

Life in the open: Preferences for openness as a substrate of well-being

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Abstract: Image schemas, such as those contrasting open and closed objects, are thought to play a fundamental role in self-regulation. Open objects encourage interactivity, which should contribute to well-being according to theories that emphasize processes such as engagement, exploration, and personal growth. On the basis of such reasoning, participants in three studies (total $N = 889$) were asked to indicate their relative preferences for the spatial concepts of closed versus open, which were hypothesized to reflect key motivations related to protection versus exploration. In Study 1, higher levels of open preference were predictive of higher levels of flourishing, a relationship that was evident across four samples. In Study 2, open-preferring individuals scored higher in multiple forms of well-being. In addition, these individuals were deemed to be flourishing to a greater extent by their peers. In Study 3, an open-closed preference slider was embedded into a daily diary protocol and higher levels of open preference were predictive of higher levels of affective and psychological well-being in both between-person and within-person analyses. In additional analyses, open preferences were linked to higher levels of approach coping and to higher levels of goal achievement. In total, the results provide key insights into orientations to the environment that are either conducive (open preferences) or not conducive (closed preferences) to well-being and flourishing.

Keywords: image schemas, open, closed, well-being, engagement, wellbeing

1. Introduction

In his topological analysis of motivation and personality, Lewin (1935) centered on the spatial features of our existence. We find ourselves in various life spaces (e.g., at a party, on a university campus) and we negotiate those spaces by either remaining stationary or by moving, in a particular direction, toward a particular location. Movements are typically linked to the goals that we have in combination with perceptions of environmental threat and reward as well as the affordances that are present (e.g., definite paths or obstructions). Infants are thought to acquire their understanding of how the world works primarily on the basis of their sensorimotor experiences (Mandler, 1992) and adult forms of representation may similarly depend on our ability to recruit sensorimotor imagery as a basis for more complex conceptual processes (Barsalou, 1999; Johnson, 2015; Lakoff & Johnson, 1999).

Fundamental to our experience as spatial beings is the phenomenon of containment (Hedblom, Gromann, & Kutz, 2018). Human bodies are containers who live in containers (houses or apartments) and travel in containers (e.g., cars) to sites that are containers (e.g., places of work, stores). A primary property of containers is that they are either open or closed. When a container is closed, the contents within that container are protected (Burris & Rempel, 2010). For example,

a locked house cannot be easily entered and a closed box hides and protects its contents. Open containers, by contrast, lend themselves to exploration and interactivity. One can peer into open containers, handle objects within those containers, and open houses or stores are places that can be visited. When a store is open, in fact, one can enter that store, peruse its contents, and take things that one wants for personal enjoyment, provided that one pays for them. In sum, open and closed are critical properties in affordances for behavior (Hedblom et al., 2018).

Our repeated sensorimotor experiences of spatial navigation are thought to give rise to image schemas, which are fundamental contrasts (Coëgnarts & Kravanja, 2014), largely of a spatial type (Oakley, 2007), that one can use as a basis for understanding more abstract concepts (Gibbs, 2011). The open-closed distinction, which can be appreciated as images of something being open or closed (Hedblom et al., 2018), can be used to represent a large range of concepts, entities, and experiences. Entire ecologies can be conceptualized as open or closed, with open ecologies facilitating mobility among members as well as information exchange (Anderson, 1999). More typically, the open-closed distinction is used to describe people (with some people being more curious and exploratory than others: Allport, 1960), minds (with some people being more willing to entertain alternative viewpoints: Price, Ottati, Wilson, & Kim, 2015), relationships with emotion (with openness linked to receptivity to one's feelings: Blackledge & Hayes, 2001), and forms of social interaction (with some forms of interaction being more interdependent and self-disclosing: Greene, Derlega, & Mathews, 2006). From these uses of open and closed metaphor (Lakoff & Johnson, 1999), one can contrast an open mode of self-regulation that is engaged with the environment with a closed mode of self-regulation that is not (Burriss & Rempel, 2010). Engagement with the environment, in turn, is thought to promote well-being according to multiple theoretical perspectives and sources of data (Deci & Ryan, 2000; Elliot, 2006; Henderson, Knight, & Richardson, 2013; Mazzucchelli, Kane, & Rees, 2010).

A premise of the present work is that one can transform a metaphor-rich contrast such as open and closed into an individual difference dimension through the mechanism of preference. Preferences, in general terms, can reveal key motivations of the individual (Greenwald et al., 2002; Kim & Markus, 1999; Woodcock et al., 2013), and preferences in the metaphoric realm can be powerful, owing to the centrality of metaphor to the conceptual system (Lakoff & Johnson, 1999). As an example, Persich et al. (2019) asked participants whether they preferred "dark" or "light" in a series of studies. As hypothesized, given that darkness is metaphorically linked to negativity (Meier, Robinson, & Clore, 2004; Yu, 2015) and depression (McMullen & Conway, 2002; Schoeneman, Schoeneman, & Stallings, 2004), dark-preferring individuals, relative to light-preferring individuals, were more prone to depressive symptoms (Persich et al., 2019).

Given the scope of phenomena metaphorically linked to open and closed (Allport, 1960; Hedblom et al., 2018; Mittelman, 1991), a preference-based measure focused on this metaphoric contrast may have similar utility. In particular, favoring open to closed is likely to occur among individuals who wish to interact with the environment in more exploratory and interactive manners; by contrast, favoring closed to open is likely to occur among individuals who wish to protect themselves, such as from unpredictable events and circumstances (Carleton, 2016). Robinson and Irvin (2022) created such a test and found that open-preferring individuals scored higher in extraversion and approach motivation, which is a profile consistent with the untroubled pursuit of environmental reward (Hundt, Mitchell, Kimbrel, & Nelson-Gray, 2010). In a more recent set of studies, Robinson and Irvin (in press) found that closed-preferring individuals scored higher in neuroticism and they also endorsed the idea of trying to escape from their negative thoughts and experiences, which are tendencies that exacerbate symptoms related to anxiety and depression (Spinhoven, Drost, de Rooij, van Hemert, & Penninx, 2014).

In the present research, we pursue the hypothesis that open preferences, relative to closed preferences, should be more conducive to well-being, broadly defined (Hone, Jarden, Schofield, & Duncan, 2014). We have suggested that open preferences can be linked to engagement motivation and a variety of perspectives, from biological (Alcaro & Panksepp, 2011) to humanistic (Mittelman, 1991) to behavioral (Jacobson, Martell, & Dimidjian, 2001), converge on the idea that engaging with one's environment is conducive to well-being. For example, behavioral activation interventions, which attempt to treat depression by engaging individuals with rewarding activities (Jacobson et al., 2001), have been shown to increase levels of positive affect and well-being (Mazzucchelli et al., 2010). Also pertinent is the psychological flexibility perspective on well-being, which contends that high levels of well-being require that one is fully committed to the goals and values that one has as well as the environmental commerce that must follow from them (Kashdan & Rottenberg, 2010). Indeed, Seligman (2018) views engagement (which should be linked to open preferences) to be either a core component of well-being or a major pathway through which it can be achieved.

Open preferences can be contrasted with closed preferences (Robinson & Irvin, 2022) and we have suggested that closed preferences are likely to reflect motivations related to protection, either from one's own thoughts and feelings (Robinson & Irvin, in press) or from events and circumstances that one cannot fully control (Carleton, 2016). Extant data suggest that protection motivation tends to undermine well-being, whether conceptualized in terms of avoidance goals (Elliot, Thrash, & Murayama, 2011), a prevention focus (i.e., a mode of self-regulation that attempts to prevent negative occurrences: Deleghach & Katz-Navon, 2021), or desires to conserve rather than expand the self (Hughes, Slotter, & Lewandowski, 2020). Attempts to protect the self can be especially problematic in a relationship context as they counteract the processes that produce intimacy (Greene et al., 2006), resulting in lower levels of social support (Feeney & Collins, 2015) and various forms of anxiety that are not conducive to well-being, either within or outside the context of relationships (Manbeck, Kanter, Kuczynski, Maitland, & Corey, 2020; Nelson, Jorgensen, & Clifford, 2021). Recall, too, that Robinson and Irvin (in press) found closed preferences to relate to experiential avoidance, which is not conducive to well-being (Eustis et al., 2020).

Given the centrality of the open preference measure (Robinson & Irvin, 2022) to the present studies, we should say more about it. This measure can be conceptualized as an implicit (McClelland, Koestner, & Weinberger, 1989) or projective (Bornstein, 1998) test, in that it does not ask individuals to characterize themselves or their personality traits. Rather, it is a stimulus-attribution (rather than self-attribution) test (Bornstein, 2007), in that participants are merely asked to indicate their preference among stimuli. Implicit tests of this type rarely correlate highly with explicit personality tests (Bornstein, 2002) and implicit tests, relative to explicit tests, are thought to be more sensitive to the motivational substrates of behavior (McClelland, 1987). In particular, they, relative to explicit tests, are thought to better predict spontaneous behavioral trends, particularly in the absence of explicit incentives (McClelland et al., 1989). Thus, what the open preference measure captures should not, in any way, be considered synonymous with what trait-based measures of personality capture (Winter, John, Stewart, Klohnen, & Duncan, 1998).

Variations in open preference could correlate with trait-based measures, but such relations should not be assumed (Bornstein, 2002). Robinson and Irvin (2022) found that open preferences were stronger among extraverted individuals and Robinson and Irvin (in press) found that they were weaker at higher levels of neuroticism. Extraversion and neuroticism are thought to capture basic processes related to approach versus avoidance, respectively (Elliot & Thrash, 2002), and extraversion and neuroticism are also the two traits of the five-factor model that most consistently

predict well-being (i.e., extraversion correlates positively with well-being and neuroticism correlates negatively with well-being: Keyes, Shmotkin, & Ryff, 2002; McCrae & Costa, 1991; Steel, Schmidt, & Shultz, 2008). Open preferences do not correlate with openness to experience, however (Robinson & Irvin, in press). Openness to experience is the least well-understood of the Big 5 traits (Connelly, Ones, & Chernyshenko, 2014), but it seems to involve intellectual processes (Wilt & Revelle, 2015) as well as interest in the arts, liberal values, and unconventionality (Feist & Brady, 2004; Kaufman, 2013). What open preferences capture, quite simply, does not seem to align with this set of tendencies (again, see Robinson & Irvin, in press).

We have argued that the motivations captured by open preferences should be conducive to well-being (Deci & Ryan, 2000; Mazzucchelli et al., 2010) and we conducted a three-study program of research to investigate potential links of this type. In Study 1, this hypothesis was examined in the context of the Flourishing Scale, which was designed to examine well-being in multiple domains of functioning, albeit in the context of a single score (Diener et al., 2010). In Study 2, we adopted a multidimensional perspective on well-being, defining it in terms of the 5 subscales of the PERMA (Butler & Kern, 2016). Doing so could reveal whether open preferences are linked to certain forms of well-being, but not others. In Study 3, finally, we adopted the daily diary method (Bolger, Davis, & Rafaeli, 2003), positing that higher levels of open preference – whether trait or state – would be linked to higher levels of affective and psychological well-being in one’s daily experiences. Convergence across the three studies would be particularly persuasive in linking the construct of interest to both between-person and within-person variations in well-being.

Two of the three studies also pursued questions of mechanism. In Study 2, we collected peer reports of social competence, reasoning that greater preferences for openness would be linked to the sorts of behaviors (e.g., self-disclosure: Greene et al., 2006) that lead to more favorable peer impressions. In Study 3, we explored two further mechanisms. Interacting with the environment effectively typically requires higher levels of approach coping (e.g., problem-solving) and lower levels of avoidance coping (Carver, Scheier, & Segerstrom, 2010). We hypothesized that open preferences, which we have suggested are related to engagement rather than disengagement, would display this generally beneficial coping profile. Additionally, we pursued the idea that open preferences would co-occur with higher levels of self-efficacy, which in turn should promote the sorts of goal accomplishments that are conducive to well-being (Klug & Maier, 2015). These additional findings, we reasoned, would provide insights into some of the mechanisms that link open preferences to well-being.

2. Study 1

2.1 Method

2.1.1 Participants and general procedures

Extraversion is a good predictor of well-being (Lee, Dean, & Jung, 2008) and we therefore based sample size planning on the studies of Robinson and Irvin (2022), who found correlations between open preferences and the personality trait of extraversion (measured by a Goldberg, 1999, scale) in the $r = .25$ range. To achieve .80 power to detect correlations of .25 with an alpha level of .05, G*Power software (Faul, Erdfelder, Buchner, & Lang, 2009) recommended sample sizes of 123. Studies were run for long enough to exceed this figure.

Four samples of undergraduate students who were seeking course credit at a Midwestern university in the United States were recruited. In all cases, participants registered for a generically described personality and social cognition study using SONA software and showed up to a

psychology department laboratory in groups of 6 or fewer, prior to the pandemic. After signing informed consent, participants were placed in private rooms with personal computers, in which they completed the measures described below (as well as other measures pertinent to other projects). Data collection occurred through a MediaLab interface and sample sizes were 142 (69.72% female; 90.00% White; M age = 18.60), 147 (57.82% female; 87.76% White; M age = 19.46), 137 (68.61% female; 83.94% White; M age = 19.23), and 172 (68.61% female; 83.94% White; M age = 19.23) in Studies 1a-1d, respectively.

2.1.2 Preferences for openness

Image schemas are image-laden spatial concepts, often built on contrast (Coëgnarts & Kravanja, 2014), that derive from frequent interactions with the environment (Johnson, 1987). Although fundamental to spatial cognition and self-regulation (Lakoff & Johnson, 1999), image schemas are abstracted (or semi-conceptual), which renders them useful for many representational purposes (Gibbs, 2011). We sought to target relative preferences for that which is open to that which is closed at the level of spatial concepts and used words rather than pictures in doing so (though see Robinson & Irvin, in press, who found that preferring the word open was highly correlated with preferring objects that displayed greater openness: $r = .68$). Individuals who favor conceptual openness, we reasoned, also favor more exploratory and interactive modes of being.

In accord with the projective testing tradition (McClelland, 1987), participants received deliberately non-restrictive instructions: "For each of the following questions, please respond according to how you think or feel, in general." These instructions were followed by the three target questions, presented one at a time: "Which do you prefer? Open or closed?", "Which is better? Open or closed?", and "Which word do you like better? Open or closed?". For each question, participants clicked a button along a 1 (e.g., "open is much preferred") to 5 (e.g., "closed is much preferred") scale. Responses were then reverse-scored, such that higher numbers reflected higher levels of open preference, and then averaged (Study 1a: $M = 3.85$; $SD = 1.10$; $\alpha = .88$; Study 1b: $M = 4.08$; $SD = 0.97$; $\alpha = .88$; Study 1c: $M = 4.05$; $SD = 0.95$; $\alpha = .87$; Study 1d: $M = 3.75$; $SD = 1.02$; $\alpha = .82$). Skew was acceptable (-.95, -.88, -.95, and -.76 in Studies 1a-1d, respectively) and the open preference measure was treated as a continuum in analyses.

2.1.3 Variations in flourishing

Flourishing can be described as "living well" in all of its forms and is thought to include hedonic, eudaimonic, and social well-being components (Hone et al., 2014). Diener et al. (2010) created a widely used 8-item measure of this type by integrating multiple perspectives on well-being and this measure was used to capture broad variations in flourishing in Study 1. Participants indicated whether pertinent statements (e.g., "I am engaged and interested in my daily activities") described their lives (1 = strongly disagree; 7 = strongly agree) and a single flourishing score for each participant was computed by averaging across items (Study 1a: $M = 5.93$; $SD = 0.75$; $\alpha = .86$; Study 1b: $M = 5.69$; $SD = 0.82$; $\alpha = .89$; Study 1c: $M = 5.75$; $SD = 0.72$; $\alpha = .89$; Study 1d: $M = 5.89$; $SD = 0.69$; $\alpha = .86$).

2.2 Results

Simple regressions indicated that higher levels of open preference were predictive of higher levels of flourishing. This was true in Study 1a, b (unstandardized) = .14 [.03, .26], $t = 2.56$, $p = .012$, β (standardized) = .21, Study 1b, $b = .18$ [.05, .32], $t = 2.69$, $p = .008$, $\beta = .22$, Study 1c, $b = .18$ [.05, .30], $t = 2.77$, $p = .006$, $\beta = .23$, and Study 1d, $b = .20$ [.10, .30], $t = 4.03$, $p < .001$, $\beta = .30$. Sex differences

in open preference were neither expected nor found, $F_s < 1$, $p_s > .30$, and greater preferences for openness continued to predict flourishing when controlling for sex (-1 = male; +1 = female) in multiple regressions, $t_s > 2.50$, $p_s < .05$, $\beta_s > .20$.

According to some analyses, a predictor of functioning that is generally beneficial can become problematic if levels of it are too high (Pierce & Aguinis, 2013). In the present case, the linear relationship between open preferences and flourishing could display some evidence of curvilinearity at especially high levels of open preference. To examine this possibility, we created a dataset that combined participants from all sub-studies ($n = 598$). We then performed a multiple regression that predicted flourishing levels on the basis of both a linear (untransformed) and curvilinear (predictor squared: Le et al., 2011) open preference term. The linear relationship between open preferences and flourishing remained significant, $b = .17$ [.10, .24], $t = 4.65$, $p < .001$, $\beta = .23$, but the curvilinear predictor was not significant, $b = .01$ [-.04, .06], $t = 0.38$, $p = .708$, $\beta = .02$. From the perspective of this analysis, at least, the relation between open preferences and flourishing exhibits no hints of curvilinearity.

2.3 Discussion

The spatial concepts of open and closed can be used to represent a wide variety of entities, including the self (Allport, 1960) and the self-environment interface (Hedblom et al., 2018). The closed orientation is one in which the self is protected, but at the expense of reduced interactivity (Burris & Rempel, 2010). Because commerce with the environment is necessary in establishing relationships (Greene et al., 2006) and in achieving one's goals (Blackledge & Hayes, 2001), preferences for spatial openness (relative to preferences for that which is closed) should be more conducive to well-being. Consistent with this analysis, Study 1 found that higher levels of open preference were predictive of higher levels of flourishing – or “living well” (Hone et al., 2014). The relationship appears to be robust, given that it was replicated in four samples, but further investigation was deemed important.

3. Study 2

One goal of Study 2 was to better understand the pathways through which open preferences relate to well-being. In the PERMA model, there are five such building blocks or pillars – namely, positive emotions, engagement, relationships, meaning, and accomplishment (Seligman, 2018). These pillars tend to be positively correlated with each other, but they are separable, rendering it possible to gain an in-depth profile of well-being as a multidimensional entity (Butler & Kern, 2016). In Study 2, we sought to relate open preferences to each of the PERMA dimensions in an effort to better understand the pathways linking open preferences to flourishing in overall terms.

Preferences for openness may also relate to social well-being, defined in terms of integration within one's broader community (Keyes & Shapiro, 2004). Although such achievements are typically assessed in subjective rather than objective terms (as was true in Study 2), there are data indicating that subjective reports of social well-being correspond with objective indicators of integration (Keyes & Shapiro, 2004) and focusing on outcomes of this type makes sense given the suggestion that open preferences encourage connectivity to the broader social environment that one is a part of. In particular terms, we hypothesized that open preferences would correlate positively with the social integration and acceptance subscales that were administered.

Another purpose of Study 2 was to examine whether open preferences can be linked to peer perceptions. Tendencies toward engagement should, in principle, be observable to others and we therefore hypothesized that higher levels of open preference would be linked to peer reports of greater flourishing. A more particular focus, however, was on peer reports of social functioning

(Larson, Whitton, Hauser, & Allen, 2007). Individuals who favor openness to a greater extent are likely to establish relationships that are closer and more intimate, owing to mechanisms such as self-disclosure (Greene et al., 2006). If so, peers may rate open-preferring individuals higher in social competence, perhaps particularly with respect to close relationship skills (Larson et al., 2007).

3.1 Method

3.1.1 Participants and procedures

Power considerations were identical to Study 1. To guard against attrition with respect to peer reports, though, we sought to recruit over 164 participants, which would allow for 25% attrition on the peer side while retaining desired levels of power. A generically described personality and social cognition study was posted to SONA and undergraduate students seeking course credit signed up for the study over the Internet. The study itself was also conducted entirely online because it occurred when COVID-19 protocols were in place. After signing up for the study, participants completed informed consent and then received a link to a Qualtrics-programmed survey on a secure website. Data were collected from 176 participants, but 9 of them failed attention checks, resulting in a sample size of 167 (58.08% female; 86.23% White; M age = 19.04).

As part of their survey, participants were asked to provide the names and email addresses of 4 peers who knew them at least reasonably well. These peers were emailed and told that a participant was seeking credit for a psychology class and that their contribution would result in one additional point of credit. Informants were also told that their responses would be confidential and that the relevant survey was a short one. Peers who agreed to these terms clicked a hyperlink and visited a Qualtrics-programmed website. Peers who did not respond were sent a reminder and additional time, following which the protocol was closed. Emails were sent to 688 peers and 501 (60.40% female; 91.91% White; M age = 20.91) provided reports that indicated attention to the task (i.e., in the form of passing attention checks). The vast majority of peers were students (88.89%) and the majority of them (60.00%) lived in the same city as their targets. On a 1-7 scale, peers indicated that they knew their targets very well (M = 6.13; SD = 1.10) and the average length of acquaintanceship was approximately 2 years (1 = I don't know this person...6 = 1-2 years; 7 = 2-4 years...: M = 6.41; SD = 2.05). We retained peer data for 145 targets who received 2 or more peer reports (M = 3.41; SD = 0.75), whose responses were averaged.

3.1.2 Preferences for openness

Participants indicated their preferences for the spatial concepts of open versus closed in a manner parallel to Study 1, except that 10 questions were asked (e.g., "Which is better? Open or closed?", "Which is more valuable? Open or closed?") and a six-point response scale was used (1 = open; 6 = closed). Responses to all items were reverse-scored, such that higher scores reflected greater preferences for openness, and an average score was computed (M = 4.99; SD = 1.08; α = .88). As in Study 1, sex differences in open preference were not observed, $F < 1$, $p = .711$, $\eta_p^2 = .00$.

3.1.3 Personality profile

We were interested in the full Big 5 profile of open preferences and all such traits were assessed with the Mini-IPIP scale (Donnellan, Oswald, Baird, & Lucas, 2006). Participants indicated their level of agreement (1 = very inaccurate; 5 = very accurate) with statements capturing variations in extraversion (M = 3.15; SD = 0.94; α = .70), agreeableness (M = 3.91; SD = 0.73; α = .68),

conscientiousness ($M = 3.46$; $SD = 0.84$; $\alpha = .72$), neuroticism ($M = 3.06$; $SD = 0.78$; $\alpha = .57$), and openness to experience or intellect ($M = 3.50$; $SD = 0.64$; $\alpha = .59$).

3.1.4 Well-being measures

To investigate relations between open preferences and well-being in a more extensive manner than in Study 1, we asked participants to complete several well-being measures. This included the flourishing scale (Diener et al., 2010) also administered in Study 1 ($M = 5.53$; $SD = 0.97$; $\alpha = .90$). In addition, to capture the purported building blocks of well-being (Seligman, 2018), participants were asked to complete the PERMA-Profilier (Butler & Kern, 2016), which has separable subscales to assess positive emotion ($M = 6.50$; $SD = 1.82$; $\alpha = .86$), engagement ($M = 7.07$; $SD = 1.37$; $\alpha = .58$), relationship functioning ($M = 6.90$; $SD = 1.94$; $\alpha = .80$), meaning ($M = 6.86$; $SD = 2.08$; $\alpha = .93$), and accomplishments ($M = 7.05$; $SD = 1.82$; $\alpha = .84$). Finally, we added scales to assess social well-being, which emerges from a sociological tradition (Keyes & Shapiro, 2004). Participants completed Keyes' (1998) 7-item scales for social integration (e.g., "I feel like I am an important part of my community": $M = 4.83$; $SD = 1.14$; $\alpha = .90$), social acceptance (e.g., "I feel that people are kind": $M = 4.14$; $SD = 0.92$; $\alpha = .80$), and social contribution (e.g., "I think I have something valuable to give to the world": $M = 4.83$; $SD = 0.92$; $\alpha = .78$).

3.1.5 Peer report measures

Open-preferring individuals are likely to be more comfortable and skilled in their social interactions and behaviors of this type are observable by others (Krenz, Persich, & Robinson, in press). To investigate potential links between open preferences and social competence, we asked peers to characterize (1 = extremely uncharacteristic; 9 = extremely characteristic) targets in terms of the close relationship ($M = 7.32$; $SD = 0.98$; $\alpha = .83$) and social group skills ($M = 7.23$; $SD = 1.06$; $\alpha = .87$) subscales of Larson et al. (2007). Further, we modified the Diener et al. (2010) flourishing scale such that it was pertinent to peer report (e.g., "John Doe leads a purposeful and meaningful life": $M = 6.29$; $SD = 0.54$; $\alpha = .93$).

3.2 Results

3.2.1 Personality profile

Open preferences are thought to be linked to higher levels of approach motivation (Robinson & Irvin, 2022) and lower levels of avoidance motivation (Robinson & Irvin, in press). Consistent with this analysis, the open preference measure correlated positively with extraversion, $r = .27$, $p < .001$, and negatively with neuroticism, $r = -.16$, $p = .043$. Potential relationships involving agreeableness, $r = .13$, $p = .087$, conscientiousness, $r = .12$, $p = .109$, and openness to experience, $r = .14$, $p = .081$, were not significant. Thus, open-preferring individuals are extraverted, but not necessarily interested in intellectual matters.

3.2.2 Self-reported outcomes

As displayed in Table 1, greater preferences for openness were associated with higher levels of flourishing. They were also predictive of higher levels for the PERMA dimensions of positive emotions, engagement, meaning, and accomplishments, but the link to relationships was not a significant one. Extending beyond personal well-being, open-preferring individuals felt more connected to their communities (social integration) and felt that they contributed in positive ways to the society and world (social contribution). This profile suggests greater engagement and connection at higher levels of open preference.

Table 1. Preferences for openness as a predictor of Study 2 outcomes (simple regressions)

Type of Report and Outcome	<i>b</i> [95% CI]	<i>t</i>	<i>p</i>	β
Self-Reported Outcomes				
Flourishing	.33 [.20, .46]	5.06	<.001	.37
Positive Emotions	.54 [.29, .79]	4.29	<.001	.32
Engagement	.34 [.18, .53]	3.51	<.001	.26
Relationships	.27 [-.00, .55]	1.95	.053	.15
Meaning	.53 [.25, .82]	3.66	<.001	.27
Accomplishment	.47 [.22, .72]	3.75	<.001	.28
Social Integration	.28 [.12, .44]	3.50	<.001	.26
Social Acceptance	.15 [.02, .28]	2.29	.023	.18
Social Contribution	.21 [.09, .34]	3.31	.001	.25
Peer-Reported Outcomes				
Close Relationships	.26 [.12, .41]	3.52	<.001	.28
Social Group Skills	.26 [.10, .43]	3.22	.002	.26
Flourishing	.09 [.01, .18]	2.18	.031	.18

3.2.3 Peer-reported outcomes

As displayed in Table 1, peers judged open-preferring individuals to be more socially competent, both in personal relationships and in social group contexts. In addition, peers attributed higher levels of flourishing to their open-preferring targets. This relationship was not a strong one, however, perhaps because certain components of well-being – such as a sense of purpose and optimism – are better reported on by individuals themselves rather than by others (Diener et al., 2010).

3.2.4 Controlling for personality

Open preferences appear to capture features of personality and motivation that extend beyond the Big 5. This was evident in multiple regressions that controlled for all Big 5 traits. In these analyses, open preferences continued to predict self-reported flourishing, $b = .18$ [.07, .30], $t = 3.25$, $p = .001$, $\beta = .20$, positive emotions, $b = .32$ [.09, .56], $t = 2.70$, $p = .008$, $\beta = .19$, engagement, $b = .22$ [.03, .41], $t = 2.25$, $p = .026$, $\beta = .17$, accomplishment, $b = .25$ [.03, .48], $t = 2.21$, $p = .028$, $\beta = .15$, and peer-reported close relationship skills, $b = .18$ [.03, .33], $t = 2.42$, $p = .017$, $\beta = .19$, when simultaneously controlling for all Big 5 traits. Links between open preference and the remaining Study 2 outcomes, though, were not significant when controlling for all of the Big 5 traits, β s < .15, p s > .05.

3.3 Discussion

Open preferences were linked to multiple aspects of well-being. In particular, open-preferring individuals scored higher in flourishing, positive emotions, engagement, meaning, and accomplishments and many of these relationships remained significant when controlling for Big 5 traits. Open-preferring individuals also reported higher levels of social well-being, though such relationships were no longer significant when controlling for Big 5 traits. Peers ascribed higher

levels of flourishing to open-preferring individuals and characterized them as more socially competent. Open preferences therefore relate to social skills that are apparent to others.

4. Study 3

Thus far, we have conceptualized open preferences in trait-like terms. Even so, we suspect that preferences along the open-closed dimension reflect state-related influences as well as trait-related influences, in concert with the projective motivation literature (Bornstein, 2007; McClelland, 1987). To investigate both stable and malleable components of preferences along the open-closed dimension, we embedded such a measure into a daily diary protocol and hypothesized that higher levels of open preference – whether varying within or between persons – would be linked to higher levels of both affective and psychological daily well-being.

We also used the daily diary protocol to probe for questions of mechanism. We have suggested that open preferences support engagement and closed preferences implicate protection motivation. If so, open preferences are likely to be linked to higher levels of approach-related coping and lower levels of avoidance-related coping, which is a coping profile that contributes to well-being (Litman, 2006). In addition, we have suggested that higher levels of open preference can be linked to greater engagement within one's goals, which should be manifest in higher levels of self-efficacy as well as higher levels of goal achievement (Moeller, Troop-Gordon, & Robinson, 2015).

4.1 Method

4.1.1 Participants and procedures

Study 3 used a multilevel (daily diary) design, which is a powerful one (Nezlek, 2012). In planning sample size, we followed recommendations in this literature, based on results involving simulation data (Nezlek, 2012). Maas and Hox (2005) found that 50 or more level 2 (in our case, participant) units results in estimates of regression coefficients and variance components that are unbiased and we sought to exceed this number. On the basis of their simulation results, Scherbaum and Ferreter (2009) recommended 900 level 1 (in our case, daily report) units and we sought to exceed this number as well.

Undergraduate students from a Midwestern University in the United States signed up for a “Daily Experiences Study” over the Internet. Those who completed an initial intake survey were sent emails for 14 days in a row and told to complete at least 8 of them. Emails, which were sent at 6 p.m., contained subject number information as well as a link to the daily survey in question, and participants were given until 2 a.m. (an 8-hour window) to complete each survey or it was considered missing. Ultimately, 124 participants (70.16% female; 83.73% White; *M* age = 20.65) completed at least 8 surveys and the average included participant completed 12.20 of them (*SD* = 2.60).

4.1.1 Daily open preferences

In Study 3, we sought to investigate whether preferences along the open-closed spatial dimension vary on a daily basis and we created a slider measure, which was inserted into the daily diary protocol, to investigate such processes. On each day, participants were asked to indicate their relative preferences for the words “open” versus “closed” by moving a horizontal slider, programmed in Qualtrics, to the “correct position” for the day, with “open” to the far left and “closed” to the far right. Slider movements were required and position was echoed by the display of negative numbers (from -1 to -100) with leftward movements and positive numbers (from +1

to +100) with rightward movements. When the slider was placed in the correct position, participants clicked a Next button, which recorded the position that was chosen. For analysis purposes, these preference judgments were multiplied by -1, such that higher numbers indicated higher levels of open preference.

The average day tended toward open preference ($M = 20.67$, 95% CI = 18.50 to 22.84), akin to Studies 1 and 2, but the standard deviation was also appreciable (30.24). On 32.78% of days, some degree of closed preferences were endorsed; on 66.62%, the slider was placed toward the open side of the dimension, with 0.59% of days at center. We then computed an intraclass correlation coefficient (ICC) for the measure, which apportions variance into between-participant versus within-participant components (West, Ryu, Kwok, & Cham, 2011). The ICC for the open preference measure was .29, indicating that 29% of the variance in open-closed preferences could be attributed to persons and 71% of the variance could be attributed to occasions. The .29 figure is lower than that found for positive affect (.43) or negative affect (.44) (see below), indicating a considerable degree of within-person malleability across days.

Nonetheless, when averaged across days, the open-closed preference measure also captures individual differences. This point was substantiated by creating a dataset in which participants were rows and day-specific open preference scores were columns. In this dataset, Cronbach's α was .88, indicating that an average across days aligns individuals in a reliable manner. We therefore computed an average score for each participant ($M = 21.36$; $SD = 30.99$) and treated it as a level 2 predictor of daily functioning, as a complement to the within-person analyses that were planned.

4.1.2 Daily well-being

Affective well-being was assessed in terms of experiences of positive and negative affect (Watson, 2000). In particular, participants were asked to report on the extent to which (1 = not at all; 5 = extremely) they experienced 3 markers of positive affect (happy, positive, and excited) as well as 3 markers of negative affect (sad, negative, and distressed). The rating scale was borrowed from the PANAS (Watson, 2000) and the positive and negative markers were taken from both the PANAS and the SPANE (Diener et al., 2010). Day-specific experiences of positive ($M = 3.27$; $SD = 0.98$; $\alpha = .93$, the latter based on a dataset with participants as rows and day-specific PA scores as columns) and negative ($M = 1.77$; $SD = 0.80$; $\alpha = .94$) affect were computed by averaging across markers for a given valence.

Psychological well-being was assessed in terms of the dimensions of the Psychological Well-Being model (Ryff, 1989), which defines flourishing according to themes derived from theories in lifespan development, philosophy, and humanistic psychology. Participants indicated their level of agreement (1 = strongly disagree; 6 = strongly agree) with statements reflecting autonomy ("Today, I was not afraid to voice my opinions even if they were controversial": $M = 3.69$; $SD = 1.56$; $\alpha = .93$), mastery ("Today, I was in charge of the situation I was in": $M = 4.03$; $SD = 1.41$; $\alpha = .94$), personal growth ("Today, I sought new experiences that would help me grow": $M = 3.40$; $SD = 1.51$; $\alpha = .90$), positive relations ("Today, I knew I could trust the people in my life": $M = 4.49$; $SD = 1.42$; $\alpha = .96$), purpose ("Today, I had a sense of direction and purpose in my life": $M = 3.49$; $SD = 1.71$; $\alpha = .96$), and self-acceptance ("Today, I felt confident and positive about myself": $M = 3.43$; $SD = 1.73$; $\alpha = .95$). A total score was also computed by averaging across items ($M = 3.75$; $SD = 1.17$; $\alpha = .96$).

4.1.3 Mechanism-related measures

We sought to gain insights into key mechanisms that could link open preferences to higher levels of well-being. Preferring open to closed is thought to relate to motivations that support engagement and goal pursuit (Robinson & Irvin, 2022). To examine processes of this type within a daily diary study, we used two goal-related items taken from Moeller et al. (2015). In response to the stem “While working on my goals today...”, participants were asked how efficacious they felt (1 = I felt I lacked the skills to achieve them; 5 = I felt like I had what it takes to achieve them: $M = 3.63$; $SD = 1.14$; $\alpha = .91$) and whether they were successful in reaching their goals (1 = I was not successful in achieving them; 5 = I was very successful in achieving them: $M = 3.50$; $SD = 1.14$; $\alpha = .90$).

Open preferences are also likely to function in an optimistic manner, with optimism being linked to higher levels of approach coping and lower levels of avoidance coping (Carver et al., 2010). Participants were asked to think about problems and stressful events they encountered on a particular day. Then, they were presented with two approach-related coping items assessing active coping and planning (e.g., “I concentrated my efforts on doing something about the situation”) as well as two avoidance-related coping items assessing denial and disengagement (e.g., “I just gave up in trying to reach my goals”). For each item, participants rated their level of agreement (1 = strongly disagree; 5 = strongly agree) and we averaged across items to assess approach-related coping ($M = 3.51$; $SD = 1.00$; $\alpha = .94$) as well as avoidance-related coping ($M = 1.85$; $SD = 0.83$; $\alpha = .94$), based on similar daily diary protocols (e.g., Irvin, Persich, & Robinson, 2021).

4.2 Results

4.2.1 Initial considerations

Sex did not predict average levels of open preference, $F(1, 122) = 1.75$, $p = .189$, $\eta_p^2 = .01$, and we will omit this variable from further consideration. In the main analyses, we focus on whether open preferences are linked to higher levels of well-being, using multilevel models and the SAS PROC MIXED procedure (Singer, 1998). We first performed level 2 (between-person) models by using average levels of open preference to predict the daily well-being and process variables. In these models, the predictor was z-scored and intercepts were allowed to vary at random, consistent with a focus on individual differences (Nezlek, 2012). We then performed level 1 (within-person) models in which day-varying levels of open preference were treated as predictors of the same daily outcome variables. In these analyses, the predictor was person z-scored and the outcome and process measures retained their original units.

4.2.2 Level 2 analyses

Table 2 reports the results of the level 2 models, which were focused on individual difference predictions. Participants with higher average levels of open preference experienced more positive affect and less negative affect in their daily lives. In addition, such individuals scored higher in daily levels of autonomy, mastery, growth, positive relations, purpose, and self-acceptance. A goal-striving perspective on such relations was supported in that open preferring individuals (relative to closed preferring individuals) reported higher levels of self-efficacy and success in achieving their daily goals. Also, open preferring individuals were more likely to cope with daily stressors in approach-related terms. These results complement Studies 1 and 2 in suggesting that higher levels of open preference, in between-person terms, are linked to higher levels of well-being and flourishing.

Table 2. Average levels of open preference as a predictor of daily outcomes (level 2 MLMs), Study 3

Category and Outcome	<i>b</i> [95% CI]	<i>t</i>	<i>p</i>
Affective Well-Being			
Positive Affect	.30 [.19, .41]	5.39	<.001
Negative Affect	-.12 [-.22, -.02]	-2.40	.018
Psychological Well-Being			
Autonomy	.38 [.19, .56]	4.05	<.001
Mastery	.37 [.20, .53]	4.46	<.001
Personal Growth	.38 [.23, .54]	4.82	<.001
Positive Relations	.39 [.20, .58]	4.01	<.001
Purpose	.42 [.19, .65]	3.63	<.001
Self-Acceptance	.47 [.25, .68]	4.35	<.001
PWB Total Score	.40 [.25, .55]	5.21	<.001
Goal Efforts			
Self-Efficacy	.27 [.14, .39]	4.24	<.001
Goal Success	.26 [.14, .38]	4.35	<.001
Coping			
Approach Coping	.29 [.18, .40]	5.25	<.001
Avoidance Coping	-.15 [-.25, -.05]	-3.05	.003

4.2.3 Level 1 analyses

Within-person relationships involving open preference are reported in Table 3. Irrespective of individual differences, days on which open preferences were higher were days associated with greater positive affect and lesser negative affect. As preferences shifted in an open (versus closed) direction, also, all well-being dimensions increased, such that individuals reported higher levels of autonomy, mastery, growth, positive relations, purpose, and self-acceptance. Mechanism-related results provide further insights into these processes in that open-preferring days were ones associated with higher levels of self-efficacy and goal pursuit success as well as a more proactive and less defensive manner of coping with problems and/or stressors. These results indicate that preferences related to the open-closed dimension shift from day to day in manners that are meaningfully related to orientations to the environment and well-being.

To gain further knowledge concerning the within-person relationships, we performed lag-based analyses. In one set of analyses, we treated previous-day preferences as a predictor of current day positive affect and/or well-being (PWB total score). In another set of analyses, we considered the reverse direction. Such lagged effects were not evident, *ts* < 2.00, *ps* > .150, suggesting that preferences along the open-closed dimension function in a day to day rather than cross-day manner.

4.3 Discussion

Like Study 2, Study 3 found that individual differences in open preference were linked to multiple aspects of well-being. For example, individuals whose average scores indicated a greater preference for openness reported higher levels of autonomy, mastery, personal growth, positive relationships with others, purpose, and self-acceptance as they went about their daily lives.

Pertinent to the well-being enhancement literature (e.g., Layous, Chancellor, & Lyubomirsky, 2014), however, it was also found that preferences along the open-closed dimension varied on a daily basis, with higher levels of open preference being linked to the same well-being outcomes. Interventions that encourage a more open and engaged mode of existing, thus, are likely to translate into multiple well-being benefits for the individual, which is a theme that will be further pursued in the General Discussion.

Table 3. Within-person relations between open preference and daily outcomes (level 1 MLMs), Study 3

Category and Outcome	<i>b</i> [95% CI]	<i>t</i>	<i>p</i>
Affective Well-Being			
Positive Affect	.29 [.24, .34]	11.38	<.001
Negative Affect	-.18 [-.22, -.13]	-8.25	<.001
Psychological Well-Being			
Autonomy	.14 [.08, .21]	4.41	<.001
Mastery	.16 [.08, .24]	4.08	<.001
Personal Growth	.27 [.19, .36]	6.52	<.001
Positive Relations	.21 [.15, .28]	6.63	<.001
Purpose	.28 [.20, .36]	7.02	<.001
Self-Acceptance	.41 [.32, .50]	9.04	<.001
PWB Total Score	.25 [.19, .30]	8.38	<.001
Goal Efforts			
Self-Efficacy	.17 [.11, .22]	5.56	<.001
Goal Success	.19 [.14, .24]	7.21	<.001
Coping			
Approach Coping	.12 [.07, .18]	4.52	<.001
Avoidance Coping	-.06 [-.10, -.02]	-3.08	.002

5. General discussion

As infants, our experience of the world is largely spatial, giving rise to image schemas that can be used to represent more abstract concepts such as affordances, agency, and the like (Mandler, 1992). Even as adults, theorists suggest that we understand ourselves, our goals, and our lives in largely spatial terms (Lakoff & Johnson, 1999), particularly through the mechanism of image schemas, which are simple space-based contrasts that exist at the interface of perception, image, and thought (Gibbs, 2011). In the present studies, we pursued one important contrast of this type – namely, that between unspecified entities being open, and thus conducive to engagement and interactivity, or closed (Burris & Rempel, 2010). To link the open-closed contrast to personality processes, we used a preference-based technique (Kim & Markus, 1999; Persich et al., 2019), reasoning that preferences for the image schema/concept of open (versus closed) would be reflective of preferences for engagement with the environment.

In the PERMA model, engagement is a building block of well-being (Seligman, 2018) and engagement also figures prominently in analyses of other processes conducive to well-being such as social involvement (Hundt et al., 2010), resource building (Fredrickson, 2013), and goal pursuit and its achievement (Klug & Maier, 2015). In fact, the system responsible for activated

feelings of positive affect is sometimes termed the behavioral engagement system (Watson, Wiese, Vaidya, & Tellegen, 1999) and engagement with the environment, whether through physical activity, social interaction, or goal pursuit, has been linked to positive affect in both correlational and experimental studies (Watson, 2000). Based on such frameworks, in part, we hypothesized that preferences for openness, which affords interactivity and engagement (Coëgnarts & Kravanja, 2014), would be systematically linked to higher levels of well-being. Support for this basic hypothesis was found with respect to self-reports of flourishing (Study 1), both self- and peer-reports of well-being (Study 2), and states of positive affect and psychological well-being in a daily diary protocol (Study 3). Additional results linked open preferences to social competence (Study 2) and active rather than disengaged modes of coping (Study 3), which are conducive to well-being (Carver et al., 2010).

5.1 Further implications, limitations, and future directions

All human beings are thought to use image schemas for self-regulation (Oakley, 2007), just like all individuals are thought to use conceptual metaphors in representing features of the self and its goals (Lakoff & Johnson, 1999). In the context of such normative theories, the mechanism of preference appears to be a useful tool. If that which is closed affords protection and that which is open affords interactivity (Burris & Rempel, 2010), then asking people whether they prefer closed to open or open to closed should be capable of transforming a normative theory into one capable of targeting individual differences (Fetterman, Meier, & Robinson, 2017). Specifically, individuals who are attracted to the spatial concept of closed likely favor a mode of existence that is more protected, inasmuch as closed objects protect their contents, whereas individuals who are attracted to the spatial concept of open likely favor a mode of existence that is more exploratory and engaged. Through the mechanism of preference, that is, a normative theory becomes one that is capable of probing for key motivations (and the orientations and behaviors that would result from them) with respect to the protection-exploration tradeoff (Burris & Rempel, 2010; Elliot, 2006; Lang & Bradley, 2013).

The resulting measure could be considered projective in nature, both because it seeks to measure underlying motivations (McClelland, 1987) and because it does not ask individuals to ascribe personality traits to themselves. Given the nature of the test, strong relationships with personality trait measures, which involve self-ascriptions of traits or tendencies (Wilt & Revelle, 2015), would not be expected (Bornstein, 2002). Although we have shown that open preferences are higher among extraverts and closed preferences are higher among neurotic individuals, these correlations are modest in effect size. The open preference measure is not a measure of the Big 5 dimension of openness to experience; indeed, it does not correlate with this dimension (Robinson & Irvin, in press). Thus, the sorts of motivations that are captured by the open preference measure are not necessarily those that predispose people to intellectual or artistic pursuits. Rather, they seem to align with more basic orientations to the environment that are approach- versus avoidance-related (Carver, 2006). A caveat is that open preferences also seem to involve a willingness to think about feelings and other intrapsychic events (Robinson, Roiger, & Irvin, 2022). In this connection, the open preference measure may capture some of the processes that are emphasized in humanistic (e.g., Rogers, 1963) and experiential (e.g., Blackledge & Hayes, 2001) accounts of optimal functioning (Henderson & Knight, 2012).

The open preference measure has a recent origin, but it uses procedures that have been validated in the attitude literature (Eagly & Chaiken, 1993) and its extensions to conceptual metaphor theory (Fetterman et al., 2017; Persich et al., 2019). As briefly mentioned in the Method section of Study 1, also, the word-based open preference measure used in the present studies

correlates highly ($r = .68$) with another measure that asks people to indicate their relative preferences for images showing doors, windows, and shutters that are open versus closed. Furthermore, both the word-based and picture-based measures predict the same sorts of outcomes (Robinson & Irvin, in press), though we favor the word-based measure because it targets concepts rather than pictures of an idiosyncratic nature. Given the suggestion that open and closed preferences capture motivational orientations to the environment, more work of a motivational nature would be valuable. Open preferences have been linked with approach motivation (Robinson & Irvin, 2022) and closed preferences have been linked with experiential avoidance (Robinson & Irvin, in press), but additional lines of data might be pertinent. For example, pilot data in the lab suggest that individuals who favor open to closed are more inclined toward risk-taking in scenarios representing real-life dilemmas (e.g., whether one should ask another person on a date). Additional studies of this type might target other contexts in which motivations related to engagement conflict with motivations related to protection (e.g., Robinson, Boyd, & Persich, 2016).

What the present findings do indicate is that open preferences are conducive to eudaimonic well-being. In fact, they might *be* eudaimonic in that open preferences would encourage commerce with the social and physical environment, which would be linked to self-expression, goal pursuit, growth, and change. When one is engaged with the environment, for example, one must continuously rework the self-environment interface in manners that change the self as well as the environment, resulting in new skills and new perspectives that add to the self's repertoire (White, 1959). The self, in a sense, becomes a larger and more inclusive entity (Hughes et al., 2020). By contrast, living in a protected way, in accordance with protection-related desires, would limit opportunities for growth as well as relationship building (Farmer & Kashdan, 2012). There may be elements of eudaimonia that would not be captured by open preferences, given that eudaimonia has been conceptualized in diverse terms (Heintzelman, 2018), but living in an open manner would facilitate many of them. In support of this idea, Study 3 found that open preferences, whether trait or state, were linked to autonomy, mastery, personal growth, positive relations, purpose, and self-acceptance. Although we focused on eudaimonic conceptions of well-being in the present research, we suspect, but did not show, that open-preferring individuals are more satisfied with their lives. Examining whether this is true is important because life satisfaction is considered a core component of well-being (Diener et al., 2017).

Biological organisms need to engage with the environment, but they also need to protect themselves (Kaschak & Maner, 2009). These functions seem to vary with open preferences (Robinson & Irvin, 2022, in press), but one wonders whether open preferences can be too high. In Study 1, we found no hint of curvilinear relationships between open preferences and flourishing, but it is possible that curvilinearity could be found with respect to other sorts of outcomes (Pierce & Aguinis, 2013). For example, it is possible that open-preferring people may sometimes be too honest in their communications with others, causing bruised feelings. And/or, it is possible that open-preferring people take unnecessary risks in their lives. Speculations of this type require further research, but we do suggest that living one's life in accordance with protection motivation is problematic for multiple reasons (Blackledge & Hayes, 2001; Farmer & Kashdan, 2012; Nelson et al., 2021). We therefore further suggest that open preferences are more likely to be functional than closed preferences under many circumstances, but that additional research could focus on potential downsides to open preferences that are very high.

Our participants were emerging adults and this phase of life is one that is supposed to be linked to exploratory endeavors, whether in the relationship realm, the occupational realm, or the education realm (Arnett, 2000). Whether open preferences would be linked to flourishing and

well-being among other age groups is not known. We suspect that this would be the case (Bohart, 2007), but there are some suggestions that exploration-related goals give way other sorts of goals among older-aged adults (Carstensen, Isaacowitz, & Charles, 1999). Cultural differences are also worth studying. For example, some cultures are more prevention-motivated than others (Gelfand et al., 2011) and, in these cultures, protection and inhibition may be valued to a greater extent than in Western cultures (Park, Kitayama, Miyamoto, & Coe, 2020). In countries such as Japan, relationships between open preferences and flourishing may be less pronounced than in countries such as USA (Miyamoto et al., 2013). Cross-cultural research, perhaps of the type conducted by Gelfand et al. (2011), would be informative. Finally, we speculate that open preferences may be less pronounced and/or less functional among groups who are disadvantaged, whether due to adverse childhood experiences or institutional barriers.

The present studies were not designed to examine causal direction and, in accordance with recent extensions in conceptual metaphor theory (Gibbs, 2019; Persich et al., 2019), bidirectional relationships are most likely. There is evidence for the idea that viewing the self as an expanding entity can change the manner in which the self operates (Landau et al., 2011; Mattingly & Lewandowski, 2013), but recent experiences (e.g., successful goal pursuit, a pleasant interaction) are also likely to change one's preferences along the open-closed dimension. This analysis accords with the color preference literature, which has found both stability and change with respect to preferred colors (e.g., Strauss, Schloss, & Palmer, 2013). In fact, considerable malleability was demonstrated in Study 3 and this malleability warrants further attention. It is possible that preferences for openness, like experiential avoidance (Eustis et al., 2020), could serve as a dependent measure of psychological functioning in future research of either an experimental or intervention type. We also encourage longitudinal research, which could establish that changes in open preference predict changes in well-being (see Spinhoven et al., 2014, for a relevant model).

5.2 Conclusions

The present research highlights an important manner in which individuals appear to contribute to the sorts of lives that they have, through their preferences. Preferring that which is open to that which is closed, the present results indicate, is linked to a mode of self-regulation that is more conducive to both hedonic and eudaimonic well-being. These preferences are malleable, however, suggesting potential pathways through which lives can be enhanced.

Conflict of interest statement

The authors report no conflicts of interest.

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Data availability

Datasets for this paper are available at:
https://osf.io/3kxnv/?view_only=fe4d8f11a9564c71a65779cbc63321f9

Author contributions

Both authors contributed to the designs and analyses of these studies. The first author wrote the paper and performed analyses, and the second author contributed to manuscript preparation and revisions.

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