Evolutionary Perspective on Self-Concept: The Effects of Interpersonal Motivations and Inclusionary Status on Spontaneous Self-Descriptions of Communion and Agency

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Abstract
Evolutionary models suggest that self-concept is a dynamic structure shaped jointly by interpersonal motivations and social challenges. Yet, empirical data assessing this claim are sparse. We examined this question in two studies. In study 1, participants \((N = 386)\) generated spontaneous self-descriptions and filled out questionnaires assessing dominance and affiliation motivations. We found that self-descriptions categorized as communion or agency were associated with affiliation and dominance motivations, respectively. In study 2, participants \((N = 360)\) underwent an inclusionary manipulation (exclusion, inclusion, popularity) and completed self-description and motivation measures. We found that exclusion (compared to inclusion/popularity) enhanced the salience of communion self-descriptions such that participants described themselves using more communion traits. Finally, in the popularity condition (compared to exclusion/inclusion), an enhanced positive association between salience of agency self-descriptions and dominance motivation was found. Our results support evolutionary models suggesting that self-concept organization shapes and is being shaped by social motivations to enhance interpersonal functioning.

Keywords
self-concept, exclusion, popularity, affiliation, dominance, agency, communion

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Self-concept, which sums what people believe about themselves, is a dynamic multidimensional organization that plays an adaptive role in social functioning (Morf & Mischel, 2012). Evolutionary models suggest that self-concept is shaped by social motivations, such that the salience of aspects of self-concept is related to the strength of relevant social motivations (Hill & Buss, 2006). Reciprocally, salient social motivations are also postulated to shape the self-concept, activating congruent aspects of the self-concept to facilitate the attainment of relevant goals (Kirkpatrick & Ellis, 2006). In the present investigation, we explore how social motivations and inclusionary challenges affect the availability of distinct self-concept aspects.

Affiliation and dominance are two evolutionary central social motivations (Wiggins, 1991). Affiliative motivations represent a person’s propensity to stand out from a group, exert influence, and accumulate respect (“to get ahead”; Wojciszke & Abele, 2008). According to evolutionary theories (Sapolsky, 2005; Seyfarth & Cheney, 2012), both motivations contribute to survival and reproduction: affiliation by enhancing nurturance and protection, and dominance by incurring advantage in resources (food, territory, mates). These motivations are postulated to map onto two central aspects of the self-concept: Communion (aka warmth, cooperation, belongingness) and agency (aka competence, power, hierarchy, status; Wojciszke & Abele,

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2008). Importantly, affiliative and dominance goals are attained by different strategies. Specifically, attaining affiliation goals demands reciprocity, whereas dominance goals require winning in physical and social competitions (Kenrick et al., 2010). The prominence of agency and communion aspects in the self-concept is expected to reflect an individual’s propensity to engage in strategies for meeting those distinct goals (Uchronski, 2008). The first aim of the current research was to test this proposition: we sought to examine whether affiliative and dominance motivations are associated with the salience of communion and agency aspects in the self-concept.

Notably, social motivations are expected to be activated when related goals are jeopardized. Exclusion is a major threat to affiliative goals that affect self-concept (Richman et al., 2015). However, cognitive and evolutionary models differ in their predictions regarding how exclusion shapes self-concept organization. Cognitive models suggest that exclusion may decrease the availability of communion aspects of the self-concept following exclusion (Leary, 2005). In contrast, evolutionary models postulate that the following exclusion and in the service of reconnection, the availability of communion aspects in the self-concept is enhanced (Maner et al., 2007). Although exclusion was found to enhance affiliative motivation and perception (Bernstein et al., 2010; DeWall et al., 2009), it is yet unclear whether exclusion affects the salience of communion (vs. agency) aspects of the self-concept.

Another type of social challenge is popularity. Although frequently considered a rewarding experience due to its potential to enhance likeability, power, and prestige (Anderson et al., 2015), popularity may be intimidating because it may also increase public scrutiny (Wallace & Alden, 1997). Thus, popularity may elicit antagonism from others due to its perceived “expropriation” of social resources from others (de Waal-Andrews & van Beest, 2020). Evolutionary speaking, being popular may be distressing due to the perceived increase in social stress associated with advancement in the social ladder (Sapolsky, 2005). Thus, the reward value of popularity appears to be related to the desirability of achieving high social prominence (Johnson et al., 2012). Importantly, positive self-evaluation of agency traits was found to be enhanced following popularity, possibly to induce a cascade of cognitions, attitudes, and behaviours maintaining the elevated status (de Waal-Andrews & Van Beest, 2020). Notably, according to the evolutionary account, enhancement in the agency aspect of self-concept is expected to be associated with the strength of dominance motivation. Whereas the association between popularity status and enhanced self-evaluation of agency traits is well established, it is still unclear whether this association results from a change in the assessment of this domain or may represent a reorganization of the self-concept to meet dominance goals.

The Present Studies
Using a spontaneous self-description statements task, we examined the self-concept’s salience of communion and agency aspects (SST, Kuhn & McPartland, 1954). In SST, participants are asked to generate self-descriptive statements. SST was found to be sensitive to social contexts (Horton et al., 2009) and to enable an exploration of the organization of the self-concept, focusing on the availability of its various aspects (Carpenter & Meade-Pruitt, 2008). Tasks such as SST are particularly well suited to assess self-concept organization, as participants’ self-descriptions are not structured or limited by pre-defined scales (Grace & Cramer, 2003).

Two studies were conducted. In study 1 (N = 386), we examined whether affiliation and agency self-descriptive statements are associated with affiliative or dominance motivations. In study 2 (N = 360), we also examined how inclusionary challenges of exclusion and popularity (elicited by Cyberball, a virtual ball-tossing game; Williams & Jarvis, 2006) combine with interpersonal motivations to affect the relative salience of communion and agency aspects in the self-concept. Study 2 tested two hypotheses. First, consistent with the exclusion-driven reconnection model, we postulated that exclusion would facilitate the prominence of communion (but not agency) aspects in the self-concept (Maner et al., 2007). Second, consistent with the maintenance account of popularity, popularity status was expected to interact with dominance motivation to facilitate the salience of the agency domain in the self-concept.

Method
Participants. Participants were first asked to complete the SST. They then filed out questionnaires assessing affiliation and dominance motivations. Statements were categorized as communion, agency, or others by five judges. We sought to examine the associations between affiliative and dominance motivations and communion and agency self-descriptions.

Measures
Self-Statements Test (SST, Kuhn & Mcpartland, 1954). In this task, participants are asked to complete ten sentences beginning with “I am…. ” We chose to limit the SST to ten statements
based on prior studies indicating a difficulty for participants to generate a longer descriptive statements list (Bochner, 1994).

The Personality Research Form (PRF; Jackson, 1999). The questionnaire was used to measure affiliation and dominance motivations based on 32 bipolar questions that assess dominance motivation (e.g., "I feel confident when directing the activities of others" or "I try to control others rather than permit them to control me") and affiliative motivation (e.g., "I rarely invest special efforts in creating friendships" (reversed) or "I really enjoy social events"). In the present study, the internal reliability of the affiliation and dominance scales was .87 (M = 8.19; SD = 4.11) and .80 (M = 6.88; SD = 5.13), respectively. The correlation between the two subscales was .41.

Self-Descriptions Analysis. Five trained coders categorized the self-descriptive statements as either communion, agency, or "other" based on previous research (Diehl et al., 2004). In general, self-descriptions were categorized as agency traits if they were positively related to ability, competence, activity, assertiveness, creativity, independence, intelligence, rationality, and self-reliance. Self-descriptions were categorized as communion traits if they were positively related to caring, helpfulness, loyalty, politeness, sensitivity, sympathy, trustworthiness, warmth, morality, and understanding of others. Coders were trained to a criterion agreement of .80 (i.e., Pearson Product-Moment correlation). The average agreement between the coders .94. Consensus ratings resolved disagreements between raters. The corpus of traits categorized as agency and communion was incorporated into a comprehensive dictionary.

Data Analytic Plan
In all studies, our dependent variables were count variables. Hence, we used Poisson regression. Furthermore, because the deviance variables of Poisson were: 1.2 to 1.4; thus, an over-dispersed analysis was conducted. Generally, the scale parameter is assumed to be 1 in Poisson regression. However, McCullagh and Nelder suggest using the Pearson chi-square estimate as a scale parameter to obtain more conservative variance estimates and significance levels when the distribution is over-dispersed. Following their suggestions, all main analyses were examined by this model in both studies (McCullagh & Nelder, 1989). Furthermore, we add a comparison of the medians in all analyses. Finally, because Poisson coefficients are not commonly used, and to enhance the readability of results, we also presented correlations using GLM and Spearman coefficients which yielded a similar pattern of results compared to the Poisson regressions.

Results
Slightly more than a third (35%) of the self-description statements described communion and agency traits. Other statements included mostly family and occupation roles, hobbies, and traits not categorized as agency or communion. Among those statements, there was, on average, a similar number of communion (M = 1.8, Median = 2, SD = 1.7, range = 0–7) and agency (M = 1.7, Median = 2, SD = 1.5, range = 0–8) traits. An over-dispersed Poisson regression revealed that communion traits were not associated with agency traits, (b = 0.5, S.E = 0.03, 95% CI for b = [0.00, 0.11]) p = 0.05).

To examine whether there is an association between the number of communion traits and motivation for affiliation, we conducted a multiple over-dispersed Poisson regression analysis with the number of communion traits as the dependent variable and with PRF affiliation, PRF-dominance, gender, and age, as predictors. We included gender in our analysis, given a robust line of studies documenting considerable gender differences in communion and agency traits (Moskowitz et al., 1994). Age was included based on prior results indicating a negative correlation between age and agency traits (Gebauer et al., 2012). As expected, there was a significant correlation between affiliation motivation and the number of communion traits, (b = 0.06, SE = 0.01, Wald Chi-squared = 24.93, p < .001, 95% CI for b = [0.38, 0.87]). Gender differences were significant as well, (b = -2.8, SE = 0.09, Wald Chi-squared = 8.85, p = .003, 95% CI for b = [-0.47, 0.09]). Those differences were consistent with prior studies reflecting high percentage of affiliative traits among female (M = 2.00, SD = 1.74, Median = 2) compared to male participants (M = 1.50, SD = 1.82, Median = 1). Notably, these differences were significant also when medians of men and women were compared (Chi-squared = 6.92; p < .01). Furthermore, motivation for dominance and age were not associated with the number of communion traits (b = -0.01, SE = 0.01, Wald Chi-squared = 2.21, p = .13, 95% CI for b = [-0.03, 0.00]; b = 0.02, SE = 0.01, Wald Chi-squared = 0.23, p = .53, 95% CI for b = [−0.01, 0.07]; respectively).

A similar analysis was conducted to explore the association between the number of agency traits (dependent variable) and dominance motivation, affiliative motivation, gender, and age (predictors). In line with our predictions, a significant correlation between the number of agency traits and dominance motivation was observed, (b = 0.03, SE = 0.01, Wald Chi-squared = 14.59, p < .001, 95% CI for b = [0.01, 0.05]). There were no gender differences in means and medians, (b = -0.04, SE = 0.08, Wald Chi-squared = 0.22, p = .63, 95% CI for b = [-0.21, 0.13]), an association between the number of agency traits and affiliative motivation was not significant, (b = 0.00, SE = 0.01, Wald Chi-squared = 13, p = .71, 95% CI for b = [-0.02, 0.01]). Notably, age was a significant predictor of agency traits (b = 0.01, SE = 0.01, Wald Chi-squared = 12.11, p = .001, 95% CI for b = [-0.20, −0.00]) indicating that agency is negatively correlated with age (Spearman r = −0.18, p < .001)

In sum, communion and agency self-descriptions were correlated with affiliative and dominance motivations, respectively. These results support the assumption that the structure of self-concept, as manifested in SST, is consistent with interpersonal motivations. In study 2, we investigated whether manipulating the attainment of belongingness goals may influence the salience of communion and agency aspects in the self-concept.
**Study 2**

In study 2, we aimed to replicate the results of Study 1 and to examine whether and how the communion and agency aspects in the self-concept become salient in response to social challenges. Participants were randomized to three inclusionary conditions (Exclusion, Inclusion, and Popularity) using a virtual ball-tossing game, "Cyberball IV" (Williams & Jarvis, 2006). Following this manipulation, they were asked to complete the SST.

We postulated that following a threat to affiliative goals (exclusion; compared to inclusion and popularity), participants would generate more communion self-descriptions. Second, we postulated that following satisfaction of dominance goals (popularity; as compared to inclusion and exclusion), motivation for dominance would be positively associated with the number of self-generated agency words.

**Method**

**Participants.** Participants were recruited via Amazon’s MTurk platform. Participants from the U.S who did not participate in a prior study in our lab (N = 442) received $4.5 for their participation. To enhance data quality, we excluded respondents if their IP or location was used more than once (n = 62) and those who had completed the SST in a non-conscientious manner (i.e., using non-words, n = 20), resulting in a sample of 360 (173 females). This sample provides 90% power for an anticipated small-medium effect reported in studies that investigated the effect of Cyberball on self-concept measures (de Waal-Andrews & Van Beest, 2020). Participants’ ages were between 18–72 (M = 37.10, SD = 11.30).

**Measures**

**Mood assessment.** Participants were asked to rank their mood on six positive scales (happiness, excitement, pride, content, satisfaction, and inspiration) and six negative scales (anger, sadness, shame, humiliation, frustration, and anxiety) before and after the Cyberball manipulation. The correlation between the positive and negative scales was -.17 (p < .001) at Time 1 and -.33 (p < .001) at Time 2. The internal reliability of the mood questionnaire was .73 at Time 1 and .75 at Time 2.

**Basic Needs Threat Questionnaire.** After completing the Cyberball manipulation, participants completed the Basic Needs Threat Questionnaire (Zadro et al., 2004). The questionnaire assesses the satisfaction of four needs during the game: belonging (e.g., “I felt poorly accepted by the other participants”), control (e.g., “I felt that I was able to throw the ball as often as I wanted during the game”), self-esteem (e.g., “During the Cyberball game, I felt good about myself”), and meaningful existence (e.g., “I felt non-existent during the Cyber-ball game”). The internal reliability of the Needs Threat questionnaire was .92 (M = 16.22; SD = 5.53).

**Personality Research Form (PRF).** was used to assess affiliative and dominance motivations. In the present sample, the internal reliability of the PRF-affiliation and PRF-dominance were .81 (M = 7.33; SD = 4.01) and .89 (M = 7.04; SD = 4.63), respectively. The correlation between the two scales was .45.

**Self-Descriptions Analysis.** Using the dictionary developed in Study 1, we categorized 68.4% of the self-statements generated in this study. The remaining self-statements were categorized by five raters (as in the pilot study). This time, agreement for the ten pairs of coders was, on average, .96. Consensus ratings resolved disagreements between raters. Communion and agency traits constituted (respectively) 20% and 21% of the total statements produced.

**Belongingness manipulation.** For the manipulation of belongingness states, we used an online ball-tossing game named "Cyberball IV" (Williams & Jarvis, 2006). During the game, which involved 30 ball tosses, participants receive the ball from one of the other three players and are required to indicate to whom they would like to pass the ball by clicking on the appropriate “player’s” icon. Participants were randomly assigned to one of three conditions. In the exclusion condition, participants received three tosses at the beginning of the game and were then ignored for the rest of the game, resulting in their receiving 10% of the tosses. In the inclusion condition, the ball was passed equally to all participants, resulting in the participant receiving 33% of the tosses. In the popularity condition, participants received every ball toss from all the other players, resulting in getting 75% of the tosses.

**Procedure.** Participants were invited to take part in a study investigating visual mentalization. They were told that they would play an online ball-tossing game named "Cyberball IV" (Williams & Jarvis, 2006) with three other players from the same online labour market. Before the game began, participants were asked to write the name they would like to be referred to and rank their mood on twelve scales. Immediately following the completion of the ball-tossing game, participants were asked to complete the self-description statements task. Next, participants filled out the Basic Needs Threat Questionnaire and completed questionnaires assessing interpersonal motivations. Then they re-rated their mood. Next, they filled out a demographic questionnaire. Finally, the participants were debriefed and thanked for their participation.

**Results**

**Manipulation check.** To examine the effects of our manipulation, we conducted an ANOVA on the Basic Needs Threat Questionnaire, using condition (exclusion, inclusion, popularity) as a between-subjects variable. As expected, the analysis revealed a main effect of condition (F(2,357) = 315.84, p < .0001, ηp2 = .639). Mean analysis revealed lower needs satisfaction following the exclusion (M = 10.52, SD = 3.50) compared to the inclusion condition (M = 17.35, SD = 3.69).
Mean basic needs satisfaction was higher in the popularity condition than in the inclusion condition ($M = 21.16$, $SD = 2.70$). Consistent with that pattern, we found similar results when examining the mood change in all conditions ($F(2,357) = 102.66, p < .001$, $\eta^2 = .365$). In the exclusion condition, participants reported a significant decline in their mood ($M = -50.23$, $SD = 47.32$) compared to following inclusion ($M = -7.71$, $SD = 29.95$). In the popularity condition, participants reported mood increases ($M = 14.57$, $SD = 44.85$).

**Self-descriptions.** First, we repeated the analyses conducted in Study 1. As in Study 1, we found a significant correlation between affiliation motivation and the number of communion traits, ($b = 0.05$, $SE = 0.01$, Wald Chi-squared = 14.66, $p < .001$, 95% CI for $b = [0.02, 0.08]$). Gender differences, age and dominance motivations were not significant predictors of communion traits ($b = 0.06$, $SE = 0.1$, Wald Chi-squared = 0.39, $p = .5$; $b = -0.01$, $SE = 0.01$, Wald Chi-squared = 0.96, $p = .9$; respectively). Furthermore, dominance motivation predicted agency traits ($b = 0.04$, $SE = 0.01$, Wald Chi-squared = 15.37, $p < .001$, 95% CI for $b = [0.02, 0.06]$), but affiliative motivation did not ($b = 0.00$, $SE = 0.01$, Wald Chi-squared = 0.00, $p = .9$). As in Study 1, age was a significant predictor of agency traits with negative correlation ($b = -0.00$, $SE = 0.01$, Wald Chi-squared = 6.02, $p = .01$; Spearman $r = -.11$, P < .05).

To examine whether a threat to affiliative goals enhances the salience of communion domains in self-concept, we conducted a multiple over-dispersed Poisson regression analysis with the number of communion traits as an outcome measure and with condition (exclusion vs. inclusion & popularity) as a predictor. Consistent with our hypothesis, a significant condition effect was found, ($b = 0.20$, $SE = 0.10$, Wald Chi-squared = 3.98, $p = .04$, 95% CI for $b = [0.01, 0.40]$). Following exclusion, participants generated a greater number of communion self-descriptions than following inclusion/popularity ($M = 2.36$, $SD = 2.07$; $M = 1.92$, $SD = 1.93$, respectively). Importantly, this pattern was not found for agency traits, $b = 0.05$, $SE = 0.09$, Wald Chi-squared = 0.38, $p = .53$, 95% CI for $b = [-0.23, 0.38]$. Furthermore, a comparison of the medians revealed a significant difference between exclusion and the other conditions (see Figure 1; Chi-squared = 2.44; $p = .04$).

Next, we tested whether, following popularity manipulation, there is an enhanced association between dominance motivation and agency traits. To this end, we conducted a multiple over-dispersed Poisson regression with the number of agency traits as an outcome variable and condition (popularity vs. inclusion & exclusion), gender, PRF-Dominance, and PRF-Dominance X Popularity as predictors. In line with our hypothesis, the Popularity X PRF-Dominance interaction was found to be significant, ($b = -0.04$, $SE = 0.01$, Wald Chi-squared = 7.59, $p < .01$, 95% CI for $b = [-0.07, -0.01]$). Follow-up analyses revealed that in the popularity condition the correlation between PRF-Dominance and agency traits was significant ($b = 0.05$, $SE = 0.01$, Wald Chi-squared = 16.37, $p < .001$, 95% CI for $b = [0.02, 0.08]$). This pattern was not observed in the inclusion or exclusion conditions ($b = 0.01$, $SE = 0.01$, Wald Chi-squared = 1.96, $p = .16$, 95% CI for $b = [-0.01, 0.02]$). Importantly, when we conducted the same analysis for communion traits, we did not find a PRF-Dominance X Popularity effect ($b = -0.03$, $SE = 0.02$, Wald Chi-squared = 2.37, $p = .12$). Results are included in the supplementary materials. Spearman correlations are depicted in Table 1.

**Discussion**

We explored the effects of social goals on the salience of communion and agency aspects in self-concept using a spontaneous self-description task. First, consistent with our hypotheses, we found that affiliation and dominance motivations were associated with enhanced salience of communion and agency aspects of the self-concept, respectively. Second, consistent with our hypotheses, we found that following a threat to affiliative goals (exclusion), participants described themselves using a greater number of communion (but not agency) traits. Furthermore, we found that in the popularity condition, dominance motivation was more strongly associated with a tendency to generate a greater number of agency (but not communion) traits than in the inclusion/exclusion conditions. Our results are consistent with the evolutionary prediction that the self-concept is shaped jointly by interpersonal motivations and social challenges (Kirkpatrick & Ellis, 2006; Morf & Mischel, 2012).

Importantly, most research on agency and communion traits used pre-defined self-evaluation scales (Abele, 2003; Wojciszke & Abele, 2008). The use of such instruments enables the evaluation of self-concept along pre-determined dimensions but does not enable the exploration of self-concept organization (structure). Importantly, the organizational aspects of the self-concept, such as availability and salience of communion and agency, may direct social interactions. For example, if "resourcefulness" (an aspect of agency) is not salient and available in one’s self-concept, this trait (even if evaluated as high upon reflection) may have little influence in determining attitudes and behaviours (Hinkley & Andersen, 1996). From an evolutionary perspective, self-concept evaluation and organization may have different adaptive roles. Using a dashboard

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**Figure 1. Medians of communion and agency self-statements in each belongingness condition.**

Note. Error bars represent the interquartile range.
Table 1. Spearman Correlations Between the Number of Communion Traits (Left side of Vertical tab), Agency Traits (Right side of Vertical tab), and Affiliative Motivation and Dominance Motivation.

|                      | Study 1           | Study 2           |
|----------------------|-------------------|-------------------|
|                      | Exclusion         | Inclusion         | Popularity        |
| Affiliative motivation| 0.25** | 0.19** | 0.19* | 0.19* |
| Dominance motivation  | 0.03 | 0.19** | 0.04 | 0.17 |
|                      | 0.03 | 0.06 | 0.12 | 0.38** |

Note. Dominance motivation = PRF dominance. Affiliative motivation = PRF affiliative. Communion traits/Agency traits p = *<.05, **<.01.

analogy, self-concept evaluation could be characterized as a passive "gauge" monitoring social standing, whereas self-concept organization could be characterized as a proactive thermometer that change the gear of the vehicle to fit the current temperature. The use of a spontaneous self-description task opens the possibility of an ecological examination of the causal role of the communion and agency aspects on social functioning.

The associations between the strength of social motivations and the salience of the respective traits (i.e., agency and communion) are in line with prior studies documenting similar associations between motivational strength and self-evaluations (Mudrak & Zabrodska, 2015; Walker & Frimer, 2015). The combination of the organization and evaluation of the self-concept may interact with interpersonal motivations in several ways. First, enhanced motivation is postulated to increase the processing of goal-relevant information leading to higher availability and evaluation of such information. Second, salient positive aspects of the self, by virtue of their association with positive affect, may enhance motivational strength (Hill & Buss, 2006). Furthermore, the positivity of the self-concept is inherently rewarding, engendering further restructuring and re-evaluation of the self-concept to maintain this positivity (Leary & Baumeister, 2000).

The greater salience of communion (but not agency) traits following exclusion is consistent with the evolutionary reconnection model (Maner et al., 2007). According to this model, individuals are exposed to social and environmental hazards when excluded, motivating them to seek re-affiliation. Excluded individuals are likely to be expected to display a readiness to invest their resources in other group members (communion traits) and not in intra-group competition (agency traits). Interestingly, prior research documented a reduction in self-evaluation of positive traits, including communion traits, following exclusion (Leary, 2005). It is possible that whereas exclusion decreases the self-evaluation of communion traits to index inclusionary deficit, it shapes self-concept organization to underline the importance of those traits to facilitate reconnection. Further studies are needed to investigate these processes.

We also found that enhanced inclusionary status—popularity—interacted with social motivations to shape self-concepts organization. Specifically, we found that individuals with higher dominance motivation (more driven to social prominence and the possibility to influence others) recorded more agency traits following popularity manipulation. Possibly, those individuals seek to maintain their high-visibility status and thus, emphasize self-concept aspects that are congruent with popularity (Xie et al., 2006). Notably, popularity may serve as a "litmus test" for dominance motivation as it differentiates between individuals who seek visibility when such an opportunity arises and those who seek to retreat into obscurity when they find themselves in the social limelight. Deemphasizing agency traits may signal that one does not seek to compete for high status, which may promote survival in agonistic environments (Sapolsky, 2005). In contrast, emphasizing agency traits may represent a bid for leadership and influence (Mudrak & Zabrodska, 2015).

Our results support the model of Kirkpatrick and Ellis (2006), who highlighted the evolutionary principle of domain-specificity, pointing out that the self-concept consists of distinct aspects relevant to various adaptation challenges. For example, acceptance into and rejection of, instrumental coalitions and mating relationships, differ greatly, as do the means of increasing one’s acceptance in each kind of relationship (Hill & Buss, 2006). For example, agency traits may facilitate mate attraction more than communion traits (Li & Kenrick, 2006). Our findings that agency is negatively correlated with age are consistent with the latter view, suggesting that agency aspects are more salient during fertility periods. Furthermore, consistent with this pattern of results, dominance motivation is more predictive of sexual activity than affiliation motivation in both sexes (Schultheiss et al., 2003) Interestingly, the enhanced correlation between dominance motivation and agency salience following popularity may indicate that mating goals are pursued more strongly when affiliative goals are satisfied (Kenrick et al., 2010).

Notably, most of the self-generated traits in our study were communion and agency, indicating that these domains are central in the self-concept organization. Furthermore, and in line with prior studies, the saliences of agency and communion traits were not correlated (Abele, 2003; Abele & Wojciszke, 2008; Suinwin & Maass, 2008). The orthogonality of the agency and communion aspects in the self-concept may point on an adaptation and selection for self-concept organizations that distinguish between hierarchical and inclusionary status in the group. Moreover, the absence of correlations between the saliency of agency and communion may reflect a trade-off between the two aspects in the self-concept organization. Forming alliances and wining competitions may require different, and sometimes contradicting, allocation of resources.

Importantly, salient communion and agency aspects of the self may direct not only cooperative and competitive behaviours but also signal other one’s abilities and intentions to facilitate negotiation of status hierarchies and coalitions. Whereas affiliation goals demand reciprocity, trustworthiness, and adherence to norms, dominance goals require winning in conflicts, resources accumulation, and unique abilities (Kenrick et al., 2010). Because displaying those capacities may require significant efforts and prolonged acquaintance, signalling that one possesses these traits may be an adaptive tactic. Self-concept
may serve as such a signal, possibly through deception (Lund et al., 2007).

Another important prediction of evolutionary models supported in the current study relates to the dynamic nature of the self-concept. Zeigler-Hill and Showers (2012) suggest that an adaptive self-concept is most likely to match the motivational and emotional context of the individual rather than to apply across the board. For example, whereas survival in agonistic environments is promoted by obscuring agency traits, reproduction in such environments is promoted by highlighting agency traits. However, in egalitarian environments both agency and communion promote reproduction (Decker & White, 1999). Future studies could examine how environments that differ in resources distribution affect self-concept organization.

Our results are consistent with the functionality of self-concept organization in promoting the sociopsychological goals of affiliation (coalitions/alliances) and dominance (status/rank; Kirkpatrick & Ellis, 2006). Considered as such, self-concept may serve as a "vessel" navigating toward, and shaped by, its social destination. Whereas dominance goals organize the self to highlight competence traits to row upstream the social ladder, affiliation goals shape the self to emphasize its cooperative aspects to sail into the harbour of the group. Self-concept organization may be thought of as a "skipper" who uses the destination to determine salient (and obscure) aspects of self-concept. Our results support evolutionary models that describe self-concept organization as a dynamic process intrinsically rooted within and dependent upon social goals (Kirkpatrick & Ellis, 2006).

In closing, the limitations of the present study need to be discussed. First, our belongingness manipulation has mild and short-term effects (Williams & Nida, 2011). Intense and long-lasting experiences of exclusion and popularity may combine with interpersonal motivations to affect the self-concept in ways that differ significantly from those observed in the present investigation. Second, examining the immediate response to changes in inclusionary status may minimize differences in coping strategies. Investigation of self-descriptions at varying stages of the coping process is needed. Third, the influence of dominance challenges (i.e., increases and decreases in perceived social-standing) on the self-concept remains to be explored. Third, the study was not pre-registered, and replication of the results is needed. Forth, the sample consists of sub-clinical individuals. Future studies could examine whether clinical populations associated with biased self-organization, such as individuals high in narcissism, differ in the saliency of communion and agency following a threat to belongingness.

In conclusion, people’s theories about themselves are based on, and modified by, social goals, just as social goals are shaped by those theories. Enhanced salience of specific aspects of self-concept may activate a cascade of cognitive, emotional, and behavioural reactions, leading to actualizing these aspects. Taken together with other findings, our results suggest that the self-concept may act as a vessel in the stormy sea of social goals, helping individuals to navigate to a desirable interpersonal shore.

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Supplemental material for this article is available online.

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