Super Size Me:

An Unsuccessful Preregistered Replication of the Effect of Product Size on Status Signaling

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Ignazio supervised Xu Wenting on her master's thesis. Burak verified the analyses and conclusions and performed new ones, and completed the manuscript submission draft. Ignazio and Burak jointly finalized the manuscript for submission.

Xu Wenting conducted the replication as part of her "Grand Memoire" (Master's Thesis) at Grenoble Ecole de Management during the academic year 2018-19.

Abstract

Dubois, Rucker, and Galinsky (2012, Experiment 1) found that consumers view larger-size options as a signal of higher status. We conducted a close replication of this finding ($N = 415$), and observed a nonsignificant effect in the opposite direction (small vs. large product size: $d_{\text{original}} = 1.49$, 95%CI [1.09, 1.89], $d_{\text{replication}} = 0.09$ 95%CI [-0.15, 0.33]; medium vs. large: $d_{\text{original}} = 0.89$ 95%CI [0.52, 1.26], $d_{\text{replication}} = 0.11$ 95%CI [-0.13, 0.34]; small vs. medium: $d_{\text{original}} = 0.62$ 95%CI [0.26, 0.98], $d_{\text{replication}} = -0.01$ 95%CI [-0.25, 0.23]). We discuss potential reasons for this unsuccessful replication as well as implications for the status-signaling literature in consumer psychology.

Keywords: status, inferences, product size, replication, open science

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Introduction

Why do consumers choose larger portions, for example at a fast-food restaurant, despite the potential negative consequences of such choices on their health and well-being? Given that larger portion sizes give rise to increased consumption (i.e, the portion size effect; Vandenbroele et al., 2019; Zlatevska et al., 2014), understanding the factors influencing portion choice is of importance to efforts in reducing excessive eating-related problems like obesity. Various underlying mechanisms of preferences for larger portions are available in the literature. These explanations include *value for money* (larger portions have a lower price per unit), *mindless eating* (consumers are inattentive to their choices, for example while dining with others), and *estimation bias* (consumers are often uninformed about reference portion sizes and they fail to estimate appropriate amount to eat; for a review, see Steenhuis & Poelman, 2017). To add to these explanations, Dubois et al. (2012) presented a novel postulation: consumers choose larger-sized food options to signal social status. Put simply, people do not choose larger portions to satiate the need for food, but to satiate the need for status.

The evidence for this novel hypothesis attracted attention. At the time of writing, the study has been cited over 290 times on Google Scholar, and also appeared in mainstream media such as *The New York Times* (Warren, 2011), *Scientific American* (Grewal, 2011), and *The Atlantic* (Villarica, 2011). To illustrate the extent of publicity, Warren (2011) reported the study in *The New York Times* as a “fascinating research that links obesity with status” and proposed that anti-obesity campaigns could benefit from altering the size-to-status relationship. While the

impact, theoretical importance, and relevance of Dubois et al.'s (2012) research make it a worthy candidate for replication, Field et al. (2019) recommend also evaluating the statistical findings in the original work to judge the necessity of a replication.

Following the guidelines in Field et al. (2019), we converted the reported statistical differences among portion sizes in the original study into Bayes factors using the BayesFactor package in R statistical software (Morey et al., 2018). Dubois et al. (2012) reported that perceived status was higher in the large choice versus small choice ($t(182) = 4.66, p = .001, d = 1.10$), large choice versus medium choice ($t(182) = 2.95, p = .01, d = .65$), and medium choice versus small choice ($t(182) = 2.27, p = .05, d = .46$). When converted into Jeffreys-Zellner-Siow Bayes factors (see Field et al., 2019, p. 2), these differences corresponded to Bayes factors of 2026 (large vs. small), 5 (large vs. medium), and 1 (medium vs. small). According to the classification recommended by Field et al. (2019), while the difference between large and small portion sizes show very strong evidence for the effect (i.e., the data are 2026 times more likely to occur under the alternative hypothesis relative to the null hypothesis), the Bayes factor values drop substantially for the remaining comparisons and indicate ambiguous evidence for the comparison between medium and small size portions with a Bayes factor of 1. We therefore argue that these statistical discrepancies in the original results also warrant replication.

Despite the abovementioned implications of Dubois et al.'s (2012) findings for marketing theory as well as policymaking, independent replications of this study are not available in the literature, to the best of our knowledge. In this replication report, we present a preregistered direct replication of the first experiment in Dubois et al. (2012), which tested the primary hypothesis that choosing larger sizes in a set of food options is associated with greater status, but

does not significantly influence other dimensions that are not related to status such as perceived niceness, honesty, or attractiveness.

Method

Choice of Direct Replication

Direct replications strive to keep as many factors as possible identical to the original (e.g., survey procedure, wording, measures), while conceptual replications aim to test the central notion of a past finding, for instance by changing the procedure or the stimuli involved. While some authors argue that replications should focus on conceptual extensions of original hypotheses (e.g., Lynch et al., 2015; Stroebe & Strack, 2014), Simons (2014) contends that the space of possible effects that can moderate a finding is infinite and all findings, reliable or unreliable, can be attributed to some unidentified moderators, thereby hindering accumulation of scientific evidence. Thus, Simons (2014) maintains that the purpose of replications is to determine reliability of findings, which can be achieved most successfully via direct replications by independent researchers. In accord with this perspective, we chose to conduct a direct replication to test the primary hypothesis in Dubois et al. (2012) and examine the reliability of the portion size effect on status perceptions.

Open Science Practices

Data collection and analyses plans were preregistered prior to data collection (see <http://aspredicted.org/blind.php?x=j9a6je>; anonymized document¹). Data, analyses, and materials are available at https://osf.io/ue458/?view_only=bc68746df4504e5683f8832b0dc69ee2.

Design and Sample

As with the original experiment (Dubois et al., 2012, Study 1), our replication comprised a 3 (size of observed choice: small, medium, large) x 3 (product: coffee, pizza, smoothie) x 2 (dimension: status, nonstatus) mixed design with size and product as between-subject factors and dimension as a within-subject factor. Participants were randomly assigned to one of nine conditions.

The original experiment was based on 183 undergraduates (74 males); data for the replication experiment were collected from the Amazon MTurk participant pool ($N = 415$, 214 males, $M_{\text{age}} = 37.9$, $SD_{\text{age}} = 11.8$). Participants received \$0.50 as compensation. Power analyses indicated that our sample size had 99% power to detect the original effect size of product size on status inferences and 99.9+% power to detect the original mixed interaction effect between product size and status dimensions (alpha level of 5%; see supplementary materials for effect size conversion and power analyses).

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¹ There was an error in the preregistration where we indicated that the scale on which participants judged the person ranged from 1 (not at all) to 9 (very much). In fact, the scale ranged from 1 (not at all) to 7 (very much), according to the original study. We used a 7-point scale in this work as well.

Procedure and Measures

Identical to the original study, participants were asked to read about a consumption scenario in which a consumer chose small, medium, or large option for one of three products (coffee, pizza, or smoothie). While price was not presented in the pizza and smoothie conditions, the coffee was presented as free. An example scenario is presented below:

“You’re at a local smoothie shop. An individual enters in the smoothie shop, and asks for a smoothie. The cashier explains to him that the smoothies come in three sizes: small (16 oz), medium (24 oz) and large (30 oz), and asks him which size he would like to choose. The individual orders the largest size.”

Following the consumption scenario, participants were asked to make judgments of the target person on status-related (this person has high status, is respected; $\alpha = 0.75$) and nonstatus-related (this person is honest, nice, attractive; $\alpha = 0.80$) dimensions. These judgments were recorded with a 7-point Likert-type scale (1 = “strongly disagree” to 7 = “strongly agree”).

Participants also responded to an attention check, in which they had to identify which among six traits had been presented to them (Roughness, Ruggedness, Niceness, Brutality, Suavity, Intelligence). 338 participants correctly identified “niceness” in the attention check (171 males, 167 females, $M_{age} = 39.05$, $SD_{age} = 11.90$). Excluding the participants who failed to identify the attention check did not affect the results. To maximize statistical power and give the original effect the best chance to be detected, we chose to report all data without any exclusion (results obtained excluding participants who failed the attention check are available on the project OSF page).

Results

Main Analyses

Descriptive statistics for each condition are presented in Table 1. We first analyzed the full 3 (size) x 3 (product) x 2 (dimension) mixed-factorial model using repeated measures ANOVA. Note that this analysis for the entire design has not been reported in the original study. As seen in Table 2, the only significant effect was the main effect of dimension, such that, regardless of the experimental condition, participants rated the target consumers lower on the status-related dimensions ($M = 4.43$, $SE = 0.05$) than the nonstatus-related dimensions ($M = 4.77$, $SE = 0.05$; $t(406) = 9.56$, $p < .001$).

Table 1

Means and standard deviations (in parentheses) for status- and nonstatus-related dimensions across experimental conditions.

	Status-related dimensions			Nonstatus-related dimensions			
	High Status	Respected	Status (combined)	Honest	Nice	Attractive	Nonstatus (combined)
Coffee:							
Small ($n = 40$)	4.47 (1.32)	5.10 (1.06)	4.79 (0.93)	5.42 (1.11)	5.45 (1.22)	4.72 (1.11)	5.20 (0.84)
Medium ($n = 49$)	4.35 (1.35)	4.63 (1.27)	4.49 (1.24)	4.96 (1.22)	4.86 (1.32)	4.47 (1.26)	4.76 (1.14)
Large ($n = 48$)	4.21 (1.29)	4.42 (1.18)	4.31 (1.14)	4.90 (1.26)	4.56 (1.13)	4.31 (1.07)	4.59 (0.97)
Smoothie:							
Small ($n = 45$)	3.98 (1.36)	4.64 (1.17)	4.31 (1.15)	5.00 (1.04)	4.91 (1.02)	4.67 (1.26)	4.86 (0.91)
Medium ($n = 43$)	4.33 (1.34)	4.65 (1.31)	4.49 (1.21)	4.98 (1.26)	4.93 (1.08)	4.51 (1.26)	4.81 (1.03)
Large ($n = 46$)	4.07 (1.20)	4.57 (1.42)	4.32 (1.11)	4.98 (1.29)	4.89 (1.27)	4.33 (1.28)	4.73 (1.10)
Pizza:							
Small ($n = 43$)	4.21 (1.17)	4.44 (1.03)	4.33 (0.99)	4.72 (1.18)	4.58 (0.96)	4.37 (0.93)	4.56 (0.77)
Medium ($n = 53$)	4.34 (1.33)	4.58 (1.18)	4.46 (1.17)	4.98 (1.32)	4.83 (1.22)	4.40 (1.23)	4.74 (1.13)
Large ($n = 48$)	4.33 (1.46)	4.56 (1.11)	4.45 (1.12)	4.92 (1.18)	4.90 (1.06)	4.50 (1.15)	4.77 (0.98)
Average							
Small ($n = 128$)	4.21 (1.29)	4.72 (1.12)	4.47 (1.05)	5.04 (1.14)	4.97 (1.12)	4.59 (1.11)	4.87 (0.88)
Medium ($n = 145$)	4.39 (1.33)	4.62 (1.24)	4.48 (1.20)	4.97 (1.26)	4.87 (1.21)	4.46 (1.24)	4.77 (1.10)
Large ($n = 142$)	4.20 (1.32)	4.51 (1.24)	4.36 (1.12)	4.93 (1.24)	4.78 (1.16)	4.38 (1.17)	4.70 (1.01)

Table 2

ANOVA summary table for the effects of product type, portion size, and status dimensions.

	Sum of Squares	df	Mean Square	F	p	η^2_p
<i>Within-subjects effects</i>						
Dimension	24.06	1	24.06	91.33	< .001	0.18
Dimension*Size	0.41	2	0.20	0.78	0.461	<0.01
Dimension*Product	0.83	2	0.41	1.57	0.209	0.01
Dimension*Size*Product	0.57	4	0.14	0.54	0.708	0.01
Residual	106.94	406	0.26			
<i>Between-subjects effects</i>						
Size	2.98	2	1.49	0.74	0.476	<0.01
Product	2.94	2	1.47	0.73	0.482	<0.01
Size*Product	12.68	4	3.17	1.58	0.179	0.02
Residual	814.75	406	2.01			

Note. Type 3 Sums of Squares.

Next, following the analysis steps in the original study, we collapsed the different product scenarios and conducted a 3 (size) x 2 (dimension) repeated measures ANOVA. Again, the main effect of dimension was significant ($F(1, 412) = 91.69, p < .001, \eta^2_p = 0.18$), indicating that participants rated the individual higher on nonstatus compared to status dimension; yet, more pertinent to the main findings of the original study that larger size choices would be associated with perceived status, the interaction between size and dimension was not significant ($F(2, 412) = 0.83, p = .435, \eta^2_p < 0.01$; original result: $F(1, 177) = 4.06, p = .03, \eta^2_p = 0.05$). For status-related dimensions, choice size did not have any effect ($F(2, 412) = 0.48, p = .620, \eta^2_p = 0.002$). As seen in Figure 1, perceived status of the consumer did not differ across small ($M = 4.46, SE = 0.10$), medium ($M = 4.48, SE = 0.09$), and large ($M = 4.36, SE = 0.09$) choice conditions (for comparisons, all $ps > .350$). Similarly, judgments on nonstatus-related dimensions were also not affected by the choice size manipulation ($F(2, 412) = 0.94, p = .391, \eta^2_p = 0.005$; $M_{\text{small}} = 4.86, SE = 0.09$; $M_{\text{medium}} = 4.77, SE = 0.08$; $M_{\text{large}} = 4.70, SE = 0.08$; for comparisons, all $ps > .170$).

Figure 1. Comparisons of status- and nonstatus-related dimensions across different product sizes.

In Table 3, we also present a comparison between the results of the original study and the replication study, including following the replication classification of LeBel et al. (2019).

Although the original study reported rather large effects of product size on status perceptions, in the replication study effects were nonsignificant in the opposite of the hypothesized direction (status perceptions were lowest in the large product size condition).

Table 3

Comparisons for status-related dimensions between the replication and original study.

Size Comparison	Replication Study				Original Study					Replication classification according to LeBel et al. 2019
	$M_{\text{difference}}$	$t(412)$	p	Cohen's d [95% CI]	$M_{\text{difference}}$	$t(182)$	p	Cohen's d *	Recalculated Cohen's d [95% CI] *	
Large vs. Small	-0.11	-0.77	.442	-0.10 [-0.34, 0.14]	1.95	4.66	.001	1.10	1.49 [1.09, 1.89]	No signal-inconsistent
Large vs. Medium	-0.12	-0.90	.367	-0.10 [-0.34, 0.14]	1.19	2.95	.01	0.65	0.89 [0.52, 1.26]	No signal – inconsistent
Medium vs. Small	0.01	0.11	.916	0.01 [-0.23, 0.25]	0.76	2.27	.05	0.46	0.62 [0.26, 0.98]	No signal-inconsistent

*see supplementary materials for a note on how the original effect sizes were recalculated

Supplementary Bayesian Analyses

Because frequentist statistics and interpretation of p -values are generally not informative in quantifying evidence for the null hypothesis, Bayesian analyses are recommended for establishing evidence of absence (Keysers et al., 2020). We therefore supplemented our analyses with Bayes factors, which provide us the plausibility of the observed data under different models employing the null versus alternative hypothesis. Open source software JASP was used to conduct the Bayesian ANOVAs reported in this section (Bergh et al., 2020; JASP Team, 2020).

First, we ran a Bayesian repeated measures ANOVA for the 3 (size: small, medium, large) x 2 (dimension: status, nonstatus) mixed model. Table 4 compares the likelihood of all possible models relative to the null model; however, given that our focus is on the predictive performance of each component, analysis of effects presented in Table 5 is more informative (Bergh et al., 2020; Keysers et al., 2020). To generate the analysis of effects, we used the recommended matched models option, which, in our case, compares the model with the interaction effect only with the models that exclude the interaction, thereby providing a more conservative estimate for each factor's contribution (Keysers et al., 2020; Mathôt, 2017). As seen in Table 5, the results revealed that data are 16 times more likely to occur under the models that exclude the interaction effect, which can be concluded as decisive evidence for the null hypothesis with respect to Kass and Raftery's (1995) reference values.

Table 4

Model comparison for all models under consideration for the replication data

Models	P(M)	P(M data)	BF _M	BF ₀₁	error %
Null model (incl. subject)	0.200	3.271e -17	1.308e -16	1.000	
Dimension	0.200	0.879	29.132	3.720e -17	0.939
Dimension + SIZE	0.200	0.114	0.513	2.876e -16	6.109
Dimension + SIZE + Dimension * SIZE	0.200	0.007	0.028	4.671e -15	8.726
SIZE	0.200	3.741e -18	1.497e -17	8.742	5.093

Note. All models include subject

Table 5

Analysis of effects of individual factors

Effects	P(incl)	P(incl data)	BF _{excl}
Dimension	0.400	0.993	3.671e -17
SIZE	0.400	0.114	7.731
Dimension * SIZE	0.200	0.007	16.241

Note. Compares models that contain the effect to equivalent models stripped of the effect. Higher-order interactions are excluded.

We also conducted a Bayesian ANOVA to examine the effect of portion size on status dimensions only, as we did in the main analyses. As seen in Tables 6 and 7, data are about 24 times more likely to occur under the models excluding the portion size effect, thereby providing decisive evidence for the null hypothesis stating that portion size choices are not associated with status perceptions. We further illustrated this lack of evidence by plotting the model with portion size effect. As seen Figure 2, 95% credible intervals for different levels of portion size overlap substantially, indicating no differences among the levels.

Table 6

Comparison of the portion size effect model with the null model for the replication data

Models	P(M)	P(M data)	BF _M	BF ₀₁	error %
Null model	0.500	0.960	23.899	1.000	
SIZE	0.500	0.040	0.042	23.899	0.025

Table 7

Analysis of the effect of portion size

Effects	P(incl)	P(incl data)	BF _{excl}
SIZE	0.500	0.040	23.899

Figure 2

Model averaged posterior distributions for the portion size effect model

Note on the Effect Sizes

In order to compare the effect sizes, we recalculated the original effect sizes from the reported F -values using two independent tools (Lakens, 2013; Uanhoro, 2017). For both the interaction and the effect of product size on status, we found smaller effect sizes and slightly higher p -values than the original. We compared effect sizes in the present replication, effect sizes reported in the original paper, and effect sizes we recalculated based on the summary statistics provided in the original paper, and we provided 90% confidence intervals (as it is customary with η^2_p , which cannot be smaller than 0).

The original interaction was $F(1, 177) = 4.06$, original $p = .03$, recalculated $p = .045$, original $\eta^2_p = 0.05$, but we recalculated it as $\eta^2_p = 0.02$, 90% CI [0.0002, 0.07]. In our replication, we obtained the following results: $F(2, 412) = 0.83$, $p = .435$, $\eta^2_p < 0.01$, 90% CI [0, 0.017]

The original main effect of product size on status inferences yielded $F(1, 177) = 10.22$, original $p = .001$, recalculated $p = .002$, original $\eta^2_p = 0.10$, recalculated $\eta^2_p = 0.05$, 90% CI [0.012, 0.12].

Note that the recalculated p could be due to a different rounding. Our replicated effect size on status: $F(2, 412) = 0.48$, $p = .620$, $\eta^2_p < 0.01$, 90% CI [0, 0.012]. The same can be said about the Cohen's d s reported at page 1051. Recalculating them yields much larger effect sizes (see supplementary materials for details), which we report in Table 3.

General Discussion

In this work, we failed to replicate the first experiment from Dubois et al. (2012), which found that consumers associated larger portion choices with higher status. What could be the reasons for this replication failure? First, although we conducted a direct replication in terms of materials and procedure, one major difference from the original study was the study sample. The original experiment was based on 183 undergraduate students (average age not available); the

replication was based on 415 participants from MTurk ($M_{age} = 37.9$). Assuming that the undergraduate sample was much younger, age might have influenced the results, such that while students could associate mundane products like coffee, smoothie, or pizza with status, older consumers could not. Second, another possible explanation is that students on average have lower socioeconomic status, and given the link between low socioeconomic status and higher propensity for status consumption (Dubois & Ordabayeva, 2015), students were more likely to associate larger portion sizes with status. However, there are plenty of successful replications in which an original finding obtained with students was successfully replicated on MTurk samples (Ziano, Wang, et al., in press; Ziano, Yao, et al., in press).

A third explanation could be the association between status and health behaviors, which have long been associated with higher socioeconomic status (Pampel et al., 2010). Particularly, healthy food consumption is prevalent among middle and upper social class while consumption of unhealthy choices such as fast food is common among lower social class (Hupkens et al., 2000; Pechey & Monsivais, 2016). This connection between status and health behaviors has been further augmented in today's popular culture. For instance, several famous social media influencers are portraying a wealthy lifestyle coupled with healthy behaviors such as eating well, meditating, and doing physical exercise (Vaterlaus et al., 2015). Consequently, it is possible that consumers today perceive larger portion choices to be unhealthy, and do not associate such unhealthy behaviors with status.

The findings of Dubois et al. (2012) have been greatly influential in the marketing literature; yet, our preregistered direct replication casts doubt on the reliability of the relationship between larger food portions and status. We therefore strongly recommend conducting further preregistered conceptual and direct replications to ascertain whether larger portions in fact signal

higher status. Obesity and other excessive food consumption related health problems have significant consequences; thus, scientific research findings that inform policymaking in these areas must be robust. The postulation that consumers signal status via choosing larger portions is certainly novel and worthwhile to examine. Nevertheless, we conclude that the evidence for this postulation remains inconclusive until further replications are available in the literature.

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Super Size Me: A Preregistered Replication

Supplementary materials

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Data and analyses

Data collection and analyses plans were preregistered prior to data collection (see <http://aspredicted.org/blind.php?x=j9a6je>; anonymized document). Data, analyses and materials are available at https://osf.io/ue458/?view_only=bc68746df4504e5683f8832b0dc69ee2.

Table S1

Difference and similarities between original studies and replication attempts

	Dubois et al. (2012) Experiment 1	Present replication
Sample size	183	415
Geographic origin	Not reported	US American
Gender	74 males, 109 females	214 males, 199 females
Average age (years)	Not reported	37.9 years old
Medium (location)	Not reported	Computer (online)
Compensation	Not reported	\$0.50
Year	Not reported (on or before 2012)	2019

Post-hoc power analyses

Dimension by product size interaction

Partial eta-squared (Fixed effects)

Inputs

F-value:
 Confidence Interval: %

Numerator degrees of freedom:
 Denominator degrees of freedom:

It is recommended that you use the **90% CI** if you have an alpha level of 5%.

Entered values: {
 "f": 4.06,
 "df_effect": 1,
 "df_error": 177,
 "conf_int": 90
 }

Results (CI using noncentral *F* distribution)

[Partial eta-squared](#):
 Lower limit on partial eta-squared:

[Partial omega-squared](#):
 Upper limit on partial eta-squared:

[Cohen's *f*](#):
 Lower limit on Cohen's *f*:

Upper limit on Cohen's *f*:

Figure S1. Converting interaction η^2_p into Cohen's *f*, using Uanhoro (2019) online calculator.

Note that using this method, the effect size we obtained is smaller than the one reported in the original paper, even though we used the same summary statistics they provided. Therefore, the subsequent power analysis is very conservative, since it is relative to an effect size ($\eta^2_p = .022$) about half the size of the one reported in Dubois et al. (2012), ($\eta^2_p = .05$)

Figure S2. Power analyses for the interaction between product size and status vs. non status dimension.

Partial eta-squared (Fixed effects)

Inputs

F-value:
 Confidence Interval: %

Numerator degrees of freedom:
 Denominator degrees of freedom:

It is recommended that you use the 90% CI if you have an alpha level of 5%.

Entered values: {
 "f": 10.22,
 "df_effect": 1,
 "df_error": 177,
 "conf_int": 90
 }

Results (CI using noncentral F distribution)

[Partial eta-squared](#):
 Lower limit on partial eta-squared:

[Partial omega-squared](#):
 Upper limit on partial eta-squared:

[Cohen's f](#):
 Lower limit on Cohen's f:

Upper limit on Cohen's f:

Figure S3. Converting main effect of product size on status η^2_p into Cohen's f , using Uanhoro (2019) online calculator. Note that using this method, the effect size we obtained is smaller than the one reported in the original paper, even though we used the same summary statistics they provided. Therefore, the subsequent power analysis is very conservative, since it is relative to an effect size ($\eta^2_p = .055$) about half the size of the one reported in Dubois et al. (2012) ($\eta^2_p = .10$).

Figure S4. Power analysis for the effect of product size on status inferences given our sample.

Recalculation of original Cohen's d effect sizes

Note: we recalculated and report the original article Cohen's d s assuming that cell size (small, medium, large size) is equal. Here, we also report somewhat extreme differences in cell size. Still, the effect size does not change dramatically, and in fact is even farther away compared to the original estimates (small-large $d = 1.10$; small-medium $d = 0.46$; medium-large $d = 0.65$). We note that the reported p -values are also inconsistent with the reported means.

Difference between small and large product size on status inferences

Independent Samples							
Mean group 1	3,03	Mean group 2	4,98	95% CI M_{diff}	-2,417727108	Cohen's d_s	1,494658842
SD group 1	1,19	SD group 2	1,41	[Low; High]	-1,482272892	Cohen's d	1,507062862
n group 1	61	n group 2	61	t	-8,254523251	Hedges's g_s	1,485297721
				df	120	CL effect size	0,854717598
				p	0,0000		

Figure S5. Difference between small and large product size on status inferences, assuming equal cell sizes. Calculated with Lakens' (2013) method.

Independent Samples							
Mean group 1	3,03	Mean group 2	4,98	95% CI M_{diff}	-2,495310986	Cohen's d_s	1,543456824
SD group 1	1,19	SD group 2	1,41	[Low; High]	-1,404689014	Cohen's d	1,557682533
n group 1	75	n group 2	35	t	-7,53985157	Hedges's g_s	1,532713505
				df	108	CL effect size	0,854717598
				p	0,0000		

Figure S6. Difference between small and large product size on status inferences, assuming unequal cell sizes. Calculated with Lakens' (2013) method.

Difference between medium and large product size on status inferences

Independent Samples							
Mean group 1	3,79	Mean group 2	4,98	95% CI M_{diff}	-1,667678706	Cohen's d_s	0,893122612
SD group 1	1,25	SD group 2	1,41	[Low; High]	-0,712321294	Cohen's d	0,900534545
n group 1	61	n group 2	61	t	-4,93243084	Hedges's g_s	0,887528942
				df	120	CL effect size	0,736153979
				p	0,0000		

Figure S7. Difference between medium and large product size on status inferences, assuming equal cell sizes. Calculated with Lakens' (2013) method.

Independent Samples							
Mean group 1	3,79	Mean group 2	4,98	95% CI M_{diff}	-1,742298381	Cohen's d_s	0,913633311
SD group 1	1,25	SD group 2	1,41	[Low; High]	-0,637701619	Cohen's d	0,922054073
n group 1	75	n group 2	35	t	-4,463137194	Hedges's g_s	0,907273915
				df	108	CL effect size	0,736153979
				p	0,0000		

Figure S8. Difference between medium and large product size on status inferences, assuming unequal cell sizes. Calculated with Lakens' (2013) method.

Difference between small and medium product size on status inferences

Independent Samples							
Mean group 1	3,03	Mean group 2	3,79	95% CI M_{diff}	-1,197513139	Cohen's d_s	0,622762563
SD group 1	1,19	SD group 2	1,25	[Low; High]	-0,322486861	Cohen's d	0,627930806
n group 1	61	n group 2	61	t	-3,43931867	Hedges's g_s	0,618862171
				df	120	CL effect size	0,670161671
				p	0,0008		

Figure S9. Difference between medium and small product size on status inferences, assuming equal cell sizes. Calculated with Lakens' (2013) method.

Independent Samples							
Mean group 1	3,03	Mean group 2	3,79	95% CI M_{diff}	-1,259587118	Cohen's d_s	0,628509509
SD group 1	1,19	SD group 2	1,25	[Low; High]	-0,260412882	Cohen's d	0,634302346
n group 1	75	n group 2	35	t	-3,070295414	Hedges's g_s	0,624134733
				df	108	CL effect size	0,670161671
				p	0,0027		

Figure S10. Difference between medium and small product size on status inferences, assuming unequal cell sizes. Calculated with Lakens' (2013) method.

Original survey

Month In which month were you born?

▼ January ... December

Day Which day were you born?

▼ 1 ... 31

gender What's your gender?

- ☐ Male
- ☐ Female

age What's your age?

18 26 34 43 51 59 67 75 84 92 100

job Which statement best describes your current employment status?

- ☐ Working (paid employee)
- ☐ Working (self-employed)
- ☐ Not working (temporary layoff from a job)
- ☐ Not working (looking for work)
- ☐ Not working (retired)
- ☐ Not working (disabled)
- ☐ Not working (other) _____
- ☐ Prefer not to answer

End of Block: demographics_tot

Start of Block: Super Size Me: Product Size as a Signal of Status

Smoothie_large You're at a local smoothie shop. An individual enters in the smoothie shop, and asks for a smoothie. The cashier explains to him that the smoothies come in three sizes: small (16 oz), medium (24 oz) and large (30 oz), and asks him which size he would like to choose.

The individual orders the largest size.

Please rate the individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Smoothie_medium You're at a local smoothie shop. An individual enters in the smoothie shop, and asks for a smoothie. The cashier explains to him that the smoothies come in three sizes: small (16 oz), medium (24 oz) and large (30 oz), and asks him which size he would like to choose.

The individual orders the medium size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Smoothie_small You're at a local smoothie shop. An individual enters in the smoothie shop, and asks for a smoothie. The cashier explains to him that the smoothies come in three sizes: small (16 oz), medium (24 oz) and large (30 oz), and asks him which size he would like to choose.

The individual orders the smallest size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Coffee_large You're at a local restaurant. An individual enters in the restaurant, he knows the restaurant provide free coffee. The cashier explains to him that the coffee come in three sizes: small (8 oz), medium (12 oz) and large (16 oz), and asks him which size he would like to choose.

The individual orders the largest size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Coffee_medium You're at a local restaurant. An individual enters in the restaurant, he knows the restaurant provide free coffee. The cashier explains to him that the coffee come in three sizes: small (8 oz), medium (12 oz) and large (16 oz), and asks him which size he would like to choose.

The individual orders the medium size.
Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Coffee_small You're at a local restaurant. An individual enters in the restaurant, he knows the restaurant provide free coffee. The cashier explains to him that the coffee come in three sizes: small (8 oz), medium (12 oz) and large (16 oz), and asks him which size he would like to choose.

The individual orders the smallest size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Pizza_large You're at a local pizzeria. An individual enters in the pizzeria, and asks for a pizza.

The cashier explains to him that the pizza come in three sizes: small (12 inch), medium (14 inch) and large (16 inch), and asks him which size he would like to choose.

The individual orders the largest size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Pizza_medium You're at a local pizzeria. An individual enters in the pizzeria, and asks for a pizza. The cashier explains to him that the pizza come in three sizes: small (12 inch), medium (14 inch) and large (16 inch), and asks him which size he would like to choose.

The individual orders the medium size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

Pizza_small You're at a local pizzeria. An individual enters in the pizzeria, and asks for a pizza.

The cashier explains to him that the pizza come in three sizes: small (12 inch), medium (14 inch) and large (16 inch), and asks him which size he would like to choose.

The individual orders the smallest size.

Please rate this individual on the following traits.

	Strongly disagree	Strongly agree
High status		
Respected		
Honest		
Nice		
Attractive		

End of Block: Super Size Me: Product Size as a Signal of Status

---

Start of Block: att_check

att_check Among the following traits, on what were you asked to judge the individual?

- ☐ Roughness
- ☐ Ruggedness
- ☐ Niceness
- ☐ Brutality
- ☐ Suavity
- ☐ Intelligence

End of Block: att_check

Start of Block: CODE AND FEEDBACK

feedback If you have any comments, please write them down in the box below

---

---

code This is the code you need to copy and paste:

CGNHNN

End of Block: CODE AND FEEDBACK