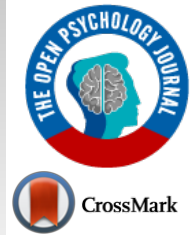




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## Supplementary Material



## Association with and Dissociation from Groups in Response to Personal and Social Identity Threats: The Role of Self-Construal and Anxiety

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### 1. DEVELOPMENT OF THE SELF-CONSTRUAL MANIPULATION

A pilot study examined the effectiveness of the self-construal manipulation is described on Supplemental materials for article: Drażkowski D., Behnke M., Kaczmarek L. D. (2021). I am afraid, so I buy it! The effects of anxiety on consumer assimilation and differentiation needs amongst individuals primed with independent and interdependent self-construal. PLOS ONE 16(9): e0256483. <https://doi.org/10.1371/journal.pone.0256483>

### 2. DEVELOPMENT OF THE SOCIAL AND PERSONAL IDENTITY THREAT MANIPULATION

We conducted a pretest of identity threat manipulation (described in detail in the main study description). 63 undergraduates females aged 19 to 27 years ( $M = 21.48$ ,  $SD = 1.94$ ) were randomly assigned into three conditions: social identity threat ( $n = 22$ ) vs. personal identity threat ( $n = 21$ ) vs. no threat ( $n = 20$ ). We excluded three individuals from the analysis because they unmasked the purpose of the study.

To assess the relative importance of professional competence to the personal and social identity, we asked participants to rate before manipulating identity threat how important this competence was either to themselves (personal identity) or women (social identity). Participants rated the importance of professional competence on a 7-point scale ranging from 1 (not at all important) to 7 (very important). Participants on average “rather agree” with statement that professional competence is an important part of their personal identity ( $M = 5.41$ ,  $SD = 1.25$ ) and social identity ( $M = 4.74$ ,  $SD = 1.09$ ). To assess the effectiveness of manipulation of the personal and social identity threat, we asked participants to indicate the extent to which they felt threatened by eight adjectives ( $\alpha = .91$ ): “threatened,” “concerned,” “calm” (reversed item), “nervous,” “upset,” “frightened,” “jittery” and

“uncertain”. We also used the method to assess the performance self-esteem (Heatherton and Polivy, 1991,  $\alpha = .92$ ) and the collective private self-esteem (Luhtanen and Crocker, 1992,  $\alpha = .90$ ) at state levels. A lower level of performance self-esteem can be considered as an indicator of a personality identity threat, and a lower private collective self-esteem can be considered as an indicator of a social identity threat (Scheepers and Ellemers, 2005). To assess whether methods of inducing identity threat lead to increased anxiety, we used the State-Trait Anxiety Inventory (Spielberger et al., 1983, Wrześniewski et al., 2006), a 20-item self-reported questionnaire that measures state anxiety (STAI-S) at the moment of scoring with four-point Likert scales ( $\alpha = .81$ ).

Results revealed that significantly greater threat was experienced in the social ( $M = 2.24$ ,  $SD = 1.02$ ) and personal identity threat ( $M = 2.30$ ,  $SD = .73$ ) condition as opposed to the no-threat condition ( $M = 1.60$ ;  $SD = 0.51$ ),  $F(2, 57) = 4.93$ ,  $p < .05$ . According to assumptions in the personal identity threat condition was observed lower level of individual performance self-esteem ( $M = 1.69$ ,  $SD = .46$ ) as compared to the no-threat ( $M = 2.56$ ;  $SD = 0.97$ ) condition,  $F(2, 57) = 5.50$ ,  $p < .01$ . No differences were observed between the social identity threat ( $M = 2.25$ ;  $SD = 0.98$ ) condition and the no-threat condition. In the social identity threat condition was observed lower level of private collective self-esteem ( $M = 4.53$ ;  $SD = 1.66$ ) as compared to the no-threat ( $M = 5.75$ ;  $SD = 1.03$ ) condition,  $F(2, 57) = 4.52$ ,  $p < .05$ . No differences in private collective self-esteem emergence between the personal identity threat ( $M = 5.55$ ;  $SD = 1.39$ ) condition and the no-threat condition.

These results suggest that examined manipulation of personal and social identity was effective.

### 3. BRAND SELECTION

In a pilot study, differently sized groups of undergraduates (between 31 and 234) evaluated 25 cosmetic, 17 cloth, and 20 beer brands organized into different sets. Participant assessed brands in terms of their perceived price, femininity, masculinity, and familiarity using a 7-point scale. At the first

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stage, unknown brands were rejected, i.e., those received in the participants' opinion average values lower than four on the 7-point brand familiarity scale. Then we chose the most feminine, masculine, and unisex brands (see Table 1). In the end, we matched brands into pairs, in which the feminine or masculine brand was at the most similar price level compared to the unisex brand. In this way we selected following pairs of brands represented different product category:

- clothes, Mohito (feminine brand) – Big Star (unisex brand)
- cosmetics, Old Spice (masculine brand) – Head & Shoulders (unisex brand), Puma (unisex brand) – L'Oreal (feminine brand)
- beers, Fortuna (unisex brand) – Oak Strong (masculine brand)

The next pilot study's purposes were to simultaneously test whether the above-described procedure of brand selection allowed us to choose identity-linked brands and develop shorten version of the Self-Brand Connection Scale (Escals and

Bettman, 2005). Female participants ( $n = 60$ ) rated three brands (feminine - Redd's; masculine – Old Spice; unisex - Head & Shoulders) using the Self-Brand Connection Scale and brand preferences measured by three bipolar items (*unfavorable/favorable, dislike/like, bad/good*;  $\alpha$  average = 0.84), both assessed on a 9-point scale. Based on results, we have selected three of the most differentiating items of the Self-Brand Connection Scale to create shorten version of this scale consisting of the following statements: "Brand X reflects who I am", "I can identify with Brand X", "Brand X suits me well". Reliability analyses averaged over the three brands for the full version of the Self-Brand Connection Scale and the shortened version of the Self-Brand Connection Scale showed a high Cronbach's alpha value of .93 and .89, respectively.

Result of study, presented in the Table 2, confirmed that females have higher preference for feminine brand and higher connection between self and feminine brand than ratings of masculine brand (respectively  $t(59) = 6.36, p < .001$ ,  $t(59) = 4.70, p < .001$ ) and unisex brand (respectively  $t(59) = 1.66, p = .10$ ,  $t(59) = 3.25, p < .01$ ).

**Table 1. Descriptive statistics for brand evaluation.**

Brand name	Price <i>M (SD) n</i>	Masculinity <i>M (SD) n</i>	Femininity <i>M (SD) n</i>	Familiarity <i>M (SD) n</i>
<i>L'Oreal</i>	5.22 (1.29) 172	2.19 (1.28) 172	6.40 (1.06) 171	6.22 (1.21) 172
<i>Old Spice</i>	4.28 (1.28) 231	6.48 (1.09) 231	1.61 (1.16) 229	5.51 (1.54) 233
<i>Head &amp; Shoulders</i>	4.10 (1.33) 174	4.57 (1.40) 174	4.43 (1.40) 174	6.19 (1.04) 175
<i>Puma</i>	5.72 (1.22) 60	5.18 (1.40) 60	4.90 (1.36) 60	6.22 (1.24) 60
<i>Big Star</i>	4.77 (1.12) 31	4.77 (1.31) 31	4.35 (1.33) 31	5.55 (1.41) 31
<i>Mohito</i>	4.76 (1.24) 108	2.18 (1.58) 108	5.97 (1.36) 108	4.68 (2.03) 119
<i>Dębowe mocne (Oak Strong)</i>	3.23 (1.33) 230	6.10 (1.25) 231	2.31 (1.52) 228	5.23 (1.55) 230
<i>Fortuna</i>	4.12 (1.47) 111	4.48 (1.55) 111	4.40 (1.50) 111	4.90 (1.82) 110

Note. Only the brands finally selected for the study are presented in the table.

**Table 2. Descriptive statistics for gender differences in brand preference and self-brand connection.**

	Males ( $n = 36$ ) <i>M (SD)</i>	Females ( $n = 60$ ) <i>M (SD)</i>	<i>t (df)</i>
Old Spice			
Brand preference	5.94 (1.72)	5.04 (1.60)	2.59(94)*
Self-brand connection full	2.43 (1.41)	1.68 (.66)	2.99(44.25)**
Self-brand connection short	2.68 (1.99)	1.47 (.78)	3.47(41.47)***
Redd's			
Brand preference	5.69 (1.68)	6.57 (1.54)	-2.64(94)*
Self-brand connection full	1.67 (.99)	2.31 (1.85)	-2.21(61.35)*
Self-brand connection short	1.86 (1.13)	2.76 (2.17)	-2.65(92.52)**
Head & Shoulders			
Brand preference	6.63 (1.67)	6.19 (1.87)	1.15(94)
Self-brand connection full	2.39 (1.87)	1.85 (1.49)	1.56(94)
Self-brand connection short	2.66 (2.05)	1.97 (1.64)	1.72(61.51)

Note: Self-brand connection full – the full version of Self-brand Connection Scale (Escals & Bettman, 2005); Self-brand connection short - shorten version of Self-Brand Connection Scale.

\* $p < 0,05$ ; \*\* $p < 0,01$ ; \*\*\* $p < 0,001$

Moreover, we also examined males ( $n = 36$ ) to compare gender differences in brands' evaluations. Results showed that, as expected, males to a greater extent preferred the masculine brand (Old Spice) and had a stronger self-brand connection with the masculine brand than females (see Table 2). On the other hand, females to a greater extent preferred the feminine brand (Redds) and had a stronger self-brand connection with this brand than males. For the unisex brand (Head & Shoulders), there were no statistically significant differences between males and females.

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