al., 2004). Interestingly, experienced inclusion, but not experienced ostracism, was significantly related to news engagement. This could be an indication that positive emotional experiences when reading news can motivate individuals to further engage with news, while negative experiences do not necessarily prevent them from doing so (Choi et al., 2021; Park et al., 2021). Experiencing ostracism could even make some of the measured news engagement activities more likely. For example, this experience could lead individuals to post negative comments expressing their anger (Acke, 2023; Choi et al., 2021). Future studies should therefore take a closer look at the nature of individuals' news engagement after reading GIL (e.g., by analyzing the content of comments).

Study 1 had shown that women (unexpectedly) are *not* more likely to select GIL headlines compared to men. Study 2 tested whether this is due to (a lack of) ostracism. As predicted, feelings of ostracism reduced the intention to use a news source again, supporting that moving away from the source of ostracism can be a coping mechanism against feelings of exclusion (Ren et al., 2016; Williams, 2009; Williams & Nida, 2011). However, the masculine-only form did not trigger ostracism in women. Women may be used to the masculine-only form, which is still the most common (Waldendorf, 2024), and rationalize that they should feel included. The finding that the participants were significantly less able to remember the use of the masculine-only form than the other language forms supports this notion. Alternatively, this finding suggests that small language changes like GIL do not serve as triggers of ostracism. However, in contrast to this interpretation, the star form made men feel ostracized and, in consequence, reduced their intention to use the news source again (even when controlling for the men's attitude toward GIL). It might be that the star form (“*innen”) visually emphasizes the female form. It is also possible that for some men, equal linguistic representation feels like an exclusion from previous privileges (Vergoossen et al., 2020).

General Discussion

This paper aims to examine how GIL in the news influences news selection and engagement. By doing this, we aim to contribute to the further development of selective exposure and ostracism research.

First, regarding selective exposure, the studies are among the first to test the influence of short linguistic markers. This extends research on selective exposure, which mostly concentrates on arguments, content, and sources of coverage as triggers for media choice (Westerwick et al., 2017). The results are inconclusive, however. While GIL in headlines affects selective exposure, a positive attitude toward GIL does not lead to an intention to use news sources that use GIL again. The effect on headline selection was rather small, as indicated by a low variance explanation. Hence, to answer the question in the title of our manuscript, the small word change (i.e., GIL) seems to only have small effects on news users. Other predispositions (e.g., desire for accurate or useful information) and media characteristics (e.g., source, imagery) factors are probably more decisive in news selection in most cases (for an overview, see Johnson, 2020). We need to consider several methodological limitations. Both studies focus on internally valid claims about the causal effects of GIL and therefore apply laboratory designs. Necessarily, the hypothetical selection situations did not consider various context factors influencing real-world news use, among them the participants' usual media portfolio, visual and audiovisual stimuli, and social circumstances. Additionally, the participants answered several measures before reporting their future usage and engagement intentions. Because GIL involves only minimal word changes and may easily be overlaid by news content, it might have a limited impact during the questionnaire. To further investigate the effects of GIL on news selection, a link to research on political social identity could be a helpful way forward: Given the strong political polarization regarding GIL (Jones et al., 2023), future studies could investigate whether individuals identify with the group of GIL supporters versus opponents and to what extent this explains effects on selective exposure (Dvir-Gvirsman, 2019). It is also important to clarify which other formulations or words are similarly politicized and could also trigger selective exposure. This might include, for example, implementations of political correctness and diversity in media texts (Gonzalez et al., 2023).

Second, we tested whether women feel excluded through masculine-only language, leading to lower engagement with news sources and articles. We contribute to ostracism research (Williams, 2007, 2009) by showing that feeling excluded from news triggers a coping mechanism of stepping back from news sources. In previous journalism research, ostracism has been mentioned as a reason for individuals to turn to alternative news media (e.g., Holt et al., 2019) or to block misinformation (Ahmed et al., 2024), but to our knowledge, our research is the first to empirically investigate the link between ostracism and news use. The opposite experience of ostracism, that is, perceived inclusion by the news article, also showed effects on news engagement. Future studies should further investigate the role of linguistic inclusion for political participation and to combat radicalization (e.g., Lyons-Padilla et al., 2015). From a theoretical perspective, it has been well elaborated how individuals can cope with

experiences of ostracism through media use (Lutz et al., 2023). Complementarily, different triggers of ostracism, especially in media content, need to be further investigated and systematized. Importantly, our studies did not indicate that GIL in the news is a source of women's experiences of ostracism. Thus, we did not replicate findings for job advertisements with masculine-only forms, which point to ostracism among women (Keener & Kotvas, 2023; Rosenberger & Claypool, 2023). In addition to the different context (i.e., news instead of job), another explanation could be that we tested the influence of GIL in German, whereas the prior studies tested GIL in English.

Hence, an important limitation of our research is that it focuses on GIL in German. Regarding the generalizability of the findings to other languages, we consider two aspects to be crucial: First, the GIL forms need to be comparable in linguistic terms. The pair form is used in many grammatical gender languages (e.g., Italian, Russian; Horvath et al., 2016; Kirey-Sitnikova, 2021). Although there is no exact equivalent to the gender star in other languages, there are comparable GIL forms that also aim to include non-binary people and depart from official orthography rules for this purpose: Examples are the use of an asperand (@) or an × in Spanish and the interpoint (·) in French (Waldendorf, 2024). In future studies, the comparability of these and other prominent GIL forms, which differ even more linguistically from those examined here (e.g., neutralizing forms), must be empirically tested. Second, crucial to our assumptions about the selective exposure mechanism is that GIL is the subject of a controversial public debate and is understood as a political statement. In other countries, too, it is mainly GIL forms that include non-binary people and break with standard orthography that are the most controversial and political (Waldendorf, 2024).

From a practical perspective, this research provides empirical evidence for news practitioners to make informed decisions about their use of language. It can be summarized that they should carefully consider the use of GIL, especially in headlines, because it can influence the selection of articles contingent on the news users' attitudes. They might also consider that men could feel excluded when reading articles in GIL, which could reduce their interest in continuing to use the news source. Future studies need to examine more closely which GIL forms trigger GIL in male news readers and what effects this has on their news consumption.

Notes

1. As preregistered, we also examined the interaction between attitude toward GIL and attitude importance. For reasons of space, these findings are only reported in the online supplement on OSF.
2. Please note that different from the preregistration, we only refer to women and men in this manuscript because the number of non-binary persons was too small.

3. In line with our preregistration, we explored whether the effects on news selection differ for stereotypically masculine vs. feminine vs. neutral topics but did not find any differences.
4. Please note that the preregistration included further research questions and hypotheses on the effects of GIL on news credibility, cognitive and affective reactance, and media skepticism. These are not part of the recent manuscript. Therefore, the numbering of the hypotheses H3 to H7b deviates from the preregistration.

Author contributions

CRedit: **Annabell Halfmann:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing; **Jonathan Schwenzer:** Investigation, Methodology, Visualization, Writing – original draft, Writing – review & editing; **Teresa K. Naab:** Conceptualization, Funding acquisition, Investigation, Methodology, Writing – original draft, Writing – review & editing.

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Data Availability Statement

Study material, dataset, and analysis code are publicly available for Study 1 (<https://doi.org/10.17605/osf.io/ug6ek>) and Study 2 (<https://doi.org/10.17605/osf.io/et95u>).

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