In press, *Journal of Personality*

Individual Self > Relational Self > Collective Self—But Why?
Processes Driving the Self-Hierarchy in Self- and Person-Perception

Andreas D. Nehrlich
University of Mannheim

Jochen E. Gebauer
University of Mannheim

Constantine Sedikides
University of Southampton

Andrea E. Abele
University of Erlangen-Nürnberg

Andreas D. Nehrlich, Mannheim Centre for European Social Research, University of Mannheim; Jochen E. Gebauer, Mannheim Centre for European Social Research, University of Mannheim; Constantine Sedikides, Centre for Research on Self and Identity, Psychology Department, University of Southampton; Andrea E. Abele, Department of Psychology, Friedrich-Alexander-Universität Erlangen-Nürnberg. Andreas Nehrlich is now at University of Koblenz-Landau. We thank Jenny Wagner for statistical advice and Alexandra Schrade for serving as second coder in Study 1. Corresponding author: Andreas Nehrlich, University of Koblenz-Landau, Fortstrasse 7, D- 76829 Landau, Germany; E-mail: nehrlich@uni-landau.de.

Abstract

Objective: The self has three parts: individual, relational, collective. Typically, people personally value their individual self most, their relational self less, and their collective self least. This self-hierarchy is consequential, but underlying processes have remained unknown. Here, we propose two process-accounts. The *content account* draws upon selves' agentic-communal content, explaining why the individual self is preferred most. The *teleology account* draws upon selves' instrumentality for becoming one's personal ideal, explaining why the collective self is preferred least.

Method: In Study 1 (N = 200, 45% female, M_{age} = 32.9 years, 79% Caucasian), participants listed characteristics of their three selves (individual, relational, collective) and evaluated those characteristics in seven preference-tasks. Additionally, we analyzed the characteristics' agentic-communal content, and participants rated their characteristics' teleological instrumentality. Study 2 (N = 396, 55% female, M_{age} = 34.5 years, 76% Caucasian) used identical methodology and featured an additional condition, where participants evaluated the selves of a friend.

Results: Study 1 re-confirmed the self-hierarchy and supported both process-accounts. Study 2 replicated and extended findings. As hypothesized, when people evaluate *others'* selves, a *different* self-hierarchy emerges (relational>individual>collective).

Conclusions: This research pioneers process-driven explanations for the self-hierarchy, establishing why people prefer different self-parts in themselves than in others.

Keywords: self, self-hierarchy, agency-communion, teleology

The self can be divided into three parts: individual, relational, and collective. People personally value all of them, but not equally so. All else being equal, they personally prefer their individual self (unique characteristics) over their relational self (relationally shared characteristics), and they personally prefer the latter over their collective self (collectively shared characteristics). There is ample empirical evidence for this self-hierarchy within individuals (for a review, see Sedikides, Gaertner, Luke, O'Mara, & Gebauer, 2013). However, no research to date has examined *why* that hierarchy occurs. What are the *processes* that render the individual self primary, the relational self secondary, and the collective self tertiary?

We propose and test two such processes. In brief, the first process concerns the *content* of the three selves. People possess a strong preference for agentic self-content (e.g., competence; Abele & Wojciszke, 2014). The individual self should comprise more agentic content than the relational and collective selves. Consequently, people should prefer their individual self most. But why do people prefer their collective self least—even less than the relational self? The second process addresses this question. In brief, that process concerns the *teleological value* of the three selves. The individual and relational selves possess relatively strong teleological value (i.e., the capacity to bring people closer to their personal ideal; Schmuck, Kasser, & Ryan, 2000). Alternatively, the collective self possesses comparatively little teleological value. That lack of teleological value should explain why individuals prefer their collective self least. In concert, the two processes can jointly explain the self-hierarchy within individuals. Next, we review the literature on that self-hierarchy and describe the two processes in more detail.

The Self-Hierarchy Within Individuals

The self-concept includes diverse representations of a person's unique identity, close relationships, and group memberships (Baumeister, 1998; Sedikides & Gregg, 2003). There is

consensus that this diversity is best captured by three distinct components: the individual self, the relational self, and the collective self (Sedikides & Brewer, 2001). The *individual self* contains characteristics that are unique to a person, differentiating the person from others. The *relational self* contains characteristics that a person shares with close others (e.g., romantic partners, friends, relatives) facilitating attachment to them. The *collective self* contains characteristics that a person shares with meaningful groups (e.g., organizations, religious communities, leisure clubs) facilitating belongingness to them. All selves are independently linked to well-being (Gable, Reis, Impett, & Asher, 2004; Hardie, Kashima, & Pridmore, 2005; Taylor, Lerner, Sherman, Sage, & McDowell, 2003). Hence, all selves are indispensable components of selfhood. But do people prefer them equally in themselves?

When people are asked to rate their personal preferences for their three selves, a consistent pattern emerges: They prefer their individual self most, followed closely by their relational self, and followed distantly by their collective self (Sedikides et al., 2013). This self-hierarchy in self-perception is a remarkably stable preference pattern within the human self-system. As such, it has proven robust against contextual factors. The self-hierarchy has been found in both individualistic cultures (Gaertner, Sedikides, & Graetz, 1999; Gaertner et al., 2012; Trafimow, Triandis, & Goto, 1991) and collectivistic cultures (del Prado et al., 2007; Gaertner et al., 2012; Zhu, Wu, Yang, & Gu, 2016). The self-hierarchy has been confirmed when contextual accessibility of the selves was experimentally induced (Gaertner et al., 2012) or controlled for (Gaertner et al., 1999). The self-hierarchy has been demonstrated across a multitude of methods, including self-report (del Prado et al., 2007), threat avoidance (Gaertner et al., 2012), and priming (Trafimow et al., 1991). Finally, the self-hierarchy has even been traced to basal electrophysiological brain activity, corroborating its universal character (Zhu et al., 2016). We

conclude that the self-hierarchy within individuals signifies a strongly validated, fundamental psychological preference (Gaertner, Sedikides, Vevea, & Iuzzini, 2002; Sedikides et al., 2013).

The self-hierarchy is consequential (Sedikides et al., 2013). From a motivation perspective, it informs about primacy within the human self-system: The individual self takes motivational precedence over both the relational self (albeit not by far) and the collective self. From a cultural perspective, the self-hierarchy speaks for the panculturality of self-primacy: The individual self is motivationally primary even in collectivistic cultures. And from a personality perspective, the self-hierarchy informs about intrapersonal preference patterns of personality traits: People will personally prefer those traits in themselves that they associate with their individual self, more so than the traits they associate with their relational and collective selves. In total, then, the self-hierarchy has implications for motivation, culture, and personality.

The present research builds on the fundamental self-hierarchy within individuals and its implications. That said, it was not our main goal to re-validate the well-established self-hierarchy. Rather, we asked *why* the self-hierarchy emerges in the first place. Indeed, research has remained surprisingly silent about the *processes* underlying the self-hierarchy, despite calls to the contrary (del Prado et al., 2007; Gaertner et al., 2012). Without such an understanding of processes, the self-hierarchy has remained a mostly descriptive phenomenon, devoid of explanatory and predictive value. We sought to redress this imbalance, formulating and testing two process accounts. Our research agenda (i.e., to elucidate the processes underlying the well-established self-hierarchy) dictated our methodological approach: Our studies needed to replicate the self-hierarchy (preferably in a direct way and, thus, with identical/improved methods) and, on top of it, include measures for assessing directly the two novel processes.

Content Account

Agency and communion, the two fundamental psychological dimensions (Abele & Wojciszke, 2014), organize parsimoniously the content of the self-concept (Abele & Wojciszke, 2007; Gebauer, Sedikides, Verplanken, & Maio, 2012). Agency includes attributes such as competence and drive, whereas communion includes attributes such as warmth and prosociality.

Agentic and communal self-content differ in the degree to which they convey *interpersonal, social-comparative* benefits. Agentic self-content is particularly beneficial for oneself, as it allows one to get ahead from others (Abele & Wojciszke, 2014; Hogan, 1982; Peeters, 2008). To illustrate, one's intelligence—an agentic attribute—helps to outsmart others and thus conveys direct social-comparative benefits. In contrast, communion is immediately beneficial for others, as it facilitates getting along with others (Abele & Wojciszke, 2014; Hogan, 1982; Peeters, 2008). To illustrate, one's trustworthiness—a communal attribute—helps others to assess one's benevolent intentions and hence benefits primarily others. Given people's strong desire for social-comparative benefits (Abele & Wojciszke, 2014; Sedikides, 1993; Sedikides, Gaertner, & Cai, 2015), they would opt for agentic over communal self-content.

Relative preferences for agentic self-content lay the ground for our content account. It posits that people prefer their individual self most, because that self is particularly agentic in content. The proposal of a highly agentic individual self is consistent with theory and evidence. Wiggins (1991, p. 89) highlighted the link between agency and unique self-aspects (i.e., individual self) in his definition of agency: "agency refers to the condition of being a differentiated individual." Evidence indicates that agency stimulates strivings for uniqueness expressed in terms of contrasting from ambient sociocultural norms: Agentic people adhere to unique beliefs (Gebauer, Paulhus, & Neberich, 2013), predilections (Gebauer, Leary, & Neberich, 2012), and behavioral intentions (Gebauer, Sedikides, Lüdtke, & Neberich, 2014).

At the same time, the literature suggests that the relational and collective selves are less agentic in content, but more communal. Wiggins (1991, p. 89) also emphasized the link between communion and interpersonally shared self-aspects (i.e., relational and collective selves) in his definition of communion: "communion refers to the condition of being part of a larger social or spiritual entity." Evidence indicates that communion stimulates strivings for similarity expressed in terms of assimilating towards sociocultural norms: Communal people adhere to commonly shared beliefs, predilections, and behavioral intentions (Gebauer et al., 2012, 2013, 2014).

Taken together, the content account predicts that the individual self will be most agentic in content. Given that agency possesses particular social-comparative benefits for oneself, this will lead to a preference of the individual self over the relational and collective selves. This account, then, can explain why people prefer their individual self most.

Teleology Account

The teleology account purports to explain why people prefer their collective self least. Humans are invested in prospection or teleology (Gilbert & Wilson, 2007; Seligman, Railton, Baumeister, & Sripada, 2013). For example, they are motivated to become their own *teleological ideal*—that is, the person they would ideally like to be (Higgins, 1987; Markus & Nurius, 1986; Stephan, Shidlovski, & Sedikides, 2018). Coming closer to one's ideal affords important intrapersonal, temporal-comparative benefits, such as better psychological health (Moretti & Higgins, 1990) and better physical health (Higgins, Vookles, & Tykocinski, 1992). These benefits increase the chances of survival and reproduction (Sedikides & Skowronski, 1997). Arguably, then, evolution has shaped humans to strive for their own teleological ideal. As a consequence, they should prefer selves with high *teleological value*—that is, selves that help them reach their ideal. But which selves possess such value?

On theoretical grounds, all three selves should be relevant to people's ideals. Still, the three selves may differ in teleological value based on the degree of self-determination they convey for reaching one's ideals (Ryan & Deci, 2017). Consider a junior academic who holds the ideal of attaining tenure in a research-oriented university. She may seek to capitalize on her intellectual resources (individual self—Table 1) or on collaboration with a close colleague (relational self—Table 1). Self-determination would likely be high in both cases, because the researcher would rely first and foremost on her own actions. Alternatively, the academic may pursue membership in a research group (collective self—Table 1), have to coordinate research goals with many colleagues, and be partially dependent on them. Here, self-determination would need to be compromised. In all, pursuing one's ideal via the individual self and (to a great degree) via the relational self will be highly self-determined and teleologically valuable, whereas pursuing one's ideal via the collective self will be less so. Although no research has directly compared the degree of self-determination/teleological value among the three selves, indirect evidence is consistent with our reasoning: Participants rate ideals associated with the individual and relational selves as more important and more attainable than ideals associated with the collective self (Schmuck et al., 2000).

In summary, we propose two process accounts. According to the content account, people personally prefer their individual self most. They do so, because that self contains the largest amount of agentic self-content, with agentic self-content being particularly beneficial for them (Abele & Wojciszke, 2014). According to the teleology account, people personally prefer their collective self least. They do so, because that self confers the least amount of teleological value, with teleological value being particularly beneficial for them (Schmuck et al., 2000). Note that both accounts are utilitarian in nature. Agentic content and teleological value share the same

ultimate goal—namely, benefit for people themselves. Importantly, however, both accounts use different means for attaining the same goal. The content account draws on interpersonal, social-comparative means (e.g., getting ahead; Hogan, 1982), whereas the teleology account draws on intrapersonal, temporal-comparative means (e.g., approaching one's ideal; Higgins, 1987).

Study 1

Study 1 constitutes the first test of the content and teleology accounts as two processes working in concert to build up the self-hierarchy. We tested five predictions. (1) The robust self-hierarchy will replicate (individual self > relational self > collective self). (2) The individual self will be filled primarily with agentic content, whereas the relational and collective selves will be filled primarily with communal content. (3) The individual self's predominantly agentic content (prediction 2) will statistically account for the preference of the individual self over the relational and collective selves—this is the content account. (4) Both the individual and relational selves will have high teleological value, whereas the collective self will not. (5) The individual and relational selves' high teleological value (prediction 4) will statistically account for the preference of those two selves over the collective self—this is the teleology account.

Method

Participants. We recruited 200 American participants via MTurk, and remunerated them with US$1.50. The sample was heterogeneous regarding sex (53% male, 45% female, 2% unspecified), age (M = 32.93 years, SD = 10.96 years), and ethnic background (78.5% Caucasian, 10.0% Asian, 6.5% African-American, 4.5% Hispanic, 0.5% other).

Measures. The study had three sections, described below in order of appearance.

Section I: Trait-listing. Participants were informed that a person's self-concept can be divided into three parts, and were given definitions of the individual, relational, and collective

selves (taken from Gaertner et al., 2012, Study 1). Then they thought of their own characteristics, and listed self-descriptive traits that were part of the three selves. Specifically, they listed nine different traits in total (i.e., three traits for each self), choosing the "most prototypical / representative traits and characteristics for each […] self."[1] We used concrete, ideographically-derived traits as representatives of selves (rather than abstract selves as a whole) for three reasons: (1) concrete traits are arguably easier for participants to compare directly in preference; (2) the use of concrete traits allowed us to analyze the agentic-communal content that people ascribe to their selves; and (3) using concrete traits enabled us to rule out an alternative explanation for the self-hierarchy (i.e., differential concreteness of the three selves). Finally, to prevent order effects, we presented the trait-listing for all three selves simultaneously on the same webpage. Table 1 displays the 10 most-frequently listed traits by participants for each self.

Section II: Preference-rating. Participants rated preferences for each of the nine self-descriptive traits from the trait-listing. We intended to assess self-preferences as exhaustively as possible. Thus, we used seven diverse preference-rating tasks, mostly validated in prior research. Throughout tasks, traits were presented without explicit reference to which self they belong.

Task 1: Removal. Following Gaertner et al. (2012, Study 1), participants read: "Imagine that [...] you were to wake up one day and suddenly lose a given personal trait or characteristic? Please indicate how you would feel about that loss." For each of their nine traits, participants completed the following three items: "Surgical removal of my own [trait] would: (1) cause a major emotional loss for me; (2) make me feel extremely sad; (3) make my life meaningless" (1 = *strongly disagree*, 7 = *strongly agree*).

Task 2: Pricing. Following Gaertner et al. (2012, Study 3), participants read: "Imagine you had to put a price on each of [the following] three personal traits and characteristics. […]

How much is each of your three personal traits and characteristics worth to you?". Participants were instructed to allocate money to three of the nine traits from the trait-listing. The money allocated to each trait could vary from $0 to $90,000 (the total across all three traits had to be $90,000). Each of the three traits was part of a different self. Thus, money allocated to the traits served as a measure of the relative preference for the three selves.

Task 3: Selling. Following Gaertner et al. (2012, Study 3), participants read: "Imagine you were forced to sell each of [the following] three personal traits and characteristics. […] For how much would you sell each [...]?" As in task 2, participants allocated a total of $90,000 to three traits and those three traits were again part of different selves. Thus, money allocated to the three traits again served as a preference-measure for the three different selves.

Task 4: Rewarding. Following Gaertner et al. (2012, Study 3), participants read: "Imagine you had lost the [following] three personal traits and characteristics. […] How much would you offer as a reward for each of your three traits and characteristics?" As before, participants allocated a total of $90,000 to three traits and those three traits were once more part of different selves. Hence, allocated money again served as a preference-measure for the three selves.

Task 5: Training. Extending Gaertner et al. (2012), participants read: "Imagine you won a 10-day course with a personal trainer. This personal trainer is exceptionally skilled in improving your personal traits and characteristics. A day's training would improve a given trait or characteristic by 10%. […] How many days would you want to spend on improving each of the three [following] personal traits and characteristics?". Analogously to tasks 2-4, participants allocated training days (0-10) to three traits, and those three traits were part of different selves.

Task 6: Pill. Extending Gaertner et al. (2012), participants read: "A pill […] may one day help individuals to improve personal traits and characteristics. […] Imagine the pill were fully

developed, safe, and 100% successful. Each pill improves a given trait or characteristic by 10%. How many pills would you want to spend on each of the [following] three personal traits and characteristics?" As before, participants allocated pills (0-10) to three traits, and those three traits were part of different selves.

Task 7: Serum. Extending Gaertner et al. (2012), participants read: "Imagine a highly reliable and safe serum existed that helps individuals to improve personal traits and characteristics. […] How many units [of the serum] would you want to drink to improve each of the [following] three personal traits and characteristics?" As before, participants allocated units of serum (0-10) to three traits, and those three traits were part of different selves.

Section III: Teleological value. Participants rated the teleological value of their nine traits. They were first asked to think about their own teleological ideal (i.e., "the type of person they would ideally like to be, the type of person they hoped, wished, or aspired to be;" Higgins, Shah, & Friedman, 1997, p. 517). Next, they evaluated how instrumental their nine traits were for becoming their own teleological ideal, responding to two items: "To what degree would excelling on the following trait or characteristic bring you closer to that ideal version of yourself?" (1 = *would not bring me any closer to my ideal*, 7 = *would bring me much closer to my ideal*) and "How useful is the following trait or characteristic to become that ideal version of yourself?" (1 = *not at all useful to become my ideal*, 7 = *very useful to become my ideal*).

Data-analytic strategy. Participants rated all their three selves. Thus, selves were nested in participants in a within-subjects design. To account for the nested data structure, we used multilevel modeling. We dummy-coded selves, grand-mean centered and z-standardized all other variables, and estimated random-intercept-and-slope models[2]. Following Bates et al. (2015) we simplified our models by setting the covariances between intercepts and slopes to zero.

Otherwise, our models did not converge. Multilevel analyses enabled us to test our process-accounts via within-person mediations, using the package *mediation* (Tingley, Yamamoto, Hirose, Keele, & Imai, 2014) of the statistical software *R*.

Results

Preparatory analyses.

Agentic-communal content analysis. We did not rely on self-report for assessing the content of the three selves. Instead, the trait-listing enabled us to content-analyze directly all nine self-descriptive traits provided by participants. Two trained raters classified each trait as agentic, communal, or non-applicable.[3] The non-applicable category contained irrelevant traits (e.g., punctuality) as well as ambiguous traits (e.g., sarcasm). Of the 1,800 traits, 79.1% were classified as either agentic or communal. Inter-rater agreement was high, $\kappa = .70$, and remaining differences were solved through discussion. Number of agentic traits per self served as the measure of agentic content (0 = *this self is not at all agentic*, 3 = *this self is completely agentic*).

Aggregation of preference tasks. As detailed above, we used seven diverse preference tasks. Each task assesses general preference for the three selves, but also specific or unwanted idiosyncrasies (Little, Cunningham, Shahar, & Widaman, 2002). To obtain a pure estimate of self-preferences (i.e., the common core of the preference tasks), we adopted a g-factor approach—a widely employed aggregation method in the intelligence literature (Jensen, 1998). The seven tasks fall into three groups and were thus first aggregated within those groups (see Table 2 for grouping and reliabilities). Subsequently, we component-analyzed the three resultant aggregates. A principle component analysis without rotation yielded a one-component solution (only one Eigenvalue > 1) and this g-factor explained 60.52% of the variance.[4]

Main analyses.

To test prediction 1 (replicability of the self-hierarchy), we conducted a multilevel model in which the three selves (individual, relational, collective; dummy-coded) predicted self-preference (g-factor). Participants preferred their selves as follows: individual > relational > collective (Table 3; Figure 1a). The self-hierarchy replicated.

To test prediction 2 (the individual self is most agentic), we conducted a multilevel model in which the three selves predicted agentic content. As expected, the individual self was most agentic. Additionally, the relational and collective selves differed in their agentic content: The collective self was more agentic than the relational self (Table 3; Figure 1b).[5]

To test prediction 3 (agentic content explains preference for the individual self), we examined whether accounting for agentic content eliminates the preference of the individual self over the relational and collective selves (mediation: MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). We controlled for teleological value to assure that results were not due to a relation between agentic content and teleological value. Furthermore, we used z-standardized mediators and outcomes in all mediation analyses. As can be seen in Table 3, agentic content mediated the preference-differences between the individual and relational selves, indicating that the individual self's higher agentic content accounts for the preference of the individual self over the relational self. Agentic content also mediated the preference differences between the individual and collective selves, indicating that the individual self's higher agentic content also accounts for the preference of the individual over the collective self. Finally, agentic content did not mediate preference differences between the relational and collective selves. The results are consistent with the content account.[6]

To test prediction 4 (the collective self has least teleological value), we conducted another multilevel model in which the three selves predicted teleological value. As expected, the

individual and relational selves had the same high teleological value, whereas the teleological value of the collective self was lower (Table 3; Figure 1c).

Finally, to test prediction 5 (teleological value explains lowest preference for the collective self), we examined whether accounting for teleological value eliminates the preference of the individual and relational selves over the collective self. We controlled for agentic content to assure that the results were not due to a relation between agentic content and teleological value. As can be seen in Table 3, teleological value mediated the preference-differences between the individual and collective selves, indicating that the individual self's higher teleological value accounts for the preference of the individual over the collective self. Teleological value also mediated the preference-differences between the relational and collective selves, indicating that the relational self's higher teleological value accounts for the preference of the relational over the collective self. Teleological value did not mediate preference differences between the individual and relational selves. The results are consistent with the teleology account.

Discussion

The results improved understanding of the self-hierarchy. To begin, we replicated the self-hierarchy having made the following five methodological changes. (1) We used a specific operationalization of selves, asking participants to rate preferences for *concrete, ideographically-derived traits* (vs. abstract selves; Sedikides et al., 2013). (2) We used *seven diverse preference tasks*, answering the call for a multi-methodological assessment of self-preferences (del Prado et al., 2007). (3) We used the *common core* of the seven preference tasks, adopting a g-factor approach—a procedure yields a purer measure of self-preferences, devoid of the idiosyncrasies and confounds of single tasks (Little et al., 2002). (4) We used *multilevel mediation* analyses in a within-subjects design, allowing us to examine directly within-person processes building up the

self-hierarchy. (5) We tested 200 participants in a *within-subjects design*, affording ample statistical power for precise estimation of true effect sizes (Funder et al., 2014).

We also obtained evidence that the selves differ in content. The individual self was most agentic, buttressing theoretical models proposing a close association between agency and uniqueness (Abele & Wojciszke, 2014; Gebauer et al., 2014; Wiggins, 1991). Content differences also emerged between the relational and collective selves: The collective self was more agentic than the relational self. This finding fits well with theorizing on two distinct strategies for gaining social inclusion. According to Baumeister and Sommer (1997), it is a masculine-*agentic* strategy to gain social inclusion via broader, *collective* bonds. At the same time, it is a feminine-*communal* strategy to gain social inclusion via closer, *relational* bonds. To our knowledge, Study 1 is the first to establish a link between agency and the collective self.

In addition, we validated the content account: The high degree of agency in the individual self accounted for why people prefer this self the most. As such, we identified a process that may drive the emergence or structure of the self-hierarchy. Moreover, we offered evidence that the three selves differ in teleological value. Consistent with past research (Schmuck et al., 2000), the individual and relational selves had high teleological value. The collective self lagged somewhat behind the individual and relational selves, being less functional for reaching one's teleological ideal. Finally, we obtained support for the teleology account. The least teleological value of the collective self accounted for why people prefer their collective self least. Again, we identified a process that may drive the self-hierarchy. In summary, the self-hierarchy appears to be a complex preference pattern that is a function of two processes: People praising their own agentic traits, and people praising selves that help them advance toward their teleological ideal.

Study 2

Besides testing the replicability of Study 1, Study 2 examined whether the proposed processes are applicable not only in self-perception (when people evaluate their own selves), but also in person-perception (when people evaluate *others'* selves). On theoretical grounds (Abele & Wojciszke, 2014), the answer would be affirmative. However, no research has tested a potential self-hierarchy in person-perception. Study 2 pushes the boundaries of the content and teleology accounts, and extends the self-hierarchy model to the domain of person-perception.

The two accounts offer clear predictions on the shape of the self-hierarchy when people evaluate the selves of close others. Regarding the content account, people prefer agency in themselves, but *communion* in others (Abele & Wojciszke, 2014). This asymmetry is due to agentic traits' higher social-comparative benefits for oneself and communal traits' higher benefits for others (Peeters, 2008). Put differently, within the own person, agency is most beneficial for oneself; within close others, however, communion is most beneficial for oneself. People should thus prefer others' selves that are particularly *communal*. Study 1 showed that the *relational* self is most communal (footnote 4). Hence, we predicted that people would place the *relational* self (not the individual self) on the top of the self-hierarchy within close others. Crucially, then, the content account makes differential predictions for self-perception (*individual* > relational > collective) and person-perception (*relational* > individual > collective). However, the underlying process—preference for selves that are beneficial for oneself—is the same.

Regarding the teleology account, people can also rely on traits or characteristics of others to advance their teleological ideal (Drigotas, Rusbult, Wieselquist, & Whitton, 1999). Thus, we predicted that teleological value would play a mediating role. People should prefer those selves in close others that are most functional for helping them become their teleological ideal. The

close other's collective self would again have least teleological value, placing the collective self at the bottom of the self-hierarchy in person-perception.

We tested five predictions, detailed in the Results section. For self-perception, we tested the same five predictions as in Study 1. For person-perception, we tested similar, but adapted, predictions. We predicted a reordering of the self-hierarchy, being headed by the close other's relational self. This reordering would come about, because people prefer the most communal self in others.

Method

Participants. We recruited 396 American participants via MTurk, and paid them US$1.50. The sample was heterogeneous in regards to sex (55% female, 44% male, 1% unspecified), age (M = 34.49 years, SD = 11.47 years), and ethnicity (76% Caucasian, 9% African-American, 8% Asian, 5% Hispanic, 2% other).

Experimental conditions and material. We randomly assigned participants to either the own-person (N = 174) or close-other (N = 222) condition. The own-person condition was identical to Study 1 (see Table 2 for reliabilities). The close-other condition was identical to Study 1, with one difference: We asked participants to evaluate the selves of a *close other*. Participants first wrote the name of a person they liked very much ("a good and old friend"). They subsequently underwent the same three sections as in Study 1. That is, they listed nine different self-descriptive traits of their friend's individual, relational, and collective selves. Next, they rated preferences for their friend's selves in the same seven preference tasks used in Study 1. Finally, participants evaluated the teleological value they ascribed to each of their friend's traits: They rated their friends' traits as to how functional each trait was for participants to

become their own teleological ideal. Table 2 shows reliabilities. We content-analyzed the self-descriptive traits[7] and used the same aggregation strategy and statistical analyses as in Study 1.[8, 9]

Results

Own-person condition. In the own-person condition, we tested the same five predictions as in Study 1, repeating the same multilevel analyses (including control variables). As can be seen in Table 4 and Figure 2, all predictions replicated. First, we again found the self-hierarchy (individual > relational > collective). Second, the individual self was more agentic than the relational self.[10] Third, agentic content (1) accounted for the preference-differences between the individual and relational selves, albeit the effect was marginal (significant in a one-sided test—an appropriate test, as this is a replication); additionally, agentic content (2) accounted for the preference-differences between the individual and collective selves, and (3) did not account for preference-differences between relational and collective selves.[7] Fourth, individual and relational selves had equally high teleological value compared to that of the collective self. Finally, teleological value (1) accounted for the preference-differences between the individual and collective selves, (2) accounted for the preference-differences between the relational and collective selves and (3) did not account for preference-differences between individual and relational selves.

Close-other condition. We tested the five predictions of the close-other condition, parallel to the own-person condition. That is, we computed parallel multilevel analyses (including parallel control variables). First, we tested prediction 1 (self-hierarchy in person-perception). Table 5 shows that we found the expected self-hierarchy within close others: relational > individual > collective (Figure 3a). Thus, as predicted, the person-perception self-hierarchy differs in its ordering from the typical self-hierarchy in self-perception. This reordering

occurred, although the traits participants ascribed to close others' three selves were virtually identical to the traits participants ascribed to their own three selves (in Study 1 and in the own-person condition of Study 2; Table 1).

Second, we tested prediction 2 (the close other's relational self is most communal). This prediction was supported (Table 5).[11] At the same time, the close other's collective self was more communal than his/her individual self (Figure 3b). Third, we tested prediction 3 (communal content explains highest preferences for close other's relational self). Communal content indeed accounted for the preference-differences between the close other's relational and individual selves (Table 5). Additionally, communal content accounted for the preference-differences between the close other's relational and collective selves. Unexpectedly, communal content also accounted for the preference-differences between close other's individual and collective selves, but in a negative direction and to a small magnitude (proportion mediated = 9%). Irrespectively, these results do support the content account. Put otherwise, a process parallel to the content account in self-perception also drives the self-hierarchy in person-perception.[12]

Fourth, we tested prediction 4 (close other's collective self has the least teleological value). Table 5 shows that close other's individual and relational selves had the same high teleological value, whereas the teleological value of close other's collective self was lower (Figure 3c). Thus, prediction 4 was also supported. Finally, we tested prediction 5 (teleological value explains lowest preferences of close other's collective self). Table 5 shows that teleological value (1) accounted for the preference-differences between the close other's individual and collective selves, and (2) accounted for the preference-differences between the close other's relational and collective selves; however, teleological value (3) did not account for preference-

differences between the close other's individual and relational selves. Hence, the teleology account also explains the self-hierarchy in person-perception.

Discussion

Results of the own-person condition replicated those of Study 1. In a new sample (N = 174), we replicated findings on the self-hierarchy in self-perception and on the two processes that may build the self-hierarchy. Agentic content was highest within the individual self, and this high agentic content accounted for why people prefer their individual self most. At the same time, the teleological value of the collective self lagged behind the teleological value of the two other selves, and this low teleological value accounted for why people prefer their collective self least. Agentic content and teleological value jointly shaped self-preferences within oneself.

Study 2 examined, for the first time, whether analogous processes might explain the self-hierarchy in person-perception. Starting from reasoning that *communal* content in others is most beneficial for oneself (Abele & Wojciszke, 2014; Peeters, 2008), we adapted the content account to person-perception. We tested it, together with the teleology account, in a sample of 222 participants of the close-other condition. Results supported our reasoning, suggesting that analogous processes operate when people evaluate the selves of close others. Crucially, the processes came with a reordering of the self-hierarchy. This reordering occurred despite virtually identical traits being ascribed to close others' three selves and to participants' own three selves (Table 1). As predicted on the basis of the content and teleology accounts, the self-hierarchy within close others was headed by the *relational* self (relational > individual > collective). Communal content was highest within the close other's relational self, and this high communal content accounted for why people prefer their close other's relational self most. The teleological value of the close other's collective self lagged behind the teleological value of the close other's

individual and relational selves, and the low teleological value accounted for why people prefer their close other's collective self least. Together, communal content and teleological value worked in tandem in shaping self-preferences in person-perception.

General Discussion

Why do self-hierarchies emerge? We sought to understand why people prefer their individual self most, their relational self less, and their collective self least (Sedikides et al., 2013). To do so, we tested two processes: the content account and the teleology account.

Predictions and Results

According to the content account, people prefer agentic self-content, because it possesses social-comparative benefits for them (Abele & Wojciszke, 2007, 2014). The individual self was most agentic in content, and agentic content accounted for preference differences between the individual self versus the relational and collective selves. As our mediation analyses illustrated, the content account offers a viable explanation for why people prefer their individual self most. But why do people prefer their collective self least?

According to the teleology account, people are motivated to become their teleological ideal (Higgins, 1987; Markus & Nurius, 1986; Oyserman & James, 2011). Thus, they should prefer selves that are functional for doing just that. Indeed, the individual and relational selves were seen to convey particularly high teleological benefits, whereas the collective self was not. Consequently, teleological value accounted for preference differences between the collective self versus the individual and relational selves. As our mediation analyses illustrated, this account offers a viable explanation for why people prefer their collective self least.

We also investigated, for the first time, the self-hierarchy in person-perception. Such an investigation can inform on whether people value the same selves in others as in themselves.

Critically, it can also inform on whether the processes driving the self-hierarchy in self-perception extend to self-hierarchies in person-perception. We obtained evidence that they do. In regards to the content account, other's communion is most beneficial for oneself, and people should thus prefer communal content in other's selves. Consistent with the account, the close other's *relational* self was most communal in content, and communal content accounted for preference-differences between close other's relational self versus their individual and collective selves. In regards to the teleology account, the close other's *collective* self carried least teleological value, and this low value accounted for preference-differences between close other's collective self versus their individual and relational selves. Study 2 aligns with the dual perspective model, according to which self- versus other-perspective is crucial in evaluating content (Abele & Wojciszke, 2014). Most importantly, Study 2 demonstrates that—despite differences in self- versus other-perspective—the same underlying processes seem at work. Put otherwise, the two processes were not confined to self-perception; instead, they generalized to person-perception, accounting for self-preferences in the own person and close others alike.

Neither process could account for the self-hierarchies on its own. That is, neither the self-hierarchy in self-perception nor the self-hierarchy in person-perception is reducible to either agentic-communal content or teleological value. Instead, self-hierarchies appear to be complex phenomena, resulting from at least two processes operating simultaneously. Furthermore, the two processes did not yield full mediation, leaving open additional possibilities. For example, people may prefer close others' relational selves, because such selves overlap most strongly with their own (Aron, Aron, Tudor, & Nelson, 1991; see also Gebauer, Göritz, Hofmann, & Sedikides, 2012). Nevertheless, the replicability of results across own person and close others attests to the

generality of the two processes, showcasing their relevance for understanding and predicting self-hierarchies.

Methodological Refinements, Consideration of an Alternative, and Limitations

We introduced several methodological refinements to self-hierarchy research. First, we combined different preference tasks, using a g-factor approach. We assessed self-preferences comprehensively, using seven preference tasks, thus reducing idiosyncratic confounds of individual preference tasks. Second, we used multilevel analyses with over 170 participants per cell. Thus, our samples easily surpass current recommendations on minimum sample size (Funder et al., 2014), resulting in very precise estimations of self-hierarchies and their underlying processes. Moreover, multilevel mediations allowed us to examine directly the psychological processes in a within-person paradigm, analyzing for the first time how self-hierarchies might be generated within individuals. As mediators, we used both observer-coded data (for agentic-communal self-content) as well as self-report data (for teleological value), and we obtained mediation evidence across both data sources. Finally, we used concrete personal traits as representatives for the selves. This is a more ecologically valid practice than abstract selves, because traits were ideographically-derived and arguably easier to compare in preference.

Using personal traits also helped us address an alternative explanation for the emergence of self-hierarchies, namely that self-preferences may have arisen from different levels of self concreteness (Sedikides & Brewer, 2001). For example, people may spurn their collective self, because this self is least concrete, compared to the individual and relational selves. Our methodology rules out this explanation: Participants rated concrete traits in all three selves, thus neutralizing differences in selves' concreteness level. Self-preferences are based on selves' actual content and teleological value rather than on different levels of concreteness.

A limitation of the current work is its reliance on cross-sectional mediation analyses. Such analyses are commonly used to illuminate underlying processes, but they do not allow causal conclusions (Trafimow, 2015). That being said, our mediation analyses are informative, for two reasons. First, we adopted a within-person mediation approach (Grice, Cohn, Ramsey, & Chiney, 2015). Second, we made theory-driven assumptions about the underlying causality (Kline, 2015) and time-order (Tate, 2015; ontogenesis of the three selves → content/teleological value of selves → self-preference). Still, the results provide only correlational support for these processes. As such, we understand our work as a first (and firm) empirical step, rather than the final word, on processes underlying self-hierarchies. We encourage future research to substantiate the causal role of these processes, although Study 2's experimental manipulation of the target person (self vs. close other) makes headway in that regard.

The present research was restricted to an individualist culture, and so it remains to be seen whether the results replicate in collectivist cultures. Although, in collectivist cultures, the individual self is much more filled with communal self-content (Sedikides, Gaertner, & Toguchi, 2003), that communal self-content is also a particularly effective means of getting ahead in collectivists' social world (Gebauer, Wagner, Sedikides, & Neberich, 2013). As a net result, the individual self will also be primary in collectivist cultures. Consistent with this reasoning, the extant evidence indicates that the self-hierarchy is pan-cultural and emerges in individualist as well as collectivist cultures (Gaertner et al., 2012; Zhu et al., 2016). We hope that future research will test rigorously the replicability of our process accounts in collectivist cultures.

Our objective was to examine processes driving the self-hierarchy *within individuals*. Self-hierarchies may, however, also exist within dyads and groups. To illustrate, the self-hierarchy within individuals responds to the question "Which self (individual, relational,

collective) is most important to me as an individual?", whereas the self-hierarchy within dyads (groups) responds to the question "Which self (individual, relational, collective) is most important to us as a dyad (us as a group)?" Thus, our research is limited to one form of self-hierarchy (within individuals) at the neglect of two other forms (within dyads, within groups). Given that the relevant literature has focused exclusively on the self-hierarchy within individuals (Sedikides et al., 2013), we adopted that focus, as our goal was to illuminate the processes driving the prior findings. Future research would need to address self-hierarchies within dyads and groups along with underlying processes, including the two we identified.

Implications

Our findings have theoretical implications. The first concerns the prevalence of agency and communion in the self-concept. People prefer agency in themselves (Abele & Wojciszke, 2014), but describe themselves as primarily communal (Abele et al., 2008; Nehrlich, Gebauer, Sedikides, & Schoel, in press; Wojciszke, Baryla, Parzuchowski, Szymkow, & Abele, 2011). This acknowledged contradiction (Abele & Wojciszke, 2014) vanishes when considering the division of the self into individual, relational, and collective. In both studies, only the individual self was primarily agentic in content, whereas the relational and collective selves were primarily communal in content. Participants listed three traits for each self, resulting in nine traits that were representative of their overall self-concept. From those nine self-descriptive traits, the majority was communal in content (Study 1: 48.7% communal vs. 30.3% agentic; Study 2—own-person condition: 43.2% communal vs. 28.4% agentic). Hence, two of the three selves are primarily communal, offering an explanation for why people describe themselves as primarily communal.

A teleological self can guide motivation and behavior toward one's ideals (Hoyle & Sherrill, 2006; Ruvolo & Markus, 1992). Aspiring to a personal ideal is closely linked to future-

orientation, because the future allows narrowing the gap between one's current and ideal selves. Consequently, scholars have emphasized the self's relevance for future-orientation. Leary (2004, p. 82) argued that the "ability to anticipate the future is perhaps the greatest benefit of having a self." Our results corroborate and advance this theorizing. People perceive some of their selves as particularly instrumental for becoming their teleological ideal, and they form self-preferences accordingly; however, they spurn selves with lower teleological functionality (collective self).

A body of evidence suggests egoistic perceptions of self and others. People judge themselves and others in ways that are beneficial for themselves, maximizing the attainment of personal ideals (Fitzsimons & Shah, 2008; Gebauer et al., in press; Orehek & Forest, 2016). Our results corroborate this work. People praise those selves that maximize self-interests and the attainment of personal ideals (i.e., beneficial for oneself) rather than other-interests and the attainment of others' ideals (i.e., advantages for others). In total, our findings paint a portrait of humans mostly concerned with components of the self that allow for their own prosperity.

Coda

The self—be it individual, relational, or collective—is felt as a prized possession. People cherish all those realms of their selfhood, but not equally so. Two processes explain why. People praise their most agentic (i.e., individual) self, because agency is beneficial for themselves. And people spurn their least teleologically valuable (i.e., collective) self, because it helps them minimally toward their future prosperity. These two processes influence self-hierarchies in person-perception as well. People prefer different selves in others than in themselves. They praise others' most communal (i.e., relational) self, because others' communion is again most beneficial for themselves. And they spurn others' least teleologically valuable (i.e., collective) self, because it contributes minimally toward their future prosperity.

Declaration of Conflicting Interests

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

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Preparation of this manuscript was supported by Grant GE 2515/3-1 from the German Research Foundation (DFG).

References

Abele, A.E., Rupprecht, T., & Wojciszke, B. (2008). The influence of success and failure experiences on agency. *European Journal of Social Psychology, 38*, 436–448.

Abele, A.E., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus others. *Journal of Personality and Social Psychology, 93*, 751–763.

Abele, A.E., & Wojciszke, B. (2014). Communal and agentic content. A dual perspective model. *Advances in Experimental Social Psychology, 50*, 195–255.

Aiken, L. S., Mistler, S. A., Coxe, S., & West, S. G. (2015). Analyzing count variables in individuals and groups: Single level and multilevel models. *Group Processes and Intergroup Relations, 18*, 290–314.

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology, 60*, 241–253.

Barr, D.J., Levy, R., Scheepers, C., & Tily, H. (2013). Random effects structure for confirmatory hypothesis testing: Keep it maximal. *Journal of Memory and Language, 68*, 255–278.

Bates, D., Kliegl, R., Vasishth, S., & Baayen, R.H. (2015). Parsimonious mixed models. *arXiv preprint.* arXiv:1506.04967:1506.04967.

Baumeister, R. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 680-740). New York: McGraw-Hill.

Baumeister, R.F., & Sommer, K.L. (1997). What do men want? Gender differences and two spheres of belongingness: Comment on Cross and Madson (1997). *Psychological Bulletin, 122*, 38–44.

del Prado, A.M., Church, A.T., Katigbak, M.S., Miramontes, L.G., Whitty, M.T., Curtis, G.J., … Reyes, J.A.S. (2007). Culture, method, and the content of self-concepts: Testing trait,

individual–self-primacy, and cultural psychology perspectives. *Journal of Research in Personality, 41*, 1119–1160.

Drigotas, S.M., Rusbult, C.M., Wieselquist, J., & Whitton, S.W. (1999). Close partner as sculptor of the ideal self: Behavioral affirmation and the Michelangelo phenomenon. *Journal of Personality and Social Psychology, 77*, 293–323.

Fitzsimons, G.M., & Shah, J.Y. (2008). How goal instrumentality shapes relationship evaluations. *Journal of Personality and Social Psychology, 95*, 319–337.

Funder, D.C., Levine, J.M., Mackie, D.M., Morf, C.C., Sansone, C., Vazire, S., & West, S.G. (2014). Improving the dependability of research in personality and social psychology: Recommendations for research and educational practice. *Personality and Social Psychology Review, 18*, 3–12.

Gable, S.L., Reis, H.T., Impett, E.A., & Asher, E.R. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing positive events. *Journal of Personality and Social Psychology, 87*, 228–245.

Gaertner, L., Sedikides, C., & Graetz, K. (1999). In search of self-definition: Motivational primacy of the individual self, motivational primacy of the collective self, or contextual primacy? *Journal of Personality and Social Psychology, 76*, 5–18.

Gaertner, G., Sedikides, C., Luke, M., O'Mara, E.M., Iuzzini, J., Jackson, L.E., … & Wu, Q. (2012). A motivational hierarchy within: Primacy of the individual self, relational self, or collective self? *Journal of Experimental Social Psychology, 48*, 997–1013.

Gaertner, L., Sedikides, C., Vevea, J., & Iuzzini, J. (2002). The "I," the "We," and the "When": A meta-analysis of motivational primacy in self-definition. *Journal of Personality and Social Psychology, 83*, 574–591.

Gebauer, J.E., Göritz, A.S., Hofmann, W., & Sedikides, C. (2012). Self-love or other-love? Explicit other-preference but implicit self-preference. *PLoS ONE, 7,* e41789.

Gebauer, J.E., Leary, M.R., & Neberich, W. (2012). Big Two personality and Big Three mate preferences: Similarity attracts, but country-level mate preferences crucially matter. *Personality and Social Psychology Bulletin, 38,* 1579–1593.

Gebauer, J. E., Nehrlich, A. D., Stahlberg, D., Sedikides, C., Hackenschmidt, A., Schick, D., . . . Mander, J. (in press). Mind-body practices and the self: Yoga and meditation do not quiet the ego, but instead boost self-enhancement. *Psychological Science*.

Gebauer, J.E., Paulhus, D.L., & Neberich, W. (2013). Big Two personality and religiosity across cultures: Communals as religious conformists and agentics as religious contrarians. *Social Psychological and Personality Science, 4*, 21–30.

Gebauer, J.E., Sedikides, C., Lüdtke, O., & Neberich, W. (2014). Agency-communion and interest in prosocial behavior: Social motives for assimilation and contrast explain sociocultural inconsistencies. *Journal of Personality, 82*, 452–466.

Gebauer, J.E., Sedikides, C., Schönbrodt, F.D., Bleidorn, W., Rentfrow, P.J., Potter, J., & Gosling, S.D. (2017). The religiosity as social value hypothesis: A multi-method replication and extension across 65 countries and three levels of spatial aggregation. *Journal of Personality and Social Psychology, 113*, e18-e39.

Gebauer, J.E., Sedikides, C., Verplanken, B., & Maio, G.R. (2012). Communal narcissism. *Journal of Personality and Social Psychology, 103*, 854–878.

Gebauer, J.E., Wagner, J., Sedikides, C., & Neberich, W. (2013). Agency-communion and self-esteem relations are moderated by culture, religiosity, age, sex: Evidence for the "Self-Centrality Breeds Self-Enhancement" principle. *Journal of Personality, 81*, 261–275.

Gilbert, D., & Wilson, T. (2007). Prospection: Experiencing the future. *Science, 351*, 1351–1354.

Grice, J. W., Cohn, A., Ramsey, R. R., & Chaney, J. M. (2015). On muddled reasoning and mediation modeling. *Basic and Applied Social Psychology, 37*, 214–225.

Hardie, E.A., Kashima, E.S., & Pridmore, P. (2005). The influence of relational, individual, and collective self-aspects on stress, uplifts and health. *Self and Identity, 4*, 1–24.

Higgins, E.T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*, 319–340.

Higgins, E.T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality and Social Psychology, 72*, 515–525.

Higgins, E.T., Vookles, J., & Tykocinski, O. (1992). Self and health: How "patterns" of self-beliefs predict types of emotional and physical problems. *Social Cognition, 10*, 125–150.

Hogan, R. (1982). A socioanalytic theory of personality. In M. Page, (Ed.), *Nebraska symposium on motivation* (Vol. 30, pp. 55–89). Lincoln: University of Nebraska Press.

Hoyle, R.H., & Sherrill, M.R. (2006). Future orientation in the self-system: Possible selves, self-regulation, and behavior. *Journal of Personality, 74*, 1673–1696.

Jensen, A.R. (1998). *The g factor: The science of mental ability*. Westport, CT: Praeger.

Kline, R.B. (2015). The mediation myth. *Basic and Applied Social Psychology, 37*, 202–213.

Leary, M.R. (2004). *The curse of the self: Self-awareness, egotism, and the quality of human life*. New York: Oxford University Press.

Little, T.D., Cunningham, W.A., Shahar, G., & Widaman, K. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling, 9*, 151–173.

MacKinnon, D.P., Lockwood, C.M., Hoffman, J.M., West, S.G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7*, 83–104.

Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist, 41*, 954–969.

Moretti, M.M., & Higgins, E.T. (1990). Relating self-discrepancy to self-esteem: The contribution of discrepancy beyond actual self-ratings. *Journal of Experimental Social Psychology, 26*, 108–123.

Nehrlich, A.D., Gebauer, J.E., Sedikides, C., & Schoel, C. (in press). Agentic narcissism, communal narcissism, and prosociality. *Journal of Personality and Social Psychology*.

Orehek, E., & Forest, A.L. (2016). When people serve as means to goals: Implications of a motivational account of close relationships. *Current Directions in Psychological Science, 25*, 79–84.

Peeters, G. (2008). The evaluative face of a descriptive model: Communion and agency in Peabody's tetradic model of trait organization. *European Journal of Social Psychology, 38*, 1066–1072.

Ruvolo, A.P., & Markus, H.R. (1992). Possible selves and performance: The power of self-relevant imagery. *Social Cognition, 10*, 95–124.

Ryan, R.M., & Deci, E.L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: Guilford Press.

Schmuck, P., Kasser, T., & Ryan, R.M. (2000). Intrinsic and extrinsic goals: Their structure and relationship to well-being in German and US college students. *Social Indicators Research, 50,* 225–241.

Sedikides, C. (1993). Assessment, enhancement, and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology, 65*, 317–338.

Sedikides, C., & Brewer, M.B. (2001). *Individual self, relational self, and collective self*. Philadelphia, PA: Psychology Press.

Sedikides, C., Gaertner, L., & Cai, H. (2015). On the panculturality of self-enhancement and self-protection motivation: The case for the universality of self-esteem. *Advances in Motivation Science, 2,* 185–241.

Sedikides, C., Gaertner, L., Luke, M.A., O'Mara, E.M., & Gebauer, J. (2013). A three-tier hierarchy of self-potency: Individual self, relational self, collective self. *Advances in Experimental Social Psychology, 48*, 235–296.

Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology, 84*, 60–79.

Sedikides, C., & Gregg, A.P. (2003). Portraits of the self. In M.A. Hogg & J. Cooper (Eds.), *Sage handbook of social psychology* (pp. 110–138). London: Sage Publications.

Sedikides, C., & Skowronski, J.A. (1997). The symbolic self in evolutionary context. *Personality and Social Psychology Review, 1*, 80–102.

Seligman, M.E.P., Railton, P., Baumeister, R.F., & Sripada, C. (2013). Navigating into the future or driven by the past. *Perspectives on Psychological Science, 8*, 119–141.

Stephan, E., Shidlovski, D., & Sedikides, C. (2018). Self-prospection and energization: The role of time distance and consideration of future consequences. *Self and Identity, 17*, 22–36.

Tate, C. U. (2015). On the overuse and misuse of mediation analysis: It may be a matter of timing. *Basic and Applied Social Psychology*, *37*, 235–246.

Taylor, S.E., Lerner, J.S., Sherman, D.K., Sage, R.M., & McDowell, N.K. (2003a). Are self-enhancing cognitions associated with healthy or unhealthy biological profiles? *Journal of Personality and Social Psychology, 85*, 605–615.

Tingley, D., Yamamoto, T., Hirose, K., Keele, L., & Imai, K. (2014). Mediation: R package for causal mediation analysis. *Journal of Statistical Software, 59*, 1–38.

Trafimow D. (2015). Introduction to the special issue on mediation analyses: What if planetary scientists used mediation analysis to infer causation? *Basic and Applied Social Psychology, 37*, 197–201.

Trafimow, D., Triandis, H.C., & Goto, S.G. (1991). Some tests of the distinction between the private self and the collective self. *Journal of Personality and Social Psychology*, *60*, 649–655.

Wiggins, J.S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behaviour. In W. Grove & D. Ciccetti (Eds.), *Thinking clearly about psychology: Essays in honour of Paul Everett Meehl* (pp. 89–113). Minneapolis: University of Minnesota Press.

Wojciszke, B., Baryla, W., Parzuchowski, M., Szymkow, A., & Abele, A.E. (2011). Self-esteem is dominated by agentic over communal information. *European Journal of Social Psychology*, *41*, 617–627.

Zhu, X., Wu, H., Yang, S., & Gu, R. (2016). Motivational hierarchy in the Chinese brain: Primacy of the individual self, relational self, or collective self? *Frontiers in Psychology, 7*, 877.

Footnotes

[1]We instructed participants to provide nine different traits, so that traits would not be assigned simultaneously to more than one self. We also instructed them to provide traits as positive, one-word nouns (Table 1), because several of our preference tasks only worked with positive traits (e.g., removal task). Regardless, all three selves are positive overall (Sedikides et al., 2013).

[2]Following recommendations by Barr, Levy, Scheepers, and Tily (2013), we report results from multi-level models that include random intercepts and random slopes. Bates, Kliegl, Vasishth, and Baayen (2015) cautioned, however, that such random-intercept-and-slope models easily result in overfitting of the data. Indeed, simpler random-intercept-only models fitted Study 1's data at least as well as the more complex random-intercept-and-slope models, $-3.82 \leq \Delta AIC \leq 0.04$. Also, Study 1's results were conceptually identical when using those random-intercept-only models. The finding that random-intercept-only models fit the data at least as well as random-intercept-and-slope models is interesting for another reason: It indicates no significant variation of level 1 effects across level 2 units (Gebauer et al., 2017). In other words, our self-hierarchy results do not vary between different people. Hence, this finding corroborates the robustness and interindividual generalizability of self-hierarchies.

[3]We adhered to standard definitions of agency and communion to facilitate content-analysis of the self-descriptive traits (Abele, Rupprecht, & Wojciszke, 2008; Hogan, 1982; Wiggins, 1991).

[4]The g-factor approach weighs the preference tasks according to how much they contribute to the common core of self-preferences. Another way of aggregating self-preferences is to weigh all tasks equally by computing a preference mean score across tasks. We opted for the g-factor, because it allows for better preclusion of unwarranted error variance from individual preference tasks (Little et al., 2002). Nevertheless, using mean scores yielded conceptually similar results.

[5]Agentic/communal content is a low-level count variable and, thus, a Poisson-distribution based multi-level model accounts better for it (Aiken, Mistler, Coxe, & West, 2015). Hence, we repeated our analyses using a Poisson-based model and obtained conceptually identical results. We present normal-distribution based models here to be consistent with our mediation analyses, which cannot be computed using Poisson-distribution based multi-level models.

[6]Standardized results for communal self-content were: individual self, M = -0.64, 95%CI [-0.75, -0.53]; relational self, M = 0.80, 95%CI [0.69, 0.91]; collective self, M = -0.16, 95%CI [-0.27, -0.05]. We repeated analyses for the content account, using communal self-content as mediator. Mediation results were similar to the agentic self-content results, but in the opposite direction, smaller in size, and mostly non-significant. Potential communal self-content mediations may be due to negative correlations between agentic and communal self-content (within selves: $-.72 < r < -.61$; across selves: r = -.59). Such negative agency-communion correlations are common when valence of self-descriptions is held constant (e.g., Abele & Wojciszke, 2007: r = -.63). Together, theory and data advocate that *agentic* content is fueling the content account in self-perception.

[7]A trained rater content-analyzed the ideographically derived traits provided in the trait-listing section, according to the rules and agreements established in Study 1. In the own-person condition, 71.6% of the 1,566 traits contained agentic-communal content. In the close-other condition, 72.5% of the 1,998 traits contained agentic-communal content.

[8]We aggregated preference scores as in Study 1, using a g-factor approach. In both conditions, one-component solutions were supported (only one Eigenvalue > 1) and explained 62.34% (own-person condition) and 58.61% (close-other condition) of variance. Results were conceptually similar when using the mean as the aggregate preference score.

[9]As in Study 1, we report results from random-intercept-and-slope models. Similar to Study 1, in Study 2's own-person condition, simpler random-intercept-only models generally fitted the data as well as the more complex random-intercept-and-slope models, $-3.99 \leq \Delta AIC \leq 3.73$. And, as in Study 1, results from Study 2's own-person condition were conceptually identical when using random-intercept-only models. Interestingly, the situation was somewhat different in the close-other condition. In that condition, the more complex random-intercept-and-slope models generally fitted the data better than the simpler random-intercept-only models, $-1.64 \leq \Delta AIC \leq 7.37$ (albeit results remained conceptually identical using random-intercept-only models). This finding suggests that there exist individual differences in how people construct the self-hierarchy in close others. Future research may want to identify which individual difference variables account for those differences in the construction of self-hierarchies within close others.

[10]A Poisson-based multi-level model yielded conceptually identical results. Standardized results for communal self-content were: individual self, $M = -0.51$, 95%CI = [-0.63, -0.39]; relational self, $M = 0.78$, 95%CI = [0.66, 0.91]; collective self, $M = -0.27$, 95%CI = [-0.39, -0.15].

[11]A Poisson-based multi-level model yielded conceptually identical results.

[12]Standardized results for agentic self-content were: individual self, $M = 0.50$, 95% CI = [0.39, 0.62]; relational self, $M = -0.65$, 95%CI = [-0.77, -0.53]; collective self, $M = 0.15$, 95%CI = [0.03, 0.27]. We repeated analyses for the content account in person-perception, using agentic self-content as mediator. Results were similar to the communal self-content ones, but in the opposite direction, smaller in size, and mostly non-significant. Once again, potential agentic self-content mediations may be due to the negative correlations between agentic and communal self-content (footnote 4). Theory and data converge in pointing to *communal* self-content as the driving force behind the content account in person-perception.

Table 1

Overview of the Ten Most-Frequently Listed Traits for the Individual, Relational, and Collective Selves in Studies 1 and 2

Rank	Study 1			Study 2: Own-person condition			Study 2: Close-other condition		
	Individual self	**Relational self**	**Collective self**	**Individual self**	**Relational self**	**Collective self**	**Individual self**	**Relational self**	**Collective self**
1	Intelligence (A, 78)	Caring (C, 51)	Leadership (A, 16)	Intelligence (A, 54)	Love (C, 56)	Leadership (A, 15)	Intelligence (A, 61)	Love (C, 48)	Leadership (A, 28)
2	Creativity (A, 27)	Love (C, 45)	Cooperation (C, 15)	Creativity (A, 33)	Caring (C, 41)	Intelligence (A, 10)	Fun (--, 28)	Caring (C, 43)	Intelligence (A, 15)
3	Honesty (C, 25)	Loyalty (C, 30)	Helpfulness (C, 15)	Kindness (C, 13)	Loyalty (C, 30)	Cooperation (C, 9)	Honesty (C, 24)	Loyalty (C, 32)	Helpfulness (C, 12)
4	Independence (A, 17)	Helpfulness (C, 23)	American (--, 12)	Caring (C, 12)	Friendliness (C, 16)	Helpfulness (C, 9)	Creativity (A, 22)	Friendliness (C, 27)	Religiosity (--, 12)
5	Humor (--, 16)	Kindness (C, 19)	Intelligence (A, 12)	Independence (A, 12)	Compassion (C, 12)	American (--, 7)	Independence (A, 21)	Helpfulness (C, 26)	Friendliness (C, 10)
6	Determination (A, 10)	Honesty (C, 16)	Responsibility (C, 12)	Honesty (C, 10)	Trust (C, 12)	Hard-working (A, 7)	Kindness (C, 21)	Kindness (C, 22)	Fun (--, 9)
7	Kindness (C, 10)	Compassion (C, 15)	Loyalty (C, 11)	Compassion (C, 9)	Dependability (C, 10)	Humor (--, 7)	Strength (A, 17)	Compassion (C, 15)	Generosity (C, 8)
8	Smartness (A, 9)	Trust (C, 15)	Empathy (C, 10)	Smartness (A, 9)	Giving (--, 9)	Creativity (A, 6)	Smartness (A, 16)	Honesty (C, 14)	Activity (A, 7)
9	Calmness (C, 8)	Dependability (C, 12)	Friendliness (C, 9)	Artistry (--, 8)	Helpfulness (C, 9)	Friendliness (C, 6)	Humor (--, 15)	Devotion (--, 13)	Confidence (A, 7)
10	Quietness (--, 6)	Nurture (C, 10)	Caring (C, 8)	Fun (--, 7)	Honesty (C, 9)	Smartness (A, 6)	Confidence (A, 13)	Humor (--, 13)	Cooperation (C, 7)

Note. Agency-communion content-rating (A=*agentic*; C=*communal*; --=*neither*) and absolute frequencies of trait-listing within a given self are presented in parentheses. Traits with equal frequencies are listed in alphabetical order. Traits were aggregated according to equal word stems (e.g., "intelligence" for "intelligence," "intelligent," etc.).

Table 2

Reliabilities (Cronbach's α) of Preference Task Groups and Teleological-Ideal Value in Studies 1 and 2

Group of preference tasks	Reliabilities Study 1			Reliabilities Study 2: Own-person condition			Reliabilities Study 2: Close-other condition		
	Individual self	Relational self	Collective self	Individual self	Relational self	Collective self	Individual self	Relational self	Collective self
Preference-task group 1: Self-removal task	.88	.90	.87	.85	.88	.88	.82	.87	.86
Preference task group 2: Pricing, selling, and rewarding	.43	.45	.41	.41	.28	.21	.28	.51	.41
Preference task group 3: Training, pill, and serum	.48	.47	.34	.47	.49	.54	.22	.55	.57
Teleological-ideal value	.82	.83	.81	.76	.85	.80	.84	.89	.88

Note. The seven tasks were organized into three groups (group 1: self-removal task; group 2: self-pricing, self-selling, and self-rewarding tasks; group 3: self-training, self-pill, and self-serum tasks). Participants began with the self-removal task (group 1). The two remaining groups followed in a random order. In the preference task groups 2 and 3, traits of the same self appeared in different tasks (e.g., one individual trait appearing in the self-pricing task, another individual trait appearing in the self-selling task, and the last individual trait appearing in the self-rewarding task; traits appeared in a fixed random order). Reliabilities were thus computed across traits and across tasks.

Table 3

Results of Study 1: Mean Level Differences and Mediation Results

	Unstandardized						Standardized					
	Individual self		Relational self		Collective self		Individual self		Relational self		Collective self	
	M [SD]	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*
Preference (factor scores)							0.44_{a} [1.01]	[0.32, 0.58]	-0.01_{b} [0.97]	[-0.14, 0.12]	-0.44_{c} [0.82]	[-0.57, -0.31]
Agentic self-content	1.46_{d} [1.02]	[1.33, 1.58]	0.33_{e} [0.61]	[0.21, 0.45]	0.95_{f} [0.95]	[0.82, 1.07]	0.55_{d} [1.03]	[0.42, 0.68]	-0.59_{e} [0.62]	[-0.71, -0.47]	0.04_{f} [0.96]	[-0.09, 0.16]
Teleological ideal-value	5.64_{g} [1.16]	[5.47, 5.79]	5.55_{g} [1.11]	[5.38, 5.70]	5.21_{h} [1.19]	[5.05, 5.37]	0.15_{g} [0.99]	[0.01, 0.28]	0.07_{g} [0.95]	[-0.07, 0.20]	-0.22_{h} [1.02]	[-0.36, -0.08]

	Individual vs. relational self					Individual vs. collective self					Relational vs. collective self				
	PE	*95%CI*	*Medprop*	*95%CI*	*p*	*PE*	*95%CI*	*Medprop*	*95%CI*	*p*	*PE*	*95%CI*	*Medprop*	*95%CI*	*p*
Agentic self-content mediation	0.15	[0.05, 0.26]	0.37	[0.11, 0.79]	<.01	0.06	[0.03, 0.12]	0.09	[0.04, 0.17]	<.01	-0.01	[-0.07, 0.05]	-0.03	[-0.29, 0.20]	.78
Teleological ideal-value mediation	-0.03	[-0.15, 0.09]	-0.11	[-0.99, 0.65]	.64	0.14	[0.06, 0.23]	0.19	[0.08, 0.29]	<.01	0.14	[0.05, 0.22]	0.32	[0.14, 0.53]	<.01

Note. Upper half: Mean level differences between selves in terms of preference (standardized factor scores), agentic self-content (unstandardized and standardized), and teleological-ideal value (unstandardized and standardized). Estimates are based on normal-distribution based random-intercept-and-slope multi-level models. Suffixes indicate significant differences between mean levels (means with different suffixes differ significantly, $p < .05$). Lower half: Mediations of self-preferences by agentic self-content and teleological-ideal value (based on random-intercept-only multi-level models), separated for contrasts between selves. *M* = mean; *SD* = standard deviation; *95%CI* = bootstrapped 95% confidence interval; *PE* = point estimate of the average mediation effect; *Medprop* = estimate of the proportion mediated of the total effect. The number of simulations for bootstrapping of confidence intervals and mediation analyses was 5,000. Mediations include control for the rivaling mediator.

Table 4

Results of Study 2 – Qwn-Person Condition: Mean Level Differences and Mediation Results

	Unstandardized						Standardized					
	Individual self		Relational self		Collective self		Individual self		Relational self		Collective self	
	M [SD]	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*
Preference (factor scores)							0.29_{a} [1.02]	[0.15, 0.44]	-0.01_{b} [0.92]	[-0.15, 0.14]	-0.29_{c} [0.98]	[-0.43, -0.14]
Agentic self-content	1.34_{d} [0.87]	[1.23, 1.46]	0.27_{e} [0.55]	[0.16, 0.38]	0.94_{f} [0.87]	[0.83, 1.06]	0.55_{d} [0.97]	[0.42, 0.68]	-0.65_{e} [0.61]	[-0.78, -0.52]	0.10_{f} [0.97]	[-0.03, 0.23]
Teleological ideal-value	5.59_{g} [1.16]	[5.43, 5.75]	5.52_{g} [1.09]	[5.35, 5.68]	5.19_{h} [1.18]	[5.02, 5.35]	0.14_{g} [0.95]	[-0.01, 0.29]	0.08_{g} [0.97]	[-0.08, 0.23]	-0.22_{h} [1.05]	[-0.37, -0.07]

	Individual vs. relational self					Individual vs. collective self					Relational vs. collective self				
	PE	*95%CI*	*Medprop*	*95%CI*	*p*	*PE*	*95%CI*	*Medprop*	*95%CI*	*p*	*PE*	*95%CI*	*Medprop*	*95%CI*	*p*
Agentic self-content mediation	0.12	[-0.01, 0.24]	0.44	[-0.03, 0.99]	.06	0.04	[0.003, 0.09]	0.10	[0.01, 0.27]	.03	-0.04	[-0.12, 0.04]	-0.24	[-0.99, 0.99]	.39
Teleological ideal-value mediation	-0.06	[-0.18, 0.06]	-0.19	[-0.99, 0.99]	.33	0.14	[0.04, 0.25]	0.29	[0.11, 0.52]	<.01	0.23	[0.14, 0.33]	0.58	[0.35, 0.99]	<.01

Note. Upper half: Mean level differences between selves in terms of preference (standardized factor scores), agentic self-content (unstandardized and standardized), and teleological-ideal value (unstandardized and standardized). Estimates are based on normal-distribution based random-intercept-and-slope multi-level models. Suffixes indicate significant differences between mean levels (means with different suffixes differ significantly, $p < .05$). Lower half: Mediations of self-preferences by agentic self-content and teleological-ideal value (based on random-intercept-only multi-level models), separated for contrasts between selves. *M* = mean; *SD* = standard deviation; *95%CI* = bootstrapped 95% confidence interval; *PE* = point estimate of the average mediation effect; *Medprop* = estimate of the proportion mediated of the total effect. The number of simulations for bootstrapping of confidence intervals and mediation analyses was 5,000. Mediations include control for the rivaling mediator.

Table 5

Results of Study 2 – Close-Other Condition: Mean Level Differences and Mediation Results

	Unstandardized						Standardized					
	Individual self		Relational self		Collective self		Individual self		Relational self		Collective self	
	M [SD]	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*	*M [SD]*	*95%CI*
Preference (factor scores)							-0.01_{a} [0.81]	[-0.13, 0.12]	0.47_{b} [1.01]	[0.34, 0.59]	-0.46_{c} [0.95]	[-0.58, -0.33]
Communal self-content	0.72_{d} [0.85]	[0.60, 0.84]	2.06_{e} [0.94]	[1.95, 2.18]	0.95_{f} [0.88]	[0.83, 1.07]	-0.49_{d} [0.80]	[-0.60, -0.38]	0.77_{e} [0.88]	[0.66, 0.88]	-0.27_{f} [0.83]	[-0.38, -0.17]
Teleological ideal-value	4.72_{g} [1.41]	[4.54, 4.92]	4.95_{g} [1.49]	[4.76, 5.15]	4.22_{h} [1.53]	[4.03, 4.42]	0.06_{g} [0.94]	[-0.07, 0.19]	0.21_{g} [0.99]	[0.08, 0.34]	-0.27_{h} [1.02]	[-0.40, -0.14]

	Individual vs. relational self					Individual vs. collective self					Relational vs. collective self				
	PE	*95%CI*	*Medprop*	*95%CI*	*p*	*PE*	*95%CI*	*Medprop*	*95%CI*	*p*	*PE*	*95%CI*	*Medprop*	*95%CI*	*p*
Communal self-content mediation	0.23	[0.12, 0.35]	0.56	[0.27, 0.99]	<.01	-0.03	[-0.06, -0.003]	-0.09	[-0.28, -0.01]	.03	0.15	[0.06; 0.25]	0.21	[0.08, 0.38]	<.01
Teleological ideal-value mediation	-0.04	[-0.10, 0.01]	-0.23	[-0.99, 0.99]	.12	0.16	[0.11, 0.22]	0.33	[0.22, 0.49]	<.01	0.10	[0.03, 0.17]	0.15	[0.05, 0.26]	<.01

Note. Upper half: Mean level differences between selves in terms of preference (standardized factor scores), agentic self-content (unstandardized and standardized), and teleological-ideal value (unstandardized and standardized). Estimates are based on normal-distribution based random-intercept-and-slope multi-level models. Suffixes indicate significant differences between mean levels (means with different suffixes differ significantly, $p < .05$). Lower half: Mediations of self-preferences by agentic self-content and teleological-ideal value (based on random-intercept-only multi-level models), separated for contrasts between selves. *M* = mean; *SD* = standard deviation; *95%CI* = bootstrapped 95% confidence interval; *PE* = point estimate of the average mediation effect; *Medprop* = estimate of the proportion mediated of the total effect. The number of simulations for bootstrapping of confidence intervals and mediation analyses was 5,000. Mediations include control for the rivaling mediator.

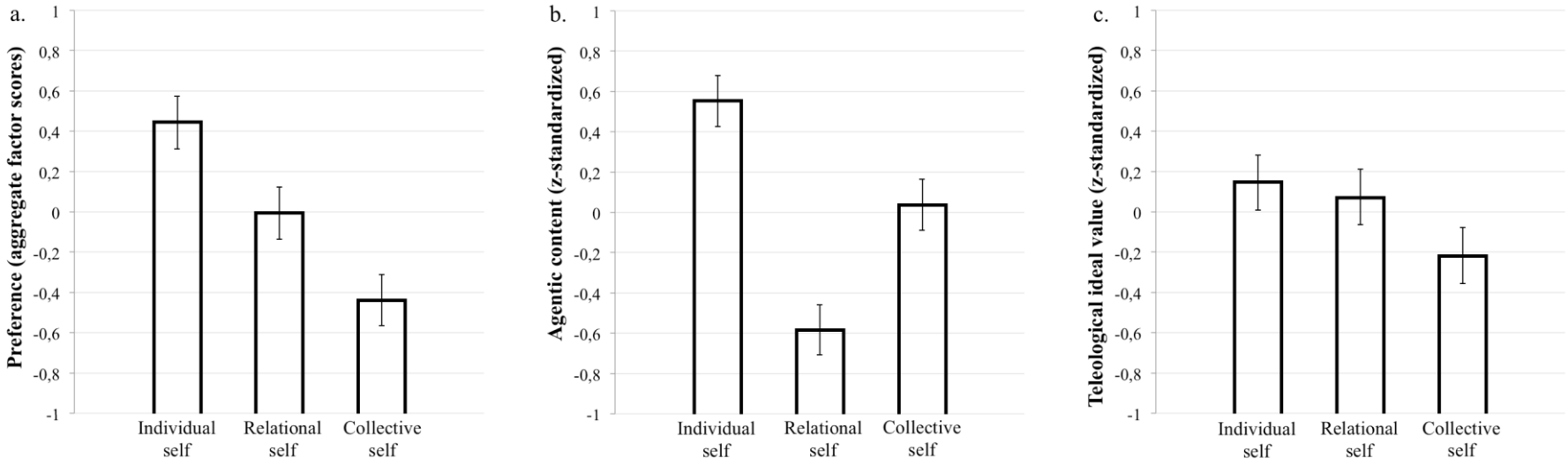

Figure 1. Results of Study 1: Mean levels for (a) preferences, (b) agentic self-content, and (c) teleological ideal value of selves

Note: Error bars delimitate bootstrapped 95% confidence intervals.

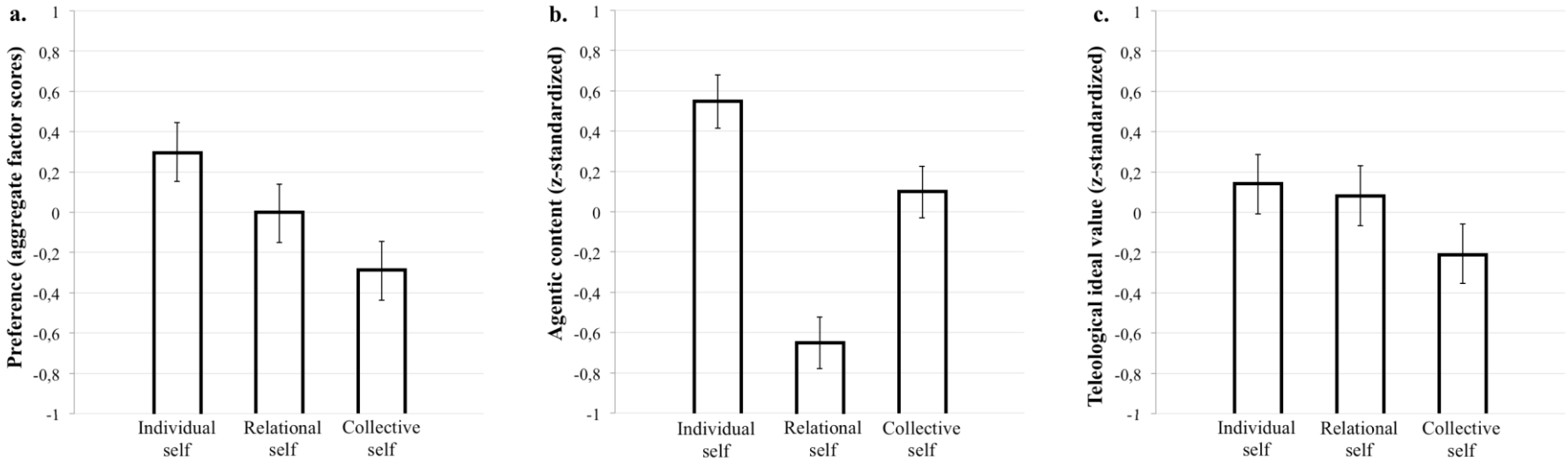

Figure 2. Results of Study 2—own-person condition: Mean levels for (a) preferences, (b) agentic self-content, and (c) teleological ideal value of selves

Note: Error bars delimitate bootstrapped 95% confidence intervals.

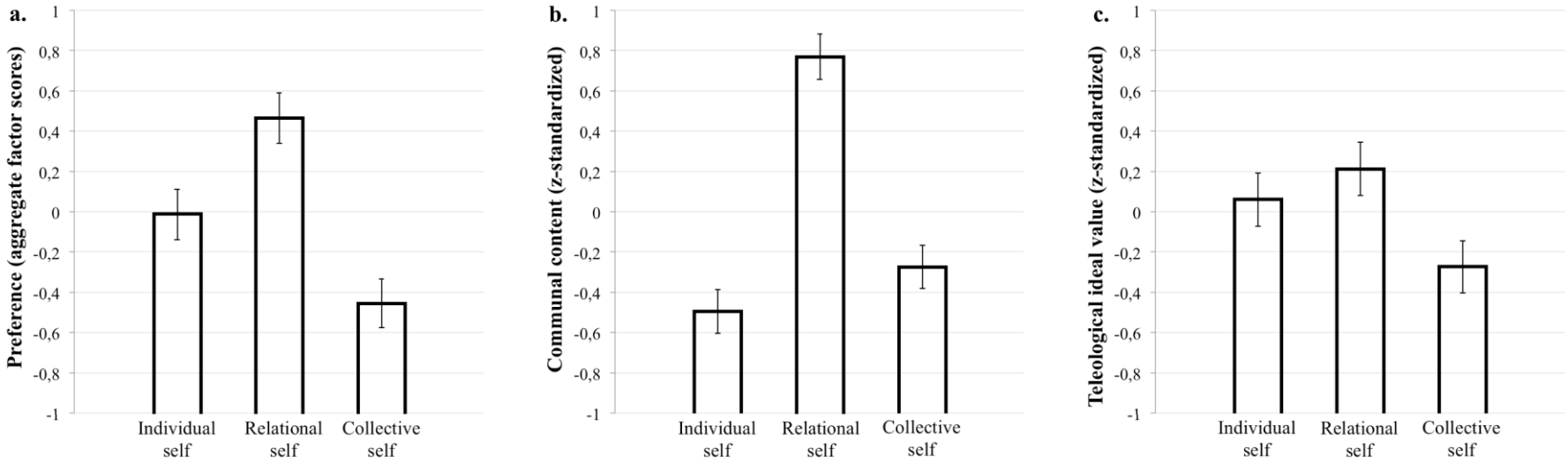

Figure 3. Results of Study 2—close-other condition: Mean levels for (a) preferences, (b) communal self-content, and (c) teleological ideal value of selves

Note: Error bars delimitate bootstrapped 95% confidence intervals.