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Social Psychology

# Do Consumers of All Social Classes Prefer Best Sellers? Three Preregistered Replication Studies of Na et al. (2016)

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This report presents three preregistered replication studies on the role of social class in the tendency to align one's product choices with those of others. The original research found that working-class Americans were more likely to conform to the majority's product choice compared to middle-class Americans. These class-based differences in conformity were explained by a more pronounced interdependent self-construal among lower-class compared to higher-class individuals. However, empirical evidence for a negative relationship between social class and an interdependent self-construal is mixed, which also calls into question the robustness of its relationship with conformity. The aim of the present research was to clarify the generalizability and replicability of the role of social class in conformity in product choices, while taking into account the cultural context. Thus, we conducted three preregistered replications of the original experiment, two of them with German samples and one with a U.S. sample (total $N = 592$). None of the studies were able to replicate the negative relationship between social class and the tendency to adjust one's product choices to the preferences of the majority. The relationship was not significant in the German samples and it even pointed in the opposite direction as expected in the U.S. sample. These results suggest that the generalizability of the relationship between social class and the tendency to follow social preferences is more limited than previously thought. We highlight the importance of conducting conceptual replication studies using different operationalizations of conformity and adopting a cross-cultural perspective on social class.

In modern consumer contexts, companies often use the strategy of communicating information about which product the majority of consumers ostensibly like in order to influence consumers' decisions. This is done, for example, by labeling products as 'best sellers' in advertising campaigns. This marketing tactic is based on several theoretical underpinnings. Social psychology has long identified social influence as an important predictor of individuals' choices (e.g., Asch, 1956). In marketing research, studies have confirmed that presenting information about majority preferences for products (i.e., suggesting that a majority of consumers have purchased this product on previous occasions) can effectively shift consumer decisions in various contexts (e.g., Rao et al., 2001; Roethke et al., 2020; Salazar et al., 2013; Salmon et al., 2015; Thomas et al., 2017). Within this field, social influence has often been conceptualized as *herd behavior* or *bandwagon effect* (Leibenstein, 1950) which describes the tendency of individuals to adopt the viewpoint of the majority even if it differs from their own (for an overview, see Bindra et al., 2022).

Yet, social influence does not appear to be equally large among all individuals. Aside from contextual factors, several inter-individual difference variables have been identified that moderate the strength of social influence. For example, people who perceive a high level of uncertainty (Deutsch & Gerard, 1955) or have a low self-esteem (e.g., Chou et al., 2013; Tainaka et al., 2014) show a larger tendency to follow others' preferences.

Extending this line of research, Na et al. (2016) introduced consumers' social class as a moderator of majority influence on purchase decisions. Using U.S. student samples, their research showed that individuals from lower social class (i.e., working class) expressed a larger tendency to adapt their product choice to a majority preference compared to those from higher social class (i.e., middle class). Notably, the authors established that social class influences the extent of majority influence through its negative re-

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lationship with an interdependent self-construal, supporting what is known as the social cognitive theory of social class (Kraus et al., 2012). Na et al.'s paper, published in a prestigious social psychological journal, holds significance as it is frequently cited in articles focusing on the psychological foundations of social class (e.g., Carey & Markus, 2017) and applied studies on environmentally conscious consumer behavior (Eom et al., 2018; Sparkman et al., 2020). This recognition is reflected in its placement within the top 25% of research outputs tracked by Altmetric (as of February 2024, https://sage.altmetric.com/details/6201240#score).

However, more recent social psychological research on social class has raised concerns about potential methodological shortcomings of prevailing practices generally and, consequentially, about the generalizability of previously found social class effects. Specifically, the usage of inadequate measures of social class has been critized (Antonoplis, 2023) as well as the reliance on rather small samples consisting mainly of U.S. students (see e.g., Gobel & Miyamoto, 2024). Indeed, studies have shown that particularly the association between social class and an interdependent self-construal appears to be less robust than expected (Boileau, 2022; see also Stephens et al., 2007). This also calls into question the generalizability of the previously found negative relationship between social class and conformity.

By conducting three preregistered replication studies of Na et al.'s (2016) Study 1, two of them in the German context and one in the U.S. context, with more diverse samples in terms of social class and considering multiple indicators of the construct, the present research contributes to clarifying the generalizability of the role of social class in majority influence. Moreover, a subordinate goal was to shed light on the assumed underlying mechanism, class-based differences in self-construal.

## Social Class and Self-Construal

Na et al.'s (2016) theoretical argument is based on a social cognitive perspective on social class which postulates that repeated experiences in social class contexts shape individuals' psychological tendencies (Kraus et al., 2012; Kraus & Stephens, 2012; Markus & Stephens, 2017). Within these models, social class is defined by a) objective components, i.e., ones' access to (material) resources (socio-economic status, SES), and b) subjective components, i.e., perceived standing in the societal hierarchy (subjective social status, SSS). A main premise of these models is that the material constraints experienced by lower-class individuals limit the opportunities to follow own ideals and shift the focus on the feelings and behaviors of *others* (e.g., Kraus et al., 2012; Kraus & Stephens, 2012). In contrast, individuals from higher-class contexts experience less constraints and a larger freedom to pursue independent choices and are, thus, more oriented toward their *self*. Among effects on other psychological tendencies, these class-based differences are expected to be reflected in the self-construal: People from lower social classes are predicted to develop a more *interdependent* self-construal, i.e., a view of their self as embedded in their social relations, whereas people from higher social classes are predicted to develop a more *independent* self-construal, i.e., a view of their self as unique, separate entity (e.g., Carey & Markus, 2017; Kraus et al., 2012).

Even though the assumed link between social class and an interdependent self-construal constitutes a central premise of social cognitive models of social class, the empirical evidence does not appear consistent: While research by Fernández et al. (2005) and Grossmann and Varnum (2011) showed that students of lower social class (measured via parental education) reported a more interdependent self-construal across different cultures, another study could not replicate this relationship (Stephens et al., 2007). Additionally, Na et al. (2010) proposed class-based differences in social orientation, yet a closer look at their results reveals a dependence on the specific measures employed. There was no significant class-based (measured via own education) difference in an interdependent self-construal as measured via the Self-Construal Scale by Singelis (1994) and the difference was even significant in the opposite direction as expected when using the Twenty Statement Task (Kuhn & McPartland, 1954) (see Table S4, Na et al., 2010), suggesting that higher-class individuals have a more interdependent self-construal. Furthermore, a recent large-scale replication study across four countries by Batruch, Sommet, and Autin (2025) showed that individuals from higher, not lower, social classes report a more interdependent self-construal and react more positively to similarity to others. In sum, class-based differences in self-construal which were proposed as mediator in the context of conformity in product choices are less robust than proposed.

## Social Class and (Product) Choices

Independent of the assumed psychological underpinnings, however, several studies on product choices have yielded results in line with the predictions of social cognitive models of social class. In particular, lower-class individuals were more likely to be influenced by social preferences in their product choices and reacted more positively to reduced individuation compared to higher-class individuals (Stephens et al., 2007). For example, people of lower social class (as measured via parental educational attainment) more often chose the same pen as an ostensible former participant and liked their choice more when another person apparently made the same choice (vs. a different choice) (Stephens et al., 2007). In contrast, another person's choice did not affect the ratings of the chosen pen for participants with higher social class. These findings suggest that individuals from lower social classes might be relatively more likely to make choices which promote similarity to and connection with others whereas individuals from higher social classes might be relatively more likely to make choices that produce uniqueness and differentiation from others (Stephens et al., 2007, 2011).

Building on this line of research, studies by Na and colleagues (2016) showed that a higher sensitivity to social preferences among lower-class individuals could even override personal preferences in product choice scenarios. The

authors conducted three quasi-experimental studies based on U.S. student samples (Study 1: $N = 43$, Study 2: $N = 107$, Study 3: $N = 101$). Within these studies, participants firstly made 60 product choices among equally attractive alternatives and received manipulated feedback indicating that the majority of previous participants had either chosen the same product (consistent trials) or a different one (conflicting trials). Then, they were shown the product pairs again and asked to indicate which product they would purchase based on their current feelings.[1] The number of *changes* in product choice in conflicting trials relative to consistent trials served as a measure of conformity. Na and colleagues found that members of the working class (as operationalized by maternal education and SSS) made more changes compared to members of the middle class when the majority had ostensibly made a deviating choice. There was no significant difference between middle- and working-class participants when the majority had ostensibly made the same choice (effect size of the interaction effect between SES and type of feedback (Study 1): $\eta_p^2 = .29$). The authors concluded that working-class Americans show a larger tendency to align their product choices with a perceived majority choice than middle-class Americans.

Na and colleagues (2016) replicated their main finding across two additional studies aimed at testing the cross-cultural robustness and participants' self-construal as potential underlying mechanism. In Study 2, Na et al. found that the effect of social class on majority influence was diminished when investigating students with East-Asian background which they explained with a generally larger tendency to follow social preferences in interdependent cultures. In Study 3, a similarity vs. difference priming was used to imitate the effects of an interdependent vs. independent self-construal among an American sample. Social class had no significant effect on the tendency to follow a majority product choice over and above this priming which the authors interpreted as support for class-based differences in self-construal as underlying psychological mechanism. While this approach was beneficial for understanding the causal effect of self-construal (as mediator) on the tendency to follow majority preferences, it omitted investigating the relationship between social class and self-construal, and, thus, did not allow for an analysis of the entire indirect effect (see Pirlott & MacKinnon, 2016). Considering the above-mentioned mixed evidence on the negative relationship between an interdependent self-construal and social class, it appears crucial to clarify the robustness of the relationship between social class and choice behavior under social influence based on (cross-cultural) replication studies with larger, more diverse samples.

## The Present Research

After Study 1a (preregistered) was planned as a first attempt to replicate class-based differences in conformity in the German context as part of an originally different research project, we conducted two more targeted, preregistered replication studies of Study 1 by Na and colleagues (2016). These aimed at providing diagnostic information on the replicability and generalizability of the proposed negative effect of social class on the tendency to follow a majority in product choices in a different cultural context. We hereby focused on Na et al.'s product choice change paradigm to investigate the level of conformity with a majority.[2] While Studies 1a and 1b were conducted with German samples, Study 2 constituted a high-powered replication study with a U.S. sample to more closely follow the study of Na et al. Additionally, Study 1b and Study 2 aimed to investigate the relationship between social class and chronic interdependent self-construal, which was proposed by Na et al. as a potential mediator for the social class effect.

Aside from implications for external validity, a replication of the social class effect on conformity outside the U.S.A. appears to be relevant for theoretical considerations. Specifically, we argue that societal characteristics of the U.S.A. may have enhanced the link between social class and conformity in prior studies. Previous research shows that the positive association between social rank and individualistic traits is particularly pronounced in cultures in which individualism is highly valued (Gobel & Miyamoto, 2024; Zhang et al., 2021). As the U.S.A. is the most individualistic country in the world (Hofstede et al., 2010), it can be expected that American individuals from higher social classes express a particularly lower tendency to adjust their product choices to social preferences. In Germany as less individualistic society compared to the U.S.A., social classes may differ less in their tendency to make individualistic product choices. Secondly, the U.S.A. is characterized by a higher level of income inequality compared to Germany (Gini index 2021: 37.4 vs. 29.7; Solt, 2019). As a higher inequality can increase the salience of one's social class and consequently social class effects (Cheung & Lucas, 2016; Schneider, 2019), the link between social class and the tendency to follow a majority product choice may be smaller in Germany. Consequently, conducting replication studies for Na et al.'s (2016) research in the German context constitutes a conservative test of the robustness of the investigated social class effects.

In the studies by Na et al. (2016) the effects were large or medium to large. People of lower social class showed a much larger tendency to follow a perceived majority than

1 In a final recognition phase participants were presented with the product pairs from the previous phases as well as with 37 new pairs. They had to complete an old-new-recognition task and indicate which item was the more popular one for the old pairs. The results showed that middle-class participants had worse memory for the feedback that the majority had made a different choice than they had, and no such effect was found for working-class participants ($\eta_p^2 = .17$).

2 Due to pragmatic considerations concerning the study length, we abstained from additionally assessing memory performance in Studies 1b and 2.

people of higher social class. We would consider moderate effect sizes in all three studies independently from the cultural setting as support for the robustness of the finding across Western countries. Similar effects in the U.S. study but much smaller effects in the German studies would suggest that the generalizability of the finding might be more limited by cultural context. Finally, much smaller effects in the U.S. study would cast doubts on the robustness of effects of social class for majority influence generally.

All of the reported studies in this manuscript were preregistered (Study 1a: https://aspredicted.org/45V_LBL, Study 1b: https://aspredicted.org/7VC_8JD, Study 2: https://aspredicted.org/Q47_GYZ) and all preregistrations included the study design, planned sample size, exclusion criteria, and planned primary analyses. All preregistrations adhere to the disclosure requirements of aspredicted.org. All preregistered analyses are reported in the manuscript or Supplement. All materials (exception: product pictures (shared upon request)), R code for all reported analyses, data and codebooks are available at https://osf.io/fmc29/.

## Study 1a

Study 1a constituted a first attempt to replicate the first study by Na et al. (2016) with a German sample and had the preliminary goal to explore class-based differences in conformity in another, less individualistic cultural context. We followed Na et al.'s methodology as closely as possible but adapted the study in the following aspects: First, as we did not have access to the original stimulus material[3] and in order to use products common to German consumers, we used standardized images of products taken from German online stores. Second, while the original study was conducted as laboratory experiment, we collected data online as in-person data collection was restricted in spring 2020 due to pandemic regulations in Germany. Therefore, unlike the original study, we implemented preregistered exclusion criteria to ensure high data quality, such as failing a seriousness check and answering too few attention checks correctly. Nevertheless, this approach allowed us to collect data from a larger, more diverse sample of participants and, thus, with larger statistical power. Third, we went beyond Na et al. by not only measuring SSS and maternal education as indicators of belonging to working vs. middle class, but also assessing and analyzing additional indicators of SES such as participants' own educational attainment and household income level, in order to gain a more nuanced understanding of social class effects.

A replication of the findings of Na et al. would imply that participants with lower SES (working class) would be more responsive to social preferences than participants with higher SES (middle class). In other words, compared to participants with higher SES (middle class) participants with lower SES (working class) should make more changes when a perceived majority of others had made a different product choice than when a perceived majority of others had made the same product choice. The same applies for differences in SSS.

### Method

**Materials.** Following the procedure employed by Na et al. (2016), participants were presented with 60 product pairs individually and asked to choose the product they would like to purchase for each pair. Within each pair, the products were in the same product category (e.g., two watches) and we ensured that they differed only in their color or design. The images of the products were taken from German online retail websites and had a standardized white background. Most of the products were utilitarian everyday objects and did not show the brand name at all or only in an unobtrusive way[4].

**Participants.** Na et al. (2016) investigated their *change of choice* – paradigm with student samples from the University of Texas at Dallas (Study 1: $N$ = 43, Study 2: $N$ = 107, Study 3: $N$ = 101). Since Study 1a was not originally planned as a conclusive replication study, we relied on an a priori power analysis to determine the sample size. Using G*Power (Faul et al., 2009) for alpha = .05 and a power of 90% to detect a medium effect size of $f^2 = 0.15$ (original effect size Study 1: $\eta_p^2 = .29$) in a multiple regression analysis with one predictor resulted in a sample size of 73 participants. To investigate effects of social class, it seems crucial to have a diverse sample which is why we collected data via prolific.co. Data were obtained from 86 German participants. After excluding participants according to the preregistered exclusion criteria[5] (failing the seriousness check or more than 12 of 60 attention check items), we arrived at a final sample size of 77[6] participants (18 female, 57 male, 2 diverse; $M_{age}$ = 28.13 years, $SD$ = 8.88). Only about one third of the participants were students ($n$ = 24), suggesting that this sample was more diverse in this respect than the original study.

**Procedure.** Study 1a was conducted via SoSci Survey (Leiner, 2019). Although it was conducted online instead of in the lab, we closely followed the procedure described by

3 We had contacted the first author of the original paper, Jinkyung Na, in March 2020 to borrow their study material but did not receive a response.

4 With the exception of one product pair, when a brand name was visible, it was identical for both products in a pair. This was the case for 20 of the 60 product pairs. For the product pair with different visible brand names, we ensured that the price of the two products was comparable at the time of data collection. Excluding this product pair did not change the pattern of results.

5 One person did not answer the seriousness check but provided answers on all other measures. Excluding this person from the dataset did not change the pattern of results.

6 Notably, this sample size is slightly below the preregistered target sample size of 80 but was still considered sufficient based on the power analysis.

Na et al. (2016). At the beginning of the study, participants were informed that the study was about consumer choices. In choice phase 1, participants viewed the 60 product pairs and indicated for each pair which of the two products they would purchase if they had to make a decision. It was randomized which of the two products in a pair was presented on which side of the screen. This was kept constant over the course of the experiment. After each product choice participants received manipulated feedback regarding the popularity of the chosen product. The same item as in Na et al. (2016) was used, reading that x% of previous participants had made the same choice. In half of the trials, a random percentage between 75% and 95% was presented, reflecting a majority (consistent trials). In the other half, a random percentage between 5% and 25% was presented, reflecting a minority (conflicting trials). Following each feedback, participants were asked to indicate the more popular product, serving as an attention check.

In choice phase 2, participants were presented with the same product pairs as in the previous phase in an individualized randomized order and asked again which product they would purchase. We presented a German translation of the instruction used by Na et al. (2016), asking the participants to rely on their current feelings instead of attempting to recall their previous choices. Furthermore, we added that sometimes peoples' taste changes when looking at products a second time but that the first impression remains in other cases.

In the last phase, participants completed an old/new-recognition task with the 60 old and 37 new product pairs. If a participant identified a product pair as old, they additionally indicated which item was more popular according to the feedback presented before.

Finally, we measured participants' SSS using the MacArthur Scale (e.g., Adler et al., 2000) ($M$ = 5.65, $SD$ = 1.61, range: 1-8). Among further demographics (age, gender, country of education, country of birth, nationality, years of living in Germany, parents' and grandparents' country of birth, ethnicity[7], German language proficiency) (see Supplement (1) for descriptives), indicators of SES were assessed. These items were adapted to the German context. Specifically, participants indicated their educational level on a scale with 8 options plus an "other" option (*Median* = high school diploma) and their current annual gross household income on category options from 1 (*below 15,000€*) to 8 (*over 150,000€*) (*Median* = 35,001€ - 50,000€) (see Supplement (1) for details on the measures of educational level and household income). Furthermore, participants indicated their parents' educational attainment, their own occupational status, occupation and the number of people living in the household. After indicating whether they had answered all questions seriously and honestly participants were debriefed.

## Results

**Changes in choice predicted by social class.** We counted the number of changes in product choice in consistent trials ($M$ = 2.29, $SD$ = 2.37) and in conflicting trials ($M$ = 3.45, $SD$ = 3.12). A paired samples $t$-test showed that participants made significantly more changes in conflicting trials than in consistent trials, $t(76) = 4.98$, $p < .001$, $d = 0.57$, 95% CI for $d$ [0.32, 0.81], reflecting a majority influence. Following Na et al.'s analytical approach (2016), we subtracted the number of changes in consistent trials from the number of changes in conflicting trials to obtain a conformity score ($M$ = 1.17, $SD$ = 2.06) with higher values reflecting a larger conformity with the majority choice. In the following, we first report the findings from the preregistered analyses using SSS as a predictor, followed by analyses using a score of SES (based on education and household income). Then, we provide an exact replication of the analyses of the original research, categorizing participants as either working or middle class based on maternal education.

*Subjective social status.* Firstly, the conformity score was regressed on SSS as single predictor. As a lower social class was expected to be associated with more conformity in product choices, a negative association would be in line with the original results.[8] Additionally, this relationship was expected to be robust to controlling for participants' gender[9]. For SSS, we found a non-significant association with conformity, $\beta = 0.16$, $SE = 0.11$, $t(75) = 1.37$, $p = .174$, 95% CI [-0.07, 0.38], Jeffrey–Zellner–Siow (JZS) $BF = 0.53$ (controlling for gender: $\beta = 0.14$, $SE = 0.11$, $t(72) = 1.19$, $p = .240$, 95% CI [-0.09, 0.37], JZS $BF = 0.48$). After excluding outliers on the dependent variable, SSS was significantly associated with the conformity score, but contrary to the findings by Na et al. (2016) conformity increased rather than decreased with higher SSS, $\beta = 0.24$, $SE = 0.11$, $t(72) = 2.07$, $p = .042$, 95% CI [0.01, 0.47], JZS $BF = 1.48$.

*Objective SES.* We repeated the analysis with a single index of SES. For this purpose, we coded and z-standardized educational attainment and household income and took their mean (see Kraus & Keltner, 2009). For students, pupils, and people in training, we created an adjusted SES index based on their parents' educational level (mean of father's and mother's educational level) and their current family household income. Contrary to Na et al.'s (2016) finding, SES was not significantly associated with the con-

7 The ethnicity item used by Na et al. (2016) for U.S. samples was adapted such that it included ethnic groups that were relevant in the German context.

8 We deviated from the preregistration in using two-sided instead of one-sided $p$-values to remain consistent to the original study and across the present studies. This did not change the pattern of significance for any of the main results.

9 To include gender as covariate, we excluded two participants that had indicated "diverse" for their gender. Different from our preregistration, we did not include ethnicity as covariate as the large majority of participants identified as German ($n$ = 74) rendering any effect of this variable unlikely to find.

formity score when included as single predictor, β = 0.05, *SE* = 0.12, *t*(75) = 0.44, *p* = .663, 95% CI [-0.18, 0.28][10], JZS *BF* = 0.26. Controlling for gender did not change this pattern, β = 0.03, *SE* = 0.12, *t*(72) = 0.27, *p* = .788, 95% CI [-0.20, 0.26], JZS *BF* = 0.25. Furthermore, using own education or household income as separate indicators did not change the pattern of results (see Supplement (1)). Finally, neither SES nor SSS were significantly associated with the total number of changes in choices (SES: *p* = .325; SSS: *p* = .403).

*Replication of Na et al.' s (2016) analysis.* To directly replicate the analyses of the original article, we used maternal education as a binary indicator of social class. Participants whose mother did not have a university degree (*n* = 60) were labeled as working class and participants whose mother had a university degree or a doctoral degree were labeled as middle class (*n* = 17). Indeed, working-class participants indicated a significantly lower SSS (*M* = 5.43, *SD* = 1.63) than middle-class participants (*M* = 6.41, *SD* = 1.33), *t*(75) = -2.27, *p* = .026, *d* = -0.62, 95% CI for *d* [-1.17, -0.07]. A 2 (social class: working vs. middle) x 2 (trial type: consistent vs. conflicting) mixed ANOVA (with Greenhouse-Geisser corrections, R package rstatix, Kassambara, 2023) resulted in a non-significant interaction effect between social class and type of feedback, *F*(1, 75) = 0.67, *p* = .417, $\eta_p^2$ = .01. Again, only the main effect of feedback was significant, *F*(1, 75) = 20.93, *p* < .001, $\eta_p^2$ = .22 (main effect of maternal education: *p* = .656). Excluding outliers on the dependent variable did not change the pattern of results.

## Additional Analyses

**Memory accuracy for social feedback predicted by social class.** Paralleling the approach of the original study, we subtracted the memory accuracy for feedback on social preferences (i.e., the probability of accurately identifying the more popular product in each pair that was correctly recognized as old) in conflicting trials from the respective memory accuracy in consistent trials and regressed this difference score separately on SES and on SSS. Na et al. (2016) had found that participants were overall better at remembering feedback on social preferences in consistent compared to conflicting trials. Importantly, this effect was moderated by social class such that individuals from the middle class had worse memory for conflicting social feedback compared to consistent social feedback while there was no such difference among working-class individuals.

In the present study, memory accuracy for social preferences (*M* = 0.69, *SD* = 0.08) was significantly higher than chance level (.50), *p* < .001. Similar to the original research, we found that participants showed a higher memory accuracy for social preferences in trials with consistent (*M* = 0.80, *SD* = 0.13) compared to conflicting feedback (*M* = 0.58, *SD* = 0.17), *t*(76) = 7.38, *p* < .001, *d* = 0.84, 95% CI for *d* [0.58, 1.10]. However, different from Na et al.'s (2016) results, a difference score of memory accuracy (computed as memory accuracy for trials with consistent minus memory accuracy for trials with conflicting feedback) was not significantly associated with SES, *p* = .871 (measured via maternal education: *p* = .556), or SSS, *p* = .548[11]. Controlling for gender did not change this pattern of results, *p* = .977, /*p* = .504.

## Discussion

In line with previous research on bandwagon effects (e.g. Cho et al., 2022; Leibenstein, 1950), we found that social feedback influenced consumer choices, as individuals changed their choice more often when other people had made a different choice compared to when they had made the same choice. This result suggests that the general paradigm was adapted successfully to investigate social influence in the German context.

In contrast to Na et al. (2016), we did not find that the tendency to follow social preferences in product choices increased with lower socio-economic status. The respective effects were very small and non-significant, and the JZS Bayes Factors indicate that the null-hypothesis is more likely. For SSS we even found the reverse relationship, albeit rather weak. This suggests that individuals across the social class spectrum did not differ in this regard in the German context. Furthermore, we did not find any class-based differences in memory accuracy for perceived social preferences. In conclusion, the social class effect reported by Na et al. was not replicated in Study 1a.

It should be noted though that our sample of *n* =75 should have been sufficient to test a medium effect, and it had more participants than the original studies (43 and 46). A sensitivity analysis using G*Power (Faul et al., 2009) for alpha = .05 and a power of .80 rendered an *f* =.278 indicating that our power was sufficient to detect a medium effect. Yet, the sample size falls short of the recommendations for 2.5 times the sample size of the original study (Simonsohn, 2015). To be able to make a meaningful statement about the replicability of the role of social class in choice behavior in the German context, and thus, the cultural context as potential boundary condition for social class effects, we took several measures to increase power in the following study.

## Study 1b

In Study 1b, we made several improvements to the design from Study 1a. We assessed a larger German sample to increase statistical power and adhered more closely to the approach by Na et al. (2016) by focusing on a predominantly student sample. Additionally, we manipulated temporary perceptions of SSS instead of measuring chronic SSS. Thus,

10 Adjusting income for household size did not change the pattern.

11 Additionally, paralleling Na et al.'s findings (2016), neither SES nor SSS predicted hit rates (old pairs identified as old), false alarm rates (new pairs misidentified as old) or discrimination indices (see Supplement (1)), suggesting that people across the social class spectrum differentiated old and new product pairs equally well.

we were able to examine rank-based, social comparative aspects of social class and investigate causality beyond the original research. In the first choice phase of Study 1a, participants' answers suggested that for some product pairs, the products were not perceived as equally attractive (see Supplemental Table S1). Therefore, we limited the number of product choice trials to the 26 product pairs that were closest to being perceived as equally attractive in Study 1a. In Study 1b, we omitted the assessment of memory of the feedback, as this part of the study had substantially increased its length while being less informative for the role of social class in majority influence per se.

Additionally, we attempted to shed some light on the psychological mechanism underlying social class differences in conformity by assessing the perceived similarity with other participants. Na et al. (2016) found that experimentally priming a higher (vs. lower) perceived similarity with others as a proxy for an interdependent self-construal diminished class-based differences in the tendency to conform to social preferences (Study 3). The authors concluded that individuals from lower social classes are more likely to follow a majority due to a higher perceived similarity with others. To clarify if this can be generalized to the German context, we assessed how similar participants perceived themselves to other participants and explored potential class-based differences in this perception.

## Method

**Materials.** To ensure that the products within each product pair were equally attractive, we selected the 26 product pairs that best fulfilled this criterion in Study 1a based on the decisions of the participants in the first choice phase. Specifically, we selected 21 pairs based on binomial tests and an additional 5 pairs that came close to achieving similar levels of attractiveness across the respective products (see Supplemental Table S1).

**Participants.** Following the recommendations by Simonsohn (2015) for replication studies (i.e., at least 2.5 times the original sample size; s.a. Simonsohn, 2016) we preregistered a minimum sample size of 200 valid cases and collected data from 242 participants. Participants were recruited from social media platforms and were offered course credit or the chance to take part in a raffle. After applying preregistered exclusion criteria (failing more than 6 of the 26 attention check items, failing a seriousness check), we arrived at a sample of 207 German participants. Additionally, we excluded participants with invalid values (i.e., answers outside the range of 1 to 10) on their SSS ($n$ = 4). The final sample consisted of 203 participants (159 female, 43 male, 1 diverse; $M_{age}$ = 24.75 years, $SD$ = 10.52). The majority of the sample were students ($n$ = 166, including 101 psychology majors). A sensitivity analysis using G*Power (Faul et al., 2009) for alpha = .05 and a power of .80 rendered an $f$ =.10 indicating that our power was sufficient to detect a small effect.

**Procedure.** Study 1b was conducted online. The procedure of Study 1b differed to the one from Study 1a in some respects. In the beginning of the study, we manipulated participants' SSS through downward versus upward comparisons (Aydin et al., 2019; Piff et al., 2010). Participants were presented with the MacArthur Scale, an image of a ladder with 10 rungs representing German society (Adler et al., 2000). They were asked to compare themselves to people at the top ($n$ = 98) vs. bottom ($n$ = 105) of the ladder which was meant to induce the feeling of having a lower vs. higher perceived standing in society. To strengthen the manipulation, participants were asked to indicate differences between themselves and people from the respective end of the ladder. As a manipulation check, they answered on which ladder rung they feel they stand within German society.

Then, the first choice phase started and was set up like in Study 1a, but with a reduced number of 26 product pairs. Again, after each product choice, participants received feedback on the ostensible majority preference followed by an attention check item asking to indicate which of the two products was the more popular one. In the second choice phase, participants were again presented with the same 26 product pairs and indicated how they felt about the products now. Finally, participants completed the measures of SES among further demographics (gender, age, German language skills). Parallel to Study 1a, SES was assessed via educational level (*Median* = high school diploma) and current household income (8-point scale plus "don't know" option[12]) (*Median* = 50,001€ - 75,000€) (further details in Supplement (2)). Additionally, we assessed parents' educational attainment, participants' occupational status, occupation and the field of studies for students. Different from Study 1a and to further explore potential social class differences in the perception of the feedback on the majority choice, participants rated their agreement to the statement that the other participants of the study are similar to them on a scale from 1 (*disagree completely*) to 7 (*agree completely*) ($M$ = 3.95, $SD$ = 1.14).[13] After a seriousness check participants were debriefed.

## Results

**Manipulation check.** Participants who compared themselves to people from the bottom of the ladder indicated a significantly higher perceived standing in society ($M$ = 6.49, $SD$ = 1.28) than participants that compared themselves to people from the top of the ladder ($M$ = 5.92, $SD$ = 1.45),

12 56 participants indicated that they did not know their household income.

13 At the end of the study, participants were asked to answer several items in English that were part of a different, unrelated research project (see Study Material at https://osf.io/fmc29/).

$t(201) = -2.96$, $p$[14] = .003, $d = -0.42$, 95% CI [-0.69, -0.14]. This result suggests that the manipulation of SSS was successful.

**Changes in choice predicted by social class.** Overall, the number of changes in product choice made by participants, i.e. the sum of the number of changes for both trial types, was rather low ($M = 2.01$, $SD = 2.15$) and about a third of the participants ($n = 65$) did not make any changes in product choice.

*Subjective social status.* A 2-between (SSS: low vs. high) x 2-within (feedback: conflicting vs. consistent) mixed ANOVA with the number of changes in product choice as dependent variable was computed (with Greenhouse-Geisser corrections, R package afex, Singmann et al., 2022). Replicating the result of Study 1, feedback type had a significant main effect, $F(1, 201) = 29.36$, $p < .001$, $\eta_p^2 = .13$, 95% CI [0.05, 0.22], as participants made significantly more changes in product choice after conflicting ($M = 1.31$, $SD = 1.56$) than after consistent feedback ($M = 0.70$, $SD = 1.07$). Different from Study 1a, SSS had a small but significant main effect on the total number of changes in choices, $F(1, 201) = 4.85$, $p = .029$, $\eta_p^2 = .02$, 95% CI [0.00, 0.08], indicating that, averaged over feedback type, participants in the high SSS condition made significantly more changes in product choice ($M = 1.17$, $SD = 1.48$) than participants in the low SSS condition ($M = 0.84$, $SD = 1.23$). As in Study 1a and not in line with the tested hypothesis, the interaction effect between SSS and feedback type was not significant, $F(1, 201) = 0.43$, $p = .514$, $\eta_p^2 = .002$, 95% CI [0.00, 0.03]. When conducting the analysis with excluded outliers on the changes in choice ($n = 20$) the main effect of SSS was not significant, $p = .123$, whereas the rest of the results remained robust.

In addition to the preregistered analyses, we included SSS as measured in the manipulation check as continuous predictor of conformity in a linear regression. To obtain the criterion, we subtracted the number of changes in consistent trials from the number of changes in conflicting trials as in Study 1a ($M = 0.61$, $SD = 1.58$). SSS was not significantly associated with this difference score, $\beta = -0.08$, $SE = 0.07$, $t(201) = -1.19$, $p = .237$, 95% CI [-0.22, 0.06], JZS $BF = 0.30$.

*Objective SES.* Parallel to Study 1a, we created an index of SES based on educational attainment and household income (for students and apprentices: based on their parents' education and family household income). Importantly, SES did not differ significantly between the two experimental groups, $p > .420$, suggesting that the SSS manipulation did not affect the objective indicators of social class.

The relationship between SES and the above-mentioned difference score of changes in choice failed to reach significance at conventional significance levels, $\beta = -0.13$, $SE = 0.08$, $t(145) = -1.61$, $p = .109$, 95% CI [-0.30, 0.03], JZS $BF = 0.58$. This result was robust to controlling for gender[15], $\beta = -0.10$, $SE = 0.08$, $t(143) = -1.22$, $p = .226$, 95% CI [-0.27, 0.06], JZS $BF = 0.47$. Furthermore, SES was not associated with the total number of changes (SES: $p = .195$). Using own education or household income as separate predictors each did not change the pattern of results (see Supplement (2)).

*Replication of Na et al.' s (2016) analysis.* Replicating the analyses by Na et al. (2016) by using maternal education as binary indicator of social class (working class: $n = 117$, middle class: $n = 82$) resulted in a non-significant interaction between social class and type of feedback on the number of changes in product choice, $F(1, 197) = 1.86$, $p = .174$, $\eta_p^2 = .01$, 95% CI [0.00, 0.05]. Again, merely feedback type had a significant main effect on the number of changes in choice, $F(1, 197) = 24.88$, $p < .001$, $\eta_p^2 = .11$, 95% CI [0.04, 0.20] (for maternal education $p > .101$). The results for the different indicators of SES were robust to excluding outliers on the dependent variable.

## Exploratory Analyses

**Perceived similarity.** As expected, participants who perceived themselves as more similar with the other participants showed a higher level of conformity with the majority preference, i.e., they changed their product choice significantly more often after conflicting compared to consistent feedback, $\beta = 0.17$, $SE = 0.07$, $t(201) = 2.37$, $p = .019$, 95% CI [0.03, 0.30]). The relationship between perceived similarity and conformity did not vary significantly across SSS conditions, $\beta = 0.01$, $SE = 0.07$, $t(199) = 0.08$, $p = .939$, 95% CI [-0.13, 0.14]), or the SES spectrum, $\beta = 0.01$, $SE = 0.08$, $t(143) = 0.15$, $p = .883$, 95% CI [-0.14, 0.17]).

Additionally, participants in the low SSS condition did not perceive themselves as more similar to other participants ($M = 3.92$, $SD = 1.11$) compared to participants in the high SSS condition ($M = 3.98$, $SD = 1.17$), $t(201) = -0.39$, $p = .696$, $d = -0.05$, 95% CI [-0.33, 0.22]). Similarly, SES was not significantly correlated with the perceived similarity with other participants, $r(145) = -0.02$, $p = .764$ (for education and income: $p$s > .330).

## Discussion

Consistent with the findings of Study 1a, people were susceptible to the majority choices. However, in contrast to Na et al.'s findings (2016) this was independent of social class. Study 1b replicated the results of Study 1a and showed that in a German context neither temporarily manipulated SSS nor objective SES were associated with following a perceived majority when making product choices. The effects were small at best and non-significant, and the JZS BF also pointed to the null hypothesis.

Additionally, Study 1b shed light on the role of perceived similarity in conformity and social class effects. Consistent with prior research on social norms (e.g., Neighbors et al.,

14 Again, different from the preregistration, we used two-sided instead of one-sided $p$-values to remain consistent across studies.

15 One participant who indicated „diverse" for their gender was excluded when we included gender as covariate in the analysis.

2010), our results suggest that individuals show a larger tendency to follow others who they perceive as similar to themselves. However, we found no significant relationship between social class and the perceived similarity with other participants which challenges the notion of perceived similarity as mediator of class-based differences in conformity.

In sum, the results of Study 1a and 1b did not support the notion that individuals of lower social class are more likely to follow social preferences in consumer choices. As outlined above, the diverging results of our research compared to Na et al.'s (2016) findings might be due to the different cultural context of our research. Possibly, social class effects on conformity are less pronounced in Germany compared to the U.S.A. due to the country's less individualistic societal norms and lower income inequality. To determine if the effect of social class is dependent on the cultural context, we conducted a third replication study with a U.S. sample.

## Study 2

Study 2 aimed to replicate the finding by Na et al. (2016) that social class moderates the effect of majority influence on product choices with a US sample. As we did not find this effect in German samples in Studies 1a/b, Study 2 was conducted to clarify the potential role of the cultural context as a boundary condition for this social class effect.

Furthermore, Study 2 had the goal to shed light on its underlying psychological mechanism. Na et al. (2016) argued that class-based differences in conformity can be explained by a more interdependent self-construal among lower-class individuals. They showed that the link between social class and the sensitivity to social preferences was diminished among people from more interdependent cultures (Study 2) and under conditions in which an interdependent (compared to an independent) self-construal was temporally induced (Study 3). While these studies provided some evidence for the role of self-construal in the responsiveness to social preferences, they did not show that individuals from different social class – but from the same cultural background – differ in their chronic interdependent self-construal. As outlined above, the empirical evidence regarding this association is mixed. To advance the understanding of the potential mediating role of self-construal, we went beyond prior research and assessed individuals' independent and interdependent self-construal.

Finally, we attempted to explore the association between social class and other potentially relevant psychological characteristics. Specifically, we assessed self-esteem as lower-class individuals tend to report lower self-esteem (Rosenberg & Pearlin, 1978; Twenge & Campbell, 2002), which, in turn, may reduce the tendency to follow a perceived majority (e.g., Chou et al., 2013; Tainaka et al., 2014). Additionally, we explored the role of the need for uniqueness which is defined as the desire to distinguish oneself from others and is often reflected in unusual consumer choices such as a preference for rare products (Lynn & Harris, 1997; Snyder & Fromkin, 1977) as well as nonconformity (Imhoff & Erb, 2009). Importantly, prior research also found that a higher need for uniqueness is associated with a more pronounced independent self-construal (Kastanakis & Balabanis, 2012).

### Method

**Materials.** In order to stick with the procedure employed by Na et al. (2016) as closely as possible, to ensure a higher level of reliability and to maintain comparability to Studies 1a/b, we used the pictures of the 60 product pairs from Study 1a.

**Participants.** In light of the small effect sizes found in the German samples, we conducted an a-priori power analysis using G*Power for alpha = .05 and a power of 80% to detect a small effect size of $f^2 = 0.03$ for a multiple regression with one predictor which resulted in a required sample of 264. To maximize power in light of our resources, we preregistered a minimum sample size of 303 valid cases and collected complete data from 327 U.S. participants on prolific.co (with incomplete submissions: 350)[16].

Following our preregistration, we excluded participants who failed more than 12 of the 60 attention checks and arrived at a final sample of 312 U.S. participants (154 female, 148 male, 6 diverse, 4 no indication; $M_{age}$ = 32.41 years, *SD* = 11.06). Among them, 230 participants identified as White/Caucasian, 55 as African American, 18 as Asian American, 20 as Hispanic/Latino and 5 as Native American (and 9 used an open answer format; multiple mentions were possible). Different from the original study, students made up merely 15.7% of the present sample. However, the sample appeared to be similar to the one investigated by Na et al. (2016) with regard to some aspects: Operationalizing SES via maternal education (i.e., no bachelor's degree/bachelor's degree or higher) led to an almost equal number of participants being classified as working class (47.3%) and middle class (52.7%) as found in the original study (original study: working class: 48.8%, middle class: 51.2%). Whereas our sample was also approximately balanced for gender (49.4% females), Na et al.'s sample had a slightly larger proportion of female participants (62.8%). With regard to ethnicity, both in our sample and in the one by Na et al., the majority of participants (73.7% vs 79.1%) identified as White/Caucasian whereas African Americans constituted the second largest group (17.6% vs 11.6%).

**Procedure.** Study 2 was conducted online. The beginning of the study was identical to Study 1a as we again attempted to follow the procedure by Na et al. (2016) very closely. Participants saw the 60 product pairs as described in the previous studies and indicated for each pair which

16 We arrived at a slightly larger final sample than preregistered (312 instead of 303 participants) as we aimed to ensure a sufficient sample size considering the preregistered exclusion criteria.

of the two products they would purchase if they had to choose. Following each choice, manipulated feedback on social preferences (conflicting vs. consistent trials) was presented as described above. After the feedback participants indicated which of the two products was more popular as an attention check. Then, the second choice phase followed as in Study 1a.

Then, several psychological characteristics were assessed to advance the understanding of class-based differences in the psychological make up which might underly its relationship with conformity. Firstly, participants' self-esteem was assessed using the 10-item Rosenberg scale (1965). Participants expressed agreement with the statements on a scale from 1 (*strongly disagree*) to 4 (*strongly agree*) (Cronbach's α = .90).

Next, participants completed a short version of the Singelis' self-construal scale (D'Amico & Scrima, 2016) measuring interdependent and independent self-construal (Cronbach's α = .73/.77) with 5 items per dimension on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). We used this measure to examine the assumption by Na et al. (2016) that lower class individuals were more responsive to social preferences because of their more pronounced interdependent self-construal.

Then, need for uniqueness was assessed, both generally and specifically in the consumption context. As a measure of general need for uniqueness, participants completed the 12-item subscale on lack of concern regarding others' reactions to one's different ideas and actions of the need for uniqueness scale (Snyder & Fromkin, 1977; see also Schumpe et al., 2016; scale: 1 (*strongly disagree*) to 5 (*strongly agree*), Cronbach's α = .87). Additionally, we included three items from the scale on the *desire for unique consumer products* by Lynn and Harris (1997) which appeared specifically suited to the consumption context (e.g., "*I enjoy having things that others do not")* (Cronbach's α = .53).

Finally, participants indicated their SSS on the MacArthur Scale (*M* = 5.50, *SD* = 1.79) and among further demographics (gender, age, country of education, country of birth, nationality, years of living in the USA, number of parents and grandparents born in the USA, ethnicity), indicators of SES were assessed. Specifically, participants reported their educational level on a scale with 8 options plus an "other" option (*Median* = Bachelor's degree) which was adapted from the U.S. Census Bureau (2021). Current annual household income was assessed on category options from 1 (*below 15,000$*) to 8 (*over 150,000$*)[17] (*Median* = $50,001 - $75,000) (further details in Supplement (3)). Parallel to Na et al. (2016), we also assessed parents' educational attainment, participants' employment status, their occupation and the number of people living in the household.

## Results

**Changes in choice predicted by social class.** Paralleling Studies 1a/b, we counted the number of changes in product choice in consistent trials (*M* = 2.96, *SD* = 3.03) and the number of changes in conflicting trials (*M* = 6.10, *SD* = 5.85). As in Studies 1a/b, we computed a conformity score (*M* = 3.14, *SD* = 5.09). Replicating the effect found in the first studies, participants made overall more changes in product choice in conflicting trials than in consistent trials, $t(311) = 10.88$, $p < .001$, $d = 0.62$, 95% CI [0.49, 0.74], indicating that they generally followed social preferences.

*Subjective social status*. We regressed the difference score as measure of conformity on SSS. Contrary to our expectation, we found a significant *positive* association with SSS, β = 0.30, *SE* = 0.05, $t(310) = 5.57$, $p < .001$, 95% CI [0.20, 0.41], JZS *BF* > 199657, suggesting that the higher their SSS, the more participants changed their choices after conflicting rather than consistent feedback. This result was robust when controlling for gender[18] (female = 0, male = 1) and ethnicity (0 = other, 1 = White/Caucasian) as dummy-coded predictors[19], β = 0.29, *SE* = 0.05, $t(298) = 5.34$, $p < .001$, 95% CI [0.18, 0.40], JZS *BF* > 86723. Additionally, the main effect of SSS on the number of changes in choices was significant, β = 0.24, *SE* = 0.06, $t(310) = 4.40$, $p < .001$, 95% CI [0.13, 0.35].

*Objective SES*. Paralleling Study 1a/b, we computed a composite score of SES. Similar to SSS, a higher SES was significantly positively associated with a larger difference score of changes in product choice, β = 0.30, *SE* = 0.05, $t(308) = 5.63$, $p < .001$, 95% CI [0.20, 0.41], JZS *BF* > 270681[20]. This association remained robust when controlling for gender and ethnicity[21] as described above, β = 0.28, *SE* = 0.05, $t(296) = 5.09$, $p < .001$, 95% CI [0.17, 0.39], JZS *BF* > 106971. Furthermore, the main effect of SES on the number of changes in choices was significant, β = 0.32, *SE* = 0.05, $t(308) = 5.88$, $p < .001$, 95% CI [0.21, 0.42]. Excluding outliers on the conformity score ($n = 4$) or using either own education or household income as individual predictor did not change the pattern of results (see Supplement (3)).

*Replication of Na et al.' s (2016) analysis*. As direct replication of the analyses of Na et al. (2016), we used maternal

17 To assess income, we used the same number of category options as Na et al. (2016) but adjusted the income categories to better distinguish between lower income levels (see Piff et al., 2010).

18 To include gender as covariate, we excluded six participants who had indicated "diverse" for gender and four participants that had not answered this item.

19 Surprisingly, male participants showed a higher level of conformity compared to female participants, β = 0.15, *SE* = 0.05, $t(298) = 2.74$, $p = .006$, 95% CI [0.04, 0.26], and participants that did not identify as White/Caucasian showed a higher level of conformity compared to White/Caucasian participants, β = -0.13, *SE* = 0.05, $t(298) = -2.43$, $p = .016$, 95% CI [-0.24, -0.03].

20 Adjusting income for household size did not change the pattern.

21 Again, gender significantly predicted conformity, β = 0.13, *SE* = 0.05, $t(296) = 244$, $p = .016$, 95% CI [0.03, 0.24] (for ethnicity: $p = .060$).

education as binary indicator of social class as in Study 1a/b (working class: $n$ = 148; middle class: $n$ = 163; one person did not indicate maternal education)[22]. Paralleling the result for the SES score, a 2 (social class: working vs. middle) x 2 (trial type: consistent vs. conflicting) mixed ANOVA indicated that individuals made more changes in conflicting compared to consistent trials, $F(1, 309) = 119.99$, $p < .001$, $\eta_p^2 = .28$, 95% CI [0.20, 0.36]. Additionally, this effect was moderated by social class, $F(1, 309) = 17.07$, $p < .001$, $\eta_p^2 = .05$, 95% CI [0.01, 0.11]. Post hoc comparisons revealed that, contrary to the results found by Na et al. (2016), the effect of feedback on social preferences was larger among middle-class participants, $t(309) = -10.93$, $p < .001$, $d = -0.62$, 95% CI [-0.74, -0.50], compared to working-class participants, $t(309) = -4.26$, $p < .001$, $d = -0.27$, 95% CI [-0.38, -0.15], suggesting that people from the middle class showed a higher level of conformity. Furthermore, different from the original study, the main effect of social class was significant, $F(1, 309) = 25.87$, $p < .001$, $\eta_p^2 = .08$, 95% CI [0.03, 0.14], indicating that people from the middle class made overall more changes compared to people from the working class.

**The role of self-construal.** Na et al. (2016) argued that people with a lower social class have a more pronounced interdependent self-construal which would mediate their higher tendency to follow a majority in their product choices. Contradicting this pattern, a lower SES was significantly associated with a *lower* (not higher) interdependent self-construal, $r(308) = 0.13$, 95% CI [0.02, 0.24], $p = .021$ in our sample. For SSS, the association with an interdependent self-construal was not significant, $r(310) = 0.03$, 95% CI [-0.08, 0.14], $p = .561$. Regarding an independent self-construal, there was no significant association with SES, $r(308) = 0.09$, 95% CI [-0.02, 0.20], $p = .108$. However, in line with our expectations, a higher SSS was significantly associated with a more independent self-construal, $r(310) = 0.17$, 95% CI [0.06, 0.28], $p = .002$.

Contrary to the assumption that a more interdependent self-construal would lead to a higher responsiveness to social preferences, it did not significantly predict the number of changes in choice in conflicting vs. consistent trials, $\beta = 0.10$, $SE = 0.06$, $t(310) = 1.73$, $p = .085$, 95% CI [-0.01, 0.21] (for separate correlations per trial type, see Table 1). Instead, a more pronounced independent self-construal significantly predicted the conformity score, $\beta = 0.21$, $SE = 0.06$, $t(310) = 3.80$, $p < .001$, 95% CI [0.10, 0.32].

**Self-esteem and need for uniqueness.** People with higher social class indicated a higher self-esteem (for SES: $r(308) = 0.29$, 95% CI [0.18, 0.39], $p < .001$, for SSS: $r(310) = 0.31$, 95% CI [0.20, 0.41], $p < .001$). However, surprisingly, a higher self-esteem significantly predicted a *higher* conformity score, $\beta = 0.12$, $SE = 0.06$, $t(310) = 2.11$, $p = .036$, 95% CI [0.01, 0.23]. When controlling for self-esteem, the positive relationship between social class and conformity remained significant (for SES/SSS: $p < .001$).

Need for uniqueness (generally and specifically in the consumer context) was neither significantly associated with social class (for SES: $p > .280$; for SSS: $p > .160$) nor with the conformity score ($p > .160$) (for details, see Table 1).

## Discussion

Following closely the experimental procedure of Na et al. (2016) and using data from a diverse U.S. sample, Study 2 did not replicate the finding that people from lower social class show a larger tendency to change their product choice to follow an apparent majority. Contrary to the findings of the original research, American participants from *higher* social class were more likely to conform to social preferences. Additionally, the present research examined the role of chronic interdependent self-construal as mediator of social class effects on conformity. In contrast to the assumed negative relationship between social class and an interdependent self-construal (e.g., Kraus et al., 2012), SES was *positively* related with this type of self-construal. This finding is consistent with recent large-scale cross-national replication studies (Batruch et al., 2025).

Furthermore, although there was evidence for a majority influence, the conformity score showed an unexpected pattern of correlations not only with social class but also with other interindividual difference variables. Specifically, a more pronounced independent self-construal and a higher self-esteem predicted more changes in choice in conflicting trials compared to consistent trials which appears to contradict prior research on the effectiveness of social norms (e.g., Chou et al., 2013; Tainaka et al., 2014). However, as this study was designed to examine the replicability of the original results by Na et al. (2016), the evidence for countervailing effects on conformity is only preliminary and should be interpreted with caution. We further discuss the divergent pattern for social class effects in the U.S. and the German context in the "General Discussion". Nevertheless, the pattern emphasizes that the relationship between social class and conformity is less generalizable than expected based on previous research.

# General Discussion

Across three replication studies (two with German samples, one with a U.S. sample), we did not find support for the notion that people of lower social class show a higher level of conformity with a majority in product choices compared to people of higher social class as found by Na et al. (2016). The effect sizes for this association were either small and non-significant (Studies 1a/b) or, interestingly, even pointed significantly in the opposite direction (Study 2), suggesting that people with higher social class showed more conformity. One may of course argue that at least Study 1a was underpowered to find a small effect and Study 1b may have missed a very small effect. This may be so but

22 The differentiation was reflected in the reported SSS, with working-class participants indicating a significantly lower SSS ($M = 5.03$, $SD = 1.88$) compared to middle-class participants ($M = 5.94$, $SD = 1.58$), $t(288) = -4.64$, $p < .001$, $d = -0.53$, 95% CI for $d$ [-0.75, -0.30].

**Table 1. Descriptive Statistics and Bivariate Correlations among Objective SES, Subjective Social Status, Gender, Ethnicity, Self-Esteem, Self-Construal, Need for Uniqueness, and the Number of Changes in Product Choice After Conflicting and Consistent Feedback (Study 2)**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SES | | | | | | | | | | | | |
| 2. SSS | .62 | | | | | | | | | | | |
| 3. Gender | .11 | .06 | | | | | | | | | | |
| 4. Ethnicity | -.04 | .03 | -.09 | | | | | | | | | |
| 5. Self-Esteem | .29 | .31 | .00 | -.08 | | | | | | | | |
| 6. Independent Self | .09 | .17 | .11 | -.03 | .47 | | | | | | | |
| 7. Interdependent Self | .13 | .03 | .06 | .08 | -.17 | -.10 | | | | | | |
| 8. Need for Uniqueness - G | -.02 | .08 | .04 | -.01 | .42 | .32 | -.44 | | | | | |
| 9. Need for Uniqueness - C | .06 | .04 | -.00 | -.12 | -.08 | .08 | .21 | -.16 | | | | |
| 10. Changes Conflicting | .34 | .29 | .19 | -.13 | .15 | .24 | .17 | -.10 | .00 | | | |
| 11. Changes Consistent | .15 | .06 | .07 | -.02 | .09 | .10 | .16 | -.05 | .02 | .49 | | |
| 12. Conformity Score | .31 | .30 | .18 | -.14 | .12 | .21 | .10 | -.08 | -.01 | .86 | -.03 | |
| *M* | 0.08 | 5.50 | - | - | 3.04 | 4.68 | 4.20 | 3.12 | 3.46 | 6.10 | 2.96 | 3.14 |
| *SD* | 0.86 | 1.79 | - | - | 0.66 | 1.26 | 1.16 | 0.76 | 0.80 | 5.85 | 3.03 | 5.09 |

*Note.* $N$ = 300-312. SES = Socioeconomic status. SSS = Subjective social status. Gender (0 = female, 1 = male) and ethnicity were dummy-coded (0 = African American/Asian American, Hispanic/Latino and open answers, Native American, 1 = White/Caucasian). Changes Conflicting = Number of changes in product choice in trials with conflicting feedback, i.e., feedback that a minority of others had chosen the same product as oneself. Changes Consistent = Number of changes in product choice in trials with consistent feedback, i.e., feedback that a majority of others had chosen the same product as oneself. Conformity Score = Number of changes in product choice in trials with conflicting feedback minus number of changes in product choice in trials with consistent feedback.
All correlations $\geq .12$ or $\leq -.11$ are statistically significant ($p < .05$).

in light of the medium to large effects found by Na et al. (2016), one may also conclude that the effects are at least considerably smaller in the German context. In the following, we interpret the results separately by cultural context.

Studies 1a/b constituted close replications of Na et al.'s (2016) Study 1 in a Western European context. We deviated from the approach by Na et al. mainly in the following aspects: In Study 1a, we collected data from a more diverse sample instead of a student sample, whereas in Study 1b, we manipulated (instead of measured) SSS to be able to investigate its potential causal effect. In both German samples, social class was not significantly associated with conformity in product choices. This result was found for several continuous measures of objective SES as well as for chronic and experimentally manipulated SSS. In line with this result, people with lower class did also not indicate a higher perceived similarity with other participants which was proposed as potential mediator by Na et al. These results are consistent with recent research from the German political context which failed to find class-based differences in the tendency to follow a majority of voters as perceived from poll results in their voting intentions (Unkelbach et al., 2023). Possibly, these results can be explained by structural or cultural differences between the German and the U.S. context. As outlined above, the lower level of individualism (e.g., Hofstede et al., 2010) or the lower level of income inequality in Germany compared to the U.S. might explain why we could not find class-based differences in the level of conformity in Studies 1a/b.

Noteworthy, however, with a U.S. sample we did also not find a negative relationship between social class and conformity with a majority product choice (Study 2). Instead, people with a lower social class (as measured via SES and SSS) showed even less conformity with a perceived majority. However, this finding is preliminary, and further research is needed to replicate and explain this effect. Additionally, the relationship between social class and self-construal which was proposed as mediator in previous research deviated from the expected pattern. People with a lower SES even indicated a less interdependent self while the relationship between SES and an independent self-construal was small and nonsignificant. For SSS, merely a significant positive association with an independent self-construal was found. Overall, the associations of social class indicators and self-construal were weak at best. Taken together with the results from a recent cross-national large-scale study which failed to replicate a link between a lower social class and a more interdependent self-construal (Batruch et al., 2025), our results raise further doubts about the proposed link between social class and self-construal.

To test the robustness of our findings, we conducted some exploratory analyses. As we were not able to use the product pictures from the corresponding original study for the change of choice task, we repeated the analyses with different types of subsets of pictures for Study 1a and Study 2 such as a) only product pairs in which both products were equally attractive in the first choice phase or b) only the first 20 of 60 product pairs in order to eliminate potential effects of fatigue or loss of motivation (see Supplement (4)). In none of these analyses did we find a significant negative relationship between social class and conformity. We also note that we were not able to follow Na et al.'s (2016) approach to investigate the relationship between social class and the number of changes in product choice when controlling for ethnicity in Study 1a/b. However, we do not think that the lack of this additional robustness check limits the interpretability of our results as it is unclear how the role of ethnicity in U.S. samples relates to its role in German samples.

Finally, we need to acknowledge that the possibility remains that factors like the mode of data collection might explain why our pattern of results differs from the one of Na et al. (2016). While Na et al. conducted their studies as laboratory experiments, we conducted our experiments online. This also made it possible to collect data from samples which were more diverse in terms of SES compared to the original research. However, collecting data online might have, for example, lead to a reduced level of attention in comparison to a laboratory experiment. One way to investigate this potential explanation is to look at the attention checks included after each (manipulated) feedback on social preferences. Even though Na et al. (2016) also included these attention checks to make sure that participants understood the feedback, they did not report their results. Thus, these data cannot be used to qualify the results of our replication studies. In order to ensure a high data quality, we decided to exclude participants who failed a preregistered number of attention checks. Including all participants regardless of their performance in these checks did not change the pattern of results regarding the relationship between social class and conformity.

However, the nature of online studies may have diminished the impact of social influence. Individuals are generally more susceptible to social pressure when others are physically present and therefore more salient (Latané, 1981). In contrast, participating alone in front of a computer screen may reduce the sense of social presence, thereby weakening the motivation to conform.

It is also possible that the different results are due to differences in the type of products, samples, or the study mode. Still the finding of class-based differences in conformity seems limited in robustness and generalizability. Social influence might be equally strong across the social class spectrum suggesting that, for example, different from expectation ads or public campaigns could employ descriptive norms to change individuals' behavior independently of the social class of the target group. Importantly, aside from questioning the robustness of class-based differences in conformity, our findings suggest that the relationship between social class and an interdependent self-construal is less robust than expected. One important avenue for future research may be to explore further the relationship between social class and self-construal.

Furthermore, follow-up studies that test the generalizability of the link between social class and conformity should be conducted. Specifically, future research should use psychometrically established measures of conformity and different choice contexts to establish the conditions

under which a lower social class is related with a higher level of conformity. Even though the manipulation of social preferences developed by Na et al. (2016) was successful in evoking changes in choice, there are some concerns. The relatively low overall number of changes in choice in our studies as well as in the corresponding original study and the unexpectedly positive correlation between self-esteem and conformity raise some concerns regarding the validity of the conformity measure. Firstly, the desire to remain consistent with one's first choice potentially diminished the influence of the social feedback on the tendency to follow a majority choice. Secondly, the paradigm only included hypothetical product choices without any real-life consequences. Previous research suggests that a lack of consequences following experimental product choice tasks can indeed affect product preferences (Klein & Hilbig, 2019). In sum, future research on the matter would be well-advised to measure conformity in a different manner.

## Conclusion

Based on German and U.S. samples, the present research fails to replicate the negative relationship between social class and the tendency to follow a majority when it comes to product choices which was originally found by Na et al. (2016). There was also no empirical support for a negative relationship between social class and an interdependent self-construal which was proposed as underlying mechanism of the original findings. Social psychological research has only recently started to acknowledge the fundamental role of social class for the psychological make up and choice behavior of individuals. However, empirical evidence for class-based differences in conformity and an interdependent self-construal is scarce and faces some methodological shortcomings. The present research adds to recent attempts to assess the generalizability of social class effects and underscores the need to further clarify under which conditions class-based differences in conformity and self-construal can be found.

## Contributions

Contributed to conception and design: Fabienne Unkelbach, Michaela Wänke

Contributed to crafting Study 1b and acquisition of data for Study 1b: Pia Kehder

Contributed to analysis and interpretation of data: Fabienne Unkelbach

Drafted the article: Fabienne Unkelbach

Revised the article: Michaela Wänke

Approved the submitted version for publication: Fabienne Unkelbach, Michaela Wänke, Pia Kehder

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All of the reported studies in this manuscript were preregistered (Study 1a: https://aspredicted.org/45V_LBL, Study 1b: https://aspredicted.org/7VC_8JD, Study 2: https://aspredicted.org/Q47_GYZ) and all preregistrations included the study design, planned sample size, exclusion criteria, and planned primary analyses. All preregistrations adhere to the disclosure requirements of aspredicted.org.

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## Ethics Statement

This research was conducted in accordance with ethical guidelines for research with human participants. Participants were fully informed about the study's purpose, procedures, and potential risks and benefits. Participation was voluntary, and participants had the right to withdraw at any time without penalty. Data has been collected and stored anonymously. Any deception used was followed by a full debriefing. We were committed to minimizing any potential harm to participants.

## Competing Interests

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Supplemental Material

Supplemental material to this article can be found on this paper's project page on the OSF: https://osf.io/fmc29/

## Data Accessibility Statement

All materials, except for product pictures (which can be shared upon request), R code for all reported analyses, raw data, and codebooks are available on this paper's project page on the OSF: https://osf.io/fmc29/

To obtain access to the product pictures used in the studies, please send an email to the corresponding author.

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## References


Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology*, *19*(6), 586–592. https://doi.org/10.1037/0278-6133.19.6.586

Antonoplis, S. (2023). Studying socioeconomic status: Conceptual problems and an alternative path forward. *Perspectives on Psychological Science*, *18*(2), 275–292. https://doi.org/10.1177/17456916221093615

Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs: General and Applied*, *70*, 1–70. https://doi.org/10.1037/h0093718

Aydin, A. L., Ullrich, J., Siem, B., Locke, K. D., & Shnabel, N. (2019). The effect of social class on agency and communion: Reconciling identity-based and rank-based perspectives. *Social Psychological and Personality Science*, *10*(6), 735–745. https://doi.org/10.1177/1948550618785162

Batruch, A., Sommet, N., & Autin, F. (2025). Advancing the psychology of social class with large-scale replications in four countries. *Nature Human Behaviour*. https://doi.org/10.1038/s41562-025-02234-1

Bindra, S., Sharma, D., Parameswar, N., Dhir, S., & Paul, J. (2022). Bandwagon effect revisited: A systematic review to develop future research agenda. *Journal of Business Research*, *143*, 305–317. https://doi.org/10.1016/j.jbusres.2022.01.085

Boileau, L.-A. (2022). *Social class and the big two: Investigating a widespread yet understudied assumption on social class differences in self-concepts* [Doctoral dissertation]. University of Mannheim.

Carey, R. M., & Markus, H. R. (2017). Social class shapes the form and function of relationships and selves. *Current Opinion in Psychology*, *18*, 123–130. https://doi.org/10.1016/j.copsyc.2017.08.031

Cheung, F., & Lucas, R. E. (2016). Income inequality is associated with stronger social comparison effects: The effect of relative income on life satisfaction. *Journal of Personality and Social Psychology*, *110*(2), 332–341. https://doi.org/10.1037/pspp0000059

Cho, E., Kim-Vick, J., & Yu, U.-J. (2022). Unveiling motivation for luxury fashion purchase among Gen Z consumers: need for uniqueness versus bandwagon effect. *International Journal of Fashion Design, Technology and Education*, *15*, 24–34. https://doi.org/10.1080/17543266.2021.1973580

Chou, T.-J., Dai, Q., Chang, E.-C., & Wong, V. (2013). Replacement between conformity and counter-conformity in consumption decisions. *Psychological Reports*, *112*(1), 125–150. https://doi.org/10.2466/01.07.09.PR0.112.1.125-150

D'Amico, A., & Scrima, F. (2016). The Italian validation of Singelis's self-construal scale (SCS): A short 10-Item version shows improved psychometric properties. *Current Psychology*, *35*, 159–168. https://doi.org/10.1007/s12144-015-9378-y

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgement. *Journal of Abnormal Psychology*, *51*(3), 629–636. https://doi.org/10.1037/h0046408

Eom, K., Kim, H. S., & Sherman, D. K. (2018). Social class, control, and action: Socioeconomic status differences in antecedents of support for pro-environmental action. *Journal of Experimental Social Psychology*, *77*, 60–75. https://doi.org/10.1016/j.jesp.2018.03.009

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Fernández, I., Páez, D., & González, J. L. (2005). Independent and interdependent self-construals and socio-cultural factors in 29 nations [Le concept de soi indepéndant et interdépendent et les facteurs socio-culturels dans 29 nations]. *Revue Internationale de Psychologie Sociale*, *18*(1–2), 35–63.

Gobel, M. S., & Miyamoto, Y. (2024). Self- and other-orientation in high rank: A cultural psychological approach to social hierarchy. *Personality and Social Psychology Review*, *28*(1), 54–80. https://doi.org/10.1177/10888683231172252

Grossmann, I., & Varnum, M. E. W. (2011). Social class, culture, and cognition. *Social Psychological and Personality Science*, *2*(1), 81–89. https://doi.org/10.1177/1948550610377119

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations—Software of the mind: Intercultural cooperation and its importance for survival* (3rd ed.). McGraw-Hill.

Imhoff, R., & Erb, H.-P. (2009). What motivates nonconformity? Uniqueness seeking blocks majority influence. *Personality and Social Psychology Bulletin*, *35*(3), 309–320. https://doi.org/10.1177/0146167208328166

Kassambara, A. (2023). *rstatix: Pipe-friendly framework for basic statistical tests*. R package version 0.7.2. https://CRAN.R-project.org/package=rstatix

Kastanakis, M. N., & Balabanis, G. (2012). Between the mass and the class: Antecedents of the "bandwagon" luxury consumption behavior. *Journal of Business Research*, *65*(10), 1399–1407. https://doi.org/10.1016/j.jbusres.2011.10.005

Klein, S. A., & Hilbig, B. E. (2019). On the lack of real consequences in consumer choice research. And its consequences. *Experimental Psychology*, *66*(1), 68–76. https://doi.org/10.1027/1618-3169/a000420

Kraus, M. W., & Keltner, D. (2009). Signs of socioeconomic status: A thin-slicing approach. *Psychological Science*, *20*(1), 99–106. https://doi.org/10.1111/j.1467-9280.2008.02251.x

Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., & Keltner, D. (2012). Social class, solipsism, and contextualism: How the rich are different from the poor. *Psychological Review*, *119*(3), 546–572. https://doi.org/10.1037/a0028756

Kraus, M. W., & Stephens, N. M. (2012). A road map for an emerging psychology of social class. *Social and Personality Psychology Compass*, *6*(9), 642–656. https://doi.org/10.1111/j.1751-9004.2012.00453.x

Kuhn, M. H., & McPartland, T. S. (1954). *Twenty Statements Test* [Dataset]. APA PsycTests. https://doi.org/10.1037/t05100-000

Latané, B. (1981). The psychology of social impact. *American Psychologist*, *36*(4), 343–356. https://doi.org/10.1037/0003-066X.36.4.343

Leibenstein, H. (1950). Bandwagon, snob, and veblen effects in the theory of consumers' demand. *The Quarterly Journal of Economics*, *64*, 183–207. https://doi.org/10.2307/1882692

Leiner, D. J. (2019). *SoSci survey* (3.1.06) [Computer software]. https://www.soscisurvey.de

Lynn, M., & Harris, J. (1997). The desire for unique consumer products: A new individual differences scale. *Psychology & Marketing*, *14*(6), 601–616. https://doi.org/10.1002/(SICI)1520-6793(199709)14:6%3C601::AID-MAR5%3E3.0.CO;2-B

Markus, H. R., & Stephens, N. M. (2017). Editorial overview: Inequality and social class: The psychological and behavioral consequences of inequality and social class: a theoretical integration. *Current Opinion in Psychology*, *18*, iv–xii. https://doi.org/10.1016/j.copsyc.2017.11.001

Na, J., Grossmann, I., Varnum, M. E., Kitayama, S., Gonzalez, R., & Nisbett, R. E. (2010). Cultural differences are not always reducible to individual differences. *Proceedings of the National Academy of Sciences of the United States of America*, *107*(14), 6192–6197. https://doi.org/10.1073/pnas.1001911107

Na, J., McDonough, I. M., Chan, M. Y., & Park, D. C. (2016). Social-class differences in consumer choices: Working-class individuals are more sensitive to choices of others than middle-class individuals. *Personality & Social Psychology Bulletin*, *42*(4), 430–443. https://doi.org/10.1177/0146167216634043

Neighbors, C., LaBrie, J. W., Hummer, J. F., Lewis, M. A., Lee, C. M., Desai, S., Kilmer, J. R., & Larimer, M. E. (2010). Group identification as a moderator of the relationship between perceived social norms and alcohol consumption. *Psychology of Addictive Behaviors*, *24*, 522–528. https://doi.org/10.1037/a0019944

Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: the influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, *99*, 771–784. https://doi.org/10.1037/a0020092

Pirlott, A. G., & MacKinnon, D. P. (2016). Design approaches to experimental mediation. *Journal of Experimental Social Psychology*, *66*, 29–38. https://doi.org/10.1016/j.jesp.2015.09.012

Rao, H., Greve, H. R., & Davis, G. F. (2001). Fool's gold: Social proof in the initiation and abandonment of coverage by wall street analysts. *Administrative Science Quarterly*, *46*(3), 502–526. https://doi.org/10.2307/3094873

Roethke, K., Klumpe, J., Adam, M., & Benlian, A. (2020). Social influence tactics in e-commerce onboarding: The role of social proof and reciprocity in affecting user registrations. *Decision Support Systems*, *131*. https://doi.org/10.1016/j.dss.2020.113268

Rosenberg, M., & Pearlin, L. I. (1978). Social class and self-esteem among children and adults. *American Journal of Sociology*, *84*(1), 53–77. https://doi.org/10.1086/226740

Salazar, H. A., Oerlemans, L., & van Stroe-Biezen, S. (2013). Social influence on sustainable consumption: Evidence from a behavioural experiment. *International Journal of Consumer Studies*, *37*, 172–180. https://doi.org/10.1111/j.1470-6431.2012.01110.x

Salmon, S. J., De Vet, E., Adriaanse, M. A., Fennis, B. M., Veltkamp, M., & De Ridder, D. T. D. (2015). Social proof in the supermarket: Promoting healthy choices under low self-control conditions. *Food Quality and Preference*, *45*, 113–120. https://doi.org/10.1016/j.foodqual.2015.06.004

Schneider, S. M. (2019). Why income inequality is dissatisfying—perceptions of social status and the inequality-satisfaction link in Europe. *European Sociological Review*, *35*(3), 409–430. https://doi.org/10.1093/esr/jcz003

Schumpe, B. M., Herzberg, P. Y., & Erb, H.-P. (2016). Assessing the need for uniqueness: Validation of the German NfU-G scale. *Personality and Individual Differences*, *90*, 231–237. https://doi.org/10.1016/j.paid.2015.11.012

Simonsohn, U. (2015). Small Telescopes: Detectability and the evaluation of replication results. *Psychological Science*, *26*(5), 559–569. https://doi.org/10.1177/0956797614567341

Simonsohn, U. (2016). https://datacolada.org/54

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, *20*(5), 580–591. https://doi.org/10.1177/0146167294205014

Singmann, H., Bolker, B., Westfall, J., Aust, F., & Ben-Shachar, M. (2022). *afex: Analysis of factorial experiments*. R package version 1.1-1. https://CRAN.R-project.org/package=afex

Snyder, C. R., & Fromkin, H. L. (1977). Abnormality as a positive characteristic: The development and validation of a scale measuring need for uniqueness. *Journal of Abnormal Psychology*, *86*, 518–527. https://doi.org/10.1037/0021-843X.86.5.518

Solt, F. (2019). *The standardized world income inequality database, Versions 8-9* [Dataset]. https://doi.org/10.7910/DVN/LM4OWF

Sparkman, G., Weitz, E., Robinson, T. N., Malhotra, N., & Walton, G. M. (2020). Developing a scalable dynamic norm menu-based intervention to reduce meat consumption. *Sustainability*, *12*(6), 2453. https://doi.org/10.3390/su12062453

Stephens, N. M., Fryberg, S. A., & Markus, H. R. (2011). When choice does not equal freedom. *Social Psychological and Personality Science*, *2*(1), 33–41. https://doi.org/10.1177/1948550610378757

Stephens, N. M., Markus, H. R., & Townsend, S. S. M. (2007). Choice as an act of meaning: The case of social class. *Journal of Personality and Social Psychology*, *93*(5), 814–830. https://doi.org/10.1037/0022-3514.93.5.814

Tainaka, T., Miyoshi, T., & Mori, K. (2014). Conformity of witnesses with low self-esteem to their co-witnesses. *Psychology*, *5*, 1695–1701. https://doi.org/10.4236/psych.2014.515177

Thomas, J. M., Ursell, A., Robinson, E. L., Aveyard, P., Jebb, S. A., Herman, C. P., & Higgs, S. (2017). Using a descriptive social norm to increase vegetable selection in workplace restaurant settings. *Health Psychology*, *36*(11), 1026–1033. https://doi.org/10.1037/hea0000478

Twenge, J. M., & Campbell, W. K. (2002). Self-esteem and socioeconomic status: A meta-analytic review. *Personality and Social Psychology Review*, *6*(1), 59–71. https://doi.org/10.1207/S15327957PSPR0601_3

Unkelbach, F., John, M., & Vogel, V. (2023). Jumping on the bandwagon: The role of voters' social class in poll effects in the context of the 2021 German federal election. *Politische Vierteljahresschrift*, *64*, 51–78. https://doi.org/10.1007/s11615-022-00417-3

U.S. Census Bureau. (2021). *Educational Attainment in the United States: 2020*. https://www.census.gov/data/tables/2020/demo/educational-attainment/cps-detailed-tables.html

Zhang, H., Talhelm, T., Yang, Q., & Hu, C. S. (2021). High-status people are more individualistic and analytic-thinking in the west and wheat-farming areas, but not rice-farming areas. *European Journal of Social Psychology*, *51*, 878–895. https://doi.org/10.1002/ejsp.2778

## Supplementary Materials

## Peer Review Communication

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