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Searching for Ithaca: The geography and psychological benefits of nostalgic places

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ABSTRACT

What are the places for which people are most nostalgic? We explored the physical and psychological characteristics of places that evoke nostalgia. In Study 1 ($N=200~\rm U.K.$ residents), we used self-reports and dictionary methods to capture the diversity of such places. Blue landscapes, located near sea, ocean, rivers, or lakes, emerged as the most frequent nostalgic places. In Studies 2 ($N=398~\rm U.S.$ residents) and 3 ($N=400~\rm U.S.$ residents), we experimentally contrasted nostalgic places against ordinary ones. Self-reports, language, and geolocation data painted the portrait of typical nostalgic places: Set in a blue landscape, they vary in size between a building and a town, and are less grey and more green than ordinary places. Nostalgic places are further away from one's current location, yet they appear psychologically closer than ordinary ones. Place nostalgia (vs. control) furthermore increases social connectedness, meaning in life, self-continuity, self-esteem, and authenticity. Future research could examine place nostalgia across different geographies, cultures, or countries.

Throughout its conceptual history, nostalgia has been linked to places. Coined by Johannes Hofer (1688/1934), a Swiss medical student, the term's Greek etymological roots capture the feeling of suffering ("algos") caused by yearning to return to one's homeland ("nostos"). Despite its relatively late emergence as a standalone construct, close relatives of nostalgia existed before the word entered the dictionary. In his dissertation, Hofer proposed "nostalgia" as an alternative to the German term "Heimweh," used to describe the pain ("weh") of being away from one's homeplace ("Heim"), and the French expression "mal du pays," meaning homesickness. Hofer's nostalgia captured the "sad mood originating from the desire for the return to one's native land" (p. 381).

More recent forays into nostalgia, however, have re-conceptualized it (Batcho, 2013; Sedikides et al., 2004), and in the 20th century the emotion was re-defined as "an affectionate feeling you have for the past, especially for a particularly happy time" (Collins English Dictionary, 2023). Lay views of nostalgia across cultures characterize it as a past-oriented, social, and ambivalent—albeit predominantly positive—emotion (Hepper et al., 2014; Sedikides and Wildschut, 2022).

When nostalgizing, one fondly savors a valued occasion from one's past, while pining for the bygone moments (Biskas et al., 2019; Hepper et al., 2012). Indeed, nostalgia is accompanied by contentment and happiness, mixed with a degree of sadness. It is positively valenced overall and low in arousal (Sedikides and Wildschut, 2016; Van Tilburg, 2023).

Despite its bittersweet character, nostalgia is not a mere mix of other emotions; rather, it features a distinct profile. Among 11 comparator emotions, nostalgia most closely resembled pride and self-compassion, while being most different from shame and embarrassment (Van Tilburg et al., 2018). Nostalgia also has a distinct appraisal profile. When contrasted against 31 emotions, it was the only one elicited by experiences that were temporally distant, unique, and pleasant yet irretrievable (Van Tilburget al., 2019). Further, it is triggered both by internal states and external stimuli. Internal states include negative affect (Barrett et al., 2010), loneliness (Zhou et al., 2008, 2022), lack of meaning (Routledge et al., 2012), boredom (Van Tilburg et al., 2013), and social exclusion (Abakoumkin et al., 2017). External stimuli include objects and conversations (Wildschut et al., 2006), scents (Reid et al., 2015), tastes (Reid et al., 2023), music (Sedikides et al., 2022), and

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inclement weather (Van Tilburg et al., 2018).

As implied above, nostalgic reverie refers to a cherished time, experiential content, and location. The temporal characteristics of nostalgia have attracted empirical attention: Nostalgia is more intense the more temporally distant an event is, whereas the reverse holds for many other emotions (e.g., pride, enthusiasm, awe; Van Tilburg, Bruder, et al., 2019). Furthermore, nostalgia elevates self-continuity (Sedikides et al., 2015): It integrates the past self with the present and future selves, transcending temporal distance. In terms of content, nostalgic events are social, populated by close others in personally meaningful and often momentous settings (Sedikides and Wildschut, 2019). Leaving aside the temporal (the "when") and experiential content (the "what") of personal nostalgia, what are the characteristics of nostalgic places (the "where"; Kapsetaki et al., 2022)?

1. How can places elicit nostalgia?

Landscapes can impact nostalgia through at least two pathways. First, nature is restorative. Prior theoretical efforts have formalized and tested this assumption. One account is offered by the attention restoration theory, which posits that people escape from physical and social stressors by effortlessly paying attention to the 'soft fascinations' encountered in the natural world (Home et al., 2012; Kaplan and Kaplan, 1989). Nature captures attention involuntarily, without requiring immediate action. In contrast, urban environments require immediate action and voluntary attention, such as paying attention to crossing the street, to cars, bikes, or people, which, in turn, deplete mental capacities. The psycho-evolutionary theory offers a complementary account of the restorative effects of natural landscapes (Ulrich, 1983). It proposes that contact with nature allows for psychophysiological stress recovery through nature's intrinsic attributes, such as spatial openness or the presence of diverse patters. To date, mounting evidence supports the idea that natural landscapes restore and elicit positive emotions (Bowler et al., 2010). We ask whether natural landscapes similarly evoke nostalgia and provide restorative benefits.

Second, certain landscapes can provide opportunities for social interactions and, in turn, evoke a range of emotions. For instance, there is an association between the quantity and quality of streetscape greenery and perceived social cohesion (De Vries et al., 2013). In turn, increased social cohesion is linked to positive emotions such as higher happiness and wellbeing (Delhey and Dragolov, 2015) and lower depression and anxiety (Breedvelt et al., 2022). However, this relationship is probably moderated: Urban greenery should offer engaging recreational features and be well-maintained to encourage socialisation (Kaźmierczak, 2013). Urban greenery is generally associated with feelings of safety, but green spaces enclosed in highly dense urban areas can decrease such feelings (Maas et al., 2009). It thus seems likely that certain landscapes (e.g., parks, gardens) that provide the backdrop for socialization gain positive emotion valuations. Social interactions are one of the most frequent triggers of nostalgia (Wildschut et al., 2006). Nostalgia enhances social connectedness and provides access to the "rosy past" relevant to one's current circumstances (Hepper and Dennis, 2023). Nostalgia might be more frequently elicited by places that afford the backdrop for socialization and in turn contributes to places' positive valuations.

2. Locating place nostalgia

An emerging stream of research identified a range of traits (Rentfrow et al., 2008), cognitive styles (Uskul et al., 2008), and states (Rychlowska et al., 2015) that are associated with elements of physical places, including terrain (Kitayama et al., 2006), climate (Wei et al., 2017), and agricultural affordances (Talhelm et al., 2014). Researchers have hypothesized that certain landscapes (e.g., urban, coastal) offer opportunities to explore and interact with diverse others, giving rise to regional differences in openness to experience (Militaru et al., 2024). Predominantly, natural environments restore mental capacities,

whereas human-made environments deplete mental capacities and evoke negative emotions. For example, nature increases awe (Anderson et al., 2018; Jiang and Sedikides, 2022), calmness (Meidenbauer et al., 2020), and decreases boredom (O'Dea et al., 2025). Further, exposure to natural environments raises self-esteem and authenticity, which is conducive to psychological well-being (Yang et al., 2024). We asked whether places similarly matter for nostalgia.

A longstanding tenet of humanistic geography has been the distinction between space and place. A space is defined by its physical and geographical features, and only transforms into a place by the humans inhabiting it, who attribute meaning to the physical location (Buttimer and Seamon, 1980). We propose and set out to explore place nostalgia, which we define as fondness or wistful affection for a certain physical location visited in one's past. We examined physical characteristics of nostalgic places, such as geographical features, distance from one's current location, and coastal attributes. We aimed to capture the psychological—in addition to the physical—properties of nostalgic places through their linguistic descriptions (Pennebaker et al., 2015), including the use of positive and negative affective terms, and reference to social processes. We expected place nostalgia to be positive, albeit bittersweet (Leunissen et al., 2021), centered on persons and momentous events (Wildschut et al., 2006).

We also investigated whether place nostalgia is associated with psychological benefits, focusing on five prominent ones identified in the literature. First, nostalgia is a boon to social connectedness, defined as a sense of acceptance and belongingness (Van Tilburg et al., 2019b). Nostalgic narratives typically depict close others (Abeyta et al., 2015), and nostalgizing increases social connectedness (Juhl et al., 2021; Wildschut et al., 2010). Second, nostalgic narratives pertain to meaningful life events (Madoglou et al., 2017), and nostalgia augments meaning in life (henceforth: meaning; Routledge et al., 2011; Sedikides et al., 2018; Sedikides and Wildschut, 2018). Third, nostalgia binds the past and present into a cohesive self-narrative (Sedikides et al., 2023), and nostalgizing enhances self-continuity (Layous et al., 2022; Sedikides et al., 2016). Fourth, nostalgia narratives may depict close others, but they do so in relation to the self who takes center stage (Wildschut et al., 2006), and nostalgizing raises self-esteem (Evans et al., 2021; Hepper et al., 2012). Finally, in nostalgizing one resorts to a sense of self that feels true or real (Stephan et al., 2012), enhancing authenticity (Baldwin et al., 2015; Kelley et al., 2022).

3. Overview

We set out to identify the (I) physical characteristics of nostalgic places, (II) psychological characteristics of descriptions of these locations, and (III) psychological benefits of mentally revisiting the places. We conducted three studies employing complementary approaches. In Study 1, we explored whether nostalgic places are located in particular landscapes, using an established taxonomy (e.g., oceanside, forest, urban areas). We examined linguistic descriptions of these locations, serving objectives (I) and (II). In Studies 2 and 3, we implemented experimental designs contrasting nostalgic against ordinary places to further test our exploratory findings from Study 1. Moreover, in Studies 2 and 3, we relied on self-reported landscape taxonomies and geolocation methods to evaluate the physical characteristics of nostalgic places, serving objectives (I) and (II). Lastly, we examined if nostalgic (vs. ordinary) places bestowed psychological benefits in the form of enhanced social connectedness (Studies 2 and 3), meaning (Studies 2 and 3), self-continuity (Study 3), self-esteem (Study 3), and authenticity (Study 3), serving objective (III).

4. Transparency and openness

We have no conflict of interest to disclose. All studies were approved by the Ethics Committee of the corresponding author's institution and were conducted according to APA ethical standards for participant treatment. We collected the data between 2022 and 2023. We report how we determined our sample size, all data exclusions, all manipulations, and all measures. Across studies, we conducted analyses after completing data collection, and we follow Journal Article Reporting Standards (Kazak, 2018). We analyzed the data using R, version 4.2.2 (R Core Team, 2022). We did not preregister the studies' designs and analyses. We provide stimulus materials and ancillary analyses in Supplementary Material. Finally, we made the data sets, analysis code, and Supplementary Material available at https://osf.io/37c4s/.

5. Study 1

In Study 1, we explored the physical and psychological characteristics of places that evoke nostalgia. In particular, we probed the landscape of nostalgic locations, their physical size, and the size of their population. Also, we examined, via a text-analysis program (Linguistic Inquiry and Word Count or LIWC; Pennebaker et al., 2015), the language participants use to describe the characteristics of nostalgic places. We adopted a confirmatory approach regarding the psychological characteristics of place nostalgia. Specifically, we hypothesized that participants would describe place nostalgia using terminology reflecting positive affect to a greater extent than negative affect.

5.1. Method

5.1.1. Participants

In a power analysis (Faul et al., 2009), we estimated that N=200 was required to ensure 80 % power within a correlational design for detecting a medium (Funder and Ozer, 2019) effect size 1 (r=0.20, two-tailed, $\alpha=0.05$). We recruited via Prolific 204 participants born in the U.K., whose first language was English. We excluded four participants who failed the attention check, resulting in final N=200. We compensated them with £1.20 (\approx \$1.50) for the 7-minute study. Participants' ages ranged from 18 to 79 years (M=37.6, SD=13.03). Of them, 50 % self-identified as male, 49 % as female, and 1 % preferred not to say.

5.1.2. Procedure

We provided participants with a definition of place nostalgia, modifying prior relevant definitions (Wildschut et al., 2006, 2010): "Nostalgia is a sentimental longing for the past. However, people can also feel nostalgic about places. Place nostalgia can be defined as the sentimental longing or wistful affection for certain physical locations." We instructed participants to write a 300-character description of a place that evokes nostalgia (Supplementary Material).

Participants answered three questions about the physical features of their nostalgic place. First, they selected all the landscapes characterizing that place out of a widely used land-cover taxonomy (Anderson, 1976): oceanside, seaside, lakeside, riverside, urban areas, agricultural land, forest, grassland, shrub, wetland, permanent snow. Second, they indicated the size of the place (e.g., room, neighborhood, city). Third, they stated how populous the place was (0, 1–9, 10–99, 100–1000, >1000 people). We examined the psychological attributes of place nostalgia by contrasting two linguistic scores²: positive affect, negative

affect.

5.2. Results

5.2.1. Physical characteristics

We explored whether nostalgic places are characterized by distinctive physical features using two sources of data: self-reported geographic features, linguistic descriptions of the nostalgic places. In terms of geographical features, participants predominantly categorized nostalgic places as urban (20 %) or seaside (16 %), followed by grassland (10 %), agricultural (10 %), and oceanside (10 %). In all, blue landscapes (oceanside, seaside, riverside, lakeside) accounted for 35 % of responses (Fig. 1). Nostalgic places were most frequently described as being the size of a neighborhood (n=49) or town (n=47; Table 1), 4 typically numbering fewer than 10 people (n=64; Table 2). Nostalgic places, then, are medium in size, varying between a house and a town, yet scarcely populated.

5.2.2. Psychological characteristics

We content-analyzed participants' narratives via LIWC and derived scores for positive affect (e.g., love, nice, sweet) and negative affect (e.g., hurt, ugly, nasty). Participants used more words reflecting positive (M = 3.42, SD = 2.41) than negative (M = 0.69, SD = 1.13) affect to describe place nostalgia, t(199) = 14.22, p < .001, t = 0.01.

5.2.3. Discussion

Blue landscapes (e.g., sea, rivers, lakes) frequently provided the backdrop of nostalgic places, accounting for over one-third of the landscapes most descriptive of nostalgic places. Also, urban area was the most frequently used category chosen to describe nostalgic places. Medium-sized spaces with few people (1–9) evoked most place nostalgia. Further, descriptions of nostalgic places contained more expressions of positive than negative affect.

Although Study 1 offers a glimpse into the physical and psychological characteristics of place nostalgia, it did not establish whether these characteristics are a hallmark of nostalgic places in particular. For example, urban areas are the most densely populated (Obschonka et al., 2015). Consequently, most autobiographical memories are probably created in urban areas, which may explain the high frequency of urban locations in descriptions of nostalgic places (i.e., high base rates). We sought to address this limitation next.

6. Study 2

In Study 2, we contrasted nostalgic places against ordinary ones in terms of their physical and psychological characteristics, searching for the distinctiveness of nostalgic places. This experimental design has been widely used in the nostalgia literature (Dang et al., 2025; Juhl and Biskas, 2023; Wildschut and Sedikides, 2025). Additionally, we tested whether reflecting on nostalgic places confers psychological benefits in the form of social connectedness and meaning.

We examined three physical characteristics of nostalgic places:

¹ Medium effect sizes characterize literatures compatible with our objectives, such as linking linguistic content with self-reports (Tov et al., 2013) and linking nostalgia with personality traits (Seehusen et al., 2013). We report the associations between place nostalgia and personality traits in Supplementary Material.

² Additionally, we asked whether the place was a childhood location and how often participants had relocated, and we administered a personality measure. Furthermore, we included a 6-item scale intended to assess place nostalgia. Participants rated their nostalgia for the place, its meaningfulness, feeling close to it, thinking often about it, as well as feeling nostalgic about its residents and its aesthetics. We report results in Supplementary Material.

 $^{^3}$ Of responses, 7.74% belonged to the category "other." Here, participants freely described landscapes as mountains (n=3), buildings (n=3), countryside (n=3), garden (n=2), hillside (n=2), or additional unique locations (e.g., field, canyon, park, moors, suburban). These landscape descriptions informed item selection in Study 2.

⁴ Within the category "other," and in regard to size (Table 1), participants classified places as mountains (n=3), gardens (n=3), parks (n=3), buildings (n=4); castle, ruins, school, cathedral), or additional unique locations (e.g., beach, farm, countryside).

 $^{^{5}}$ Additionally, we content-analyzed participants' narratives to identify the most frequently used words to describe nostalgic places. We report the results in Supplementary Material.

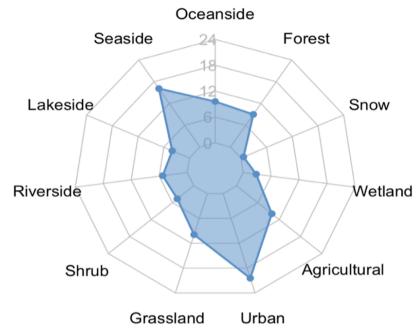


Fig. 1. Radar Plot Illustrating the Percentage of Each Landscape Category Chosen to Describe Nostalgic Places in Study 1. Note. Numbers along the line represent interval percentages.

Table 1Self-Reported Physical Space Size of The Nostalgic Place and Associated Frequencies in Study 1.

Physical Space Size	Frequency		
Neighborhood	49		
Town	47		
Other	30		
House	29		
Region	26		
City	21		
Room	13		
Country	11		

Table 2Self-Reported Social Space Size of the Nostalgic Place and Associated Frequencies in Study 1.

Social Space Size	Frequency		
1–9 people	64		
10–99 people	51		
100-1000	43		
> 1000	38		
0	4		

geographic features, coastal location, and distance between the current and nostalgic place. We added coastal location in light of the prominence of ocean and sea areas reported in Study 1, and used objective geolocation data to assess it. Variations in land-cover taxonomies have been employed extensively in the geographical sciences literature and, more recently, in the psychological literature (Anderson, 1976; Militaru et al., 2024). We asked participants to indicate the precise location of the recalled place on an interactive map. We used the geolocation of recalled places to identify whether these are situated on the coast (i.e., blue landscape) or in a non-coastal location. We considered both the physical and psychological distance between the current and recalled locations, given that recollections of nostalgic (vs. ordinary) events are more physically distant but more psychologically close (Stephan et al., 2012; Van Tilburg, Bruder, et al., 2019).

In terms of psychological characteristics of nostalgic places, we

tested if participants described nostalgic (vs. ordinary) places with language characterized by more positive affect and less negative affect. Additionally, we examined whether descriptions of nostalgic and ordinary places differ in sociality. Finally, we tested whether nostalgia raises social connectedness and meaning.

6.1. Method

6.1.1. Participants

We estimated that N = 352 was required to ensure 80 % power with an independent samples t-test when anticipating a medium effect size (d = 0.30, two-tailed, α = 0.05). We recruited 401 American Prolific workers. They resided in the U.S., indicated English as their first language, and had not taken part in Study 1. We compensated them with £1.20 (\approx \$1.50) for the 8-minute study duration. We excluded those who failed the attention check, resulting in final N = 398. We randomly allocated participants to the nostalgic place (n = 199) or ordinary place (n = 199) condition. Participants' age ranged from 18 to 83 years (M =38.34, SD = 14.65). Of them, 52 % self-identified as male, 46 % as female, 1.5 % as non-binary, 0.25 % as genderqueer, and 0.25 % preferred not to say; also, 78.89 % self-identified as White, 7.29 % as Black, 6.03 % as Mixed, 3.77 % as Asian, 2.51 % as Other, 0.50 % as Native American, 0.25 % as Pacific Islander and 0.75 % preferred not to say. Moreover, 34.92 % had a graduate or professional degree, 23.62 % an associate or technical degree, 13.07 % a high school diploma or General Educational Development Test, 12.31 % a Bachelor's degree, 1.51 % some high school education or less, and 14.57 % preferred not to say.

6.1.2. Procedure

We provided participants with a definition of place nostalgia or ordinary place. Next, we instructed them to think of a nostalgic or ordinary place that they had visited in the U.S. and drop a pin on an interactive map corresponding to that location (see Supplementary Material for a detailed description of the procedure). We asked participants to write a description of the recalled place with >300 characters.

We used the Google Maps API to identify the location of the recalled places. We retrieved the U.S. counties cartographic boundary files from the 2015 TIGER Census Bureau's demographic data (United States Census Bureau, 2015) and assigned the location of recalled places to the

corresponding U.S. county. Next, we retrieved a secondary dataset recording the U.S. coastal and non-coastal counties (US Census Bureau, 2018), which allowed us to identify whether the recalled places are situated in a coastal or non-coastal county.

Subsequently, participants completed the manipulation check and dependent measures (1 = strongly disagree, 6 = strongly agree). The manipulation check comprised three items: "Right now, I am feeling quite nostalgic," "Right now, I am having nostalgic feelings," "I feel nostalgic at the moment" (Routledge et al., 2008; Wildschut et al., 2006). (We also checked the effectiveness of the manipulation with Chen et al.'s [2023] Nostalgia Dictionary; see below.) The measure of social connectedness, preceded by the stem "After thinking about this location, I feel...", comprised four items: "connected to loved ones," "protected," "loved," "I can trust others" (Hepper et al., 2012; Zhou et al., 2012). Likewise, the meaning measure, also preceded by the stem "After thinking about this location, I feel...", consisted of four items: "life is meaningful," "life has a purpose," "there is a greater purpose to life," "life is worth living" (Hepper et al., 2012; Routledge et al., 2011). As in Study 1, participants answered a 1-item measure of psychological closeness (Supplementary Material). Finally, they responded to three questions about location (i.e., landscape, social size of the place, physical size of the place) and demographics (i.e., gender, age, race).

6.2. Results

We focused on variables central to our hypotheses: manipulation check, physical and psychological characteristics of place nostalgia, psychological benefits. We report results from other measures in Supplementary Material.

6.2.1. Manipulation checks

Participants in the nostalgic place condition (M=5.11, SD=1.11) expressed higher state nostalgia than those in the ordinary place condition (M=4.21, SD=1.61), t(352.05)=6.49, p<.001, d=0.65. Similarly, participants in the nostalgic place condition (M=0.16, SD=0.09) reported being more nostalgic compared to those in the ordinary place condition (M=0.12, SD=0.08), t(392.69)=3.79, p<.001, d=0.38, as per the Nostalgia Dictionary (Chen et al., 2023). The manipulation was effective.

6.2.2. Physical characteristics of place nostalgia

We tested whether nostalgic (vs. ordinary) places are characterized by distinctive landscapes, relying on four data sources corresponding to the recalled places: self-reported geographic features, coastal location, distance between the current and recalled places, linguistic descriptions.

Geographic features. Nostalgic and ordinary places were part of different landscapes (Fig. 2). Participants most frequently classified nostalgic (vs. ordinary) places as part of blue landscapes (oceanside, seaside, riverside, lakeside), which accounted for 31 % of landscapes chosen to describe nostalgic places, followed by urban areas (22 %). Comparatively, only 14 % of ordinary places were set in blue landscapes.

In turn, participants located ordinary places most frequently in human-made environments, such as urban areas (29 %), agricultural areas (13 %), or parks (12 %). Nostalgic and ordinary places did not differ in physical size, t(359.73) = 0.54, p = .591, d = 0.06, or social size (i.e., population), t(395.56) = -0.81, p = .416, d = 0.08.

Next, we compared these landscapes per their parent categories (see Supplementary Material for category allocation): blue, green, grey (Seresinhe et al., 2015; Table 4). *Blue* landscapes predominantly feature "visible outdoor surface waters" (Britton et al., 2020, p. 51), *green* landscapes predominantly feature vegetation, and *grey* landscapes mostly comprise features of human origin (Taylor and Hochuli, 2017).

Nostalgic places were more frequently located in blue landscapes, $\chi^2(1)=16.02, p<.001, \varphi=0.20$, but not in green landscapes, $\chi^2(1)=0.82, \ p=.364, \ \varphi=0.05$. Conversely, nostalgic places were less frequently located in grey landscapes, $\chi^2(1)=4.76, p=.029, \varphi=0.11$ (Table 3). Overall, blue landscapes were the signature of nostalgic (vs. ordinary) places across different taxonomical approaches.⁸

Coastal Location. Self-reported landscapes are influenced by subjective understanding of geographical features. We addressed this limitation by using the objective latitude and longitude of the recalled location to identify whether nostalgic places are more frequently located by the water than ordinary places. To this end, we allocated recalled places to a coastal or non-coastal county based on their geolocation (Table 4). Nostalgic (vs. ordinary) places were more often situated on the coast, $\gamma^2(1) = 7.39$, p = .007, d = 0.28.

Distance Between the Current and Nostalgic Location. We tested the hypothesis that nostalgic places are physically distant, yet psychologically close, compared to ordinary places. We calculated the (log-transformed) distance between the location of the place brought to mind (Fig. 3) and participants' current approximate location (Supplementary Material). Nostalgic places (M=5.47, SD=0.82) were further away from participants' current location compared to ordinary places (M=5.26, SD=0.90), t(392.77)=2.44, p=.015, d=0.25. In addition, participants reported feeling psychologically closer to nostalgic (M=4.01, SD=1.05) relative to ordinary (M=3.16, SD=1.44) places, t(362.38)=6.68, p<.001, d=0.67.

6.2.3. Psychological characteristics of place nostalgia

To investigate the psychological characteristics of place nostalgia, we employed LIWC-derived scores of positive affect (e.g., love, nice, sweet), negative affect (e.g., hurt, ugly, nasty), and social processes (e.g., mate, talk, they). Participants used more words that conveyed positive affect to describe nostalgic places (M=4.26, SD=2.82) compared to ordinary places (M=3.19, SD=2.61), $t(393.83)=3.93, p<.001, d=0.39.^{10}$ There was no difference in negative affect between the two conditions, t(388.47)=0.85, p=.393, d=0.09. Further, participants used more words pertaining to social processes to describe nostalgic (M=5.42, SD=3.74) than ordinary (M=4.05, SD=3.15) places, t(384.58)=3.98, p<.001, d=0.40. In all, participants described nostalgic (vs. ordinary) places with more positively-toned and socially-relevant words. 11

6.2.4. Psychological benefits of place nostalgia

We proceeded to test the hypothesis that place nostalgia confers psychological benefits. Participants in the nostalgic place condition (M = 4.33, SD = 1.23) manifested higher social connectedness than those in the ordinary place condition (M = 3.79, SD = 1.43), t(386.98) = 4.04, p < .001, d = 0.40. Similarly, participants in the nostalgic place condition (M = 4.76, SD = 1.18) reported greater meaning than those in the

⁶ We added three landscape categories to reflect Study 1 responses: mountain, park, garden.

 $^{^7}$ The distribution of nostalgia scores was significantly different from normal as indicated by a Shapiro-Wilk test. The variance between the nostalgic place and ordinary place conditions was also significantly different. We conducted Welch's t-tests instead of Student's t-tests (Delacre et al., 2017).

⁸ Additionally, we used structural topic modeling to identify general themes in the language corpus. The topic pertaining to blue landscapes was more prevalent in the nostalgic versus ordinary place condition. We report the results in the Supplementary Material.

⁹ County allocation of each location resulted in data loss, culminating in final

¹⁰ Participants in the nostalgic place (M = 90.02, SD = 44.53) and ordinary place (M = 83.72, SD = 37.29) conditions did not differ significantly in the number of words they used in their narratives, t(384.16) = 1.53, p = .127, d = 0.15

Additionally, we content-analyzed participants' narratives to identify the most frequently used words to describe nostalgic places. We report the results in Supplementary Material.

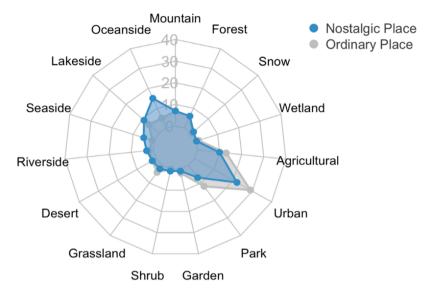


Fig. 2. Radar Plot Illustrating the Percentage of Each Landscape Category Chosen to Describe Places Brought to Mind in Study 2. Note. Numbers along the line represent interval percentages.

Table 3Contingency Table for the Three Parent Landscape Categories as a Function of Place Nostalgia in Study 2.

	Nostalgic Place	Ordinary Place
Blue	60	27
Non-blue	139	172
Green	49	57
Non-green	150	142
Grey	63	84
Non-grey	136	115

Table 4Contingency Table for the Coastal Versus Non-Coastal Locations Chosen as a Function of Place Nostalgia Study 2.

	Nostalgic Place	Ordinary Place		
Coastal	73	49		
Non-coastal	122	149		

ordinary place condition (M = 4.29, SD = 1.39), t(386.25) = 3.64, p < .001, d = 0.36. Place nostalgia bestows psychological benefits.

6.3. Discussion

We implemented two approaches to identify the physical characteristics of place nostalgia. First, we asked participants to choose the type of landscape that best describes their recalled location from a predefined land-cover taxonomy (Anderson, 1976). Second, we placed the recalled places on a map contrasting coastal and non-coastal U.S. counties, which allowed us to objectively test if blue landscapes are a hallmark feature of place nostalgia.

Nostalgic (compared to ordinary) places were more often positioned in blue environments (by the ocean, sea, lake, or river), and less often surrounded by grey, built-up areas, such as houses, cities, or towns. Nostalgic places were located farther away from one's current location, yet appeared psychologically closer than ordinary places. Nostalgic and ordinary places did not differ in the amount of green space surrounding them, nor in their social or physical size.

Place nostalgia has similar psychological characteristics to personal nostalgia. Place nostalgia was typically coupled with positive affect and featured social processes, like personal nostalgia (Juhl and Biskas, 2023;

Leunissen, 2023). Further, place nostalgia was related to heightened social connectedness and meaning, like personal nostalgia (Sedikides and Wildschut, 2018, 2019).

7. Study 3

In Study 3, we built upon the Study 2 findings and expanded them. We changed the landscape taxonomy to align directly with the parent categories that we analyzed in Study 2 (i.e., blue, green, grey landscapes; Seresinhe et al., 2015), and we instructed participants to evaluate these on a continuum. Also, we added a measure of temporal distance to complement the physical and psychological distance measures of Study 2. Nostalgic recollections typically involve unusual or unique events and settings (Morewedge, 2013; Van Tilburg, Bruder, et al., 2019); as such, we hypothesized that participants would locate nostalgic places physically and temporally farther away from themselves compared to ordinary locations yet perceive them to be psychologically closer. Lastly, we expanded the search for the psychological benefits of place nostalgia. Induced personal nostalgia raises self-continuity (Sedikides et al., 2016), self-esteem (Hepper et al., 2012), and authenticity (Kelley et al., 2022). We hypothesized accordingly that place nostalgia increases self-continuity, self-esteem, and authenticity, in addition to social connectedness and meaning.

7.1. Method

7.1.1. Participants

In a power analysis (Faul et al., 2009), and assuming a medium effect size as Study 2, we estimated that N=352 would be required to ensure 80 % power with an independent samples t-test (d=0.30, two-tailed, $\alpha=0.05$). We recruited 403 American Prolific workers. They resided in the U.S., indicated English as their first language, and had not taken part in Studies 1 or 2. We compensated them with £1.35 (\approx \$1.68) for the 9-minute study. We randomly allocated them to the nostalgic place (n=200) or ordinary place (n=200) condition. Participants' age ranged from 18 to 94 years (M=39.63, SD=14.49). Of them, 48.75 % self-identified as male, 49.75 % as female, 0.75 % as non-binary, and 0.75 % preferred not to say. In addition, 73.75 % self-identified as White, 9.25 % as Black, 5.75 % as Asian, 4.50 % as Other, 4.25 % as Mixed, 0.75 % as Native American, and 1.50 % preferred not to say. Finally, 42.75 % had a graduate or professional degree, 20.75 % an associate or technical degree, 10 % a high school diploma or GED, 8 % a

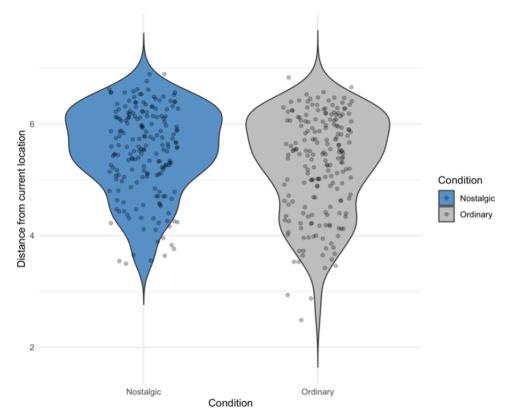


Fig. 3. Distance Between Nostalgic and Ordinary Places from the Current Location in the U.S. in Study 3.

Table 5Contingency Table for the Coastal Versus Non-Coastal Locations as a Function of Place Nostalgia in Study 3.

	Nostalgic Place	Ordinary Place		
Coastal	73	46		
Non-coastal	124	153		

Bachelor's degree, 0.50 % some high school education or less, and 17.75 % preferred not to say.

7.1.2. Procedure

As in Study 2, participants thought of either a nostalgic or ordinary location they had visited in the U.S., identified it on a map, and described it in 300 characters. Next, they responded to the same manipulation check as in Study 2. Subsequently, they completed the dependent measures in a separate random order. Two measures (social connectedness, meaning) were the same as in Study 2. The selfcontinuity measure comprised four items (Sedikides et al., 2016): "I feel connected with my past," "I feel connected with who I was in the past," "I feel like there is continuity in my life," "I feel like important aspects of my personality remain the same across time." Similarly, the self-esteem measure comprised four items (Hepper et al., 2012): "I feel good about myself," "I like myself better," "I value myself more," "I have many positive qualities." Lastly, the authenticity measure, the Southampton Authenticity scale (Kelley et al., 2022), also consisted of four items: "I feel authentic," "I feel true to myself," "I feel like the real me," "I feel genuine." Response options for all measures ranged from 1 (strongly disagree) to 6 (strongly agree).

Afterward, participants responded to a question about psychological closeness ("To what extent do you feel close to the place you described?"; 1 = not at all, 5 = a great deal). To quantify temporal distance, we asked participants to report the amount of time spent at the location and the amount of time that has passed since their last visit

("How many years, months, or days have passed since you last visited the place you described?"). Finally, to gauge the landscape of the recalled places, we asked participants to rate the extent to which the place they brought to mind ("To what extent do the following characteristics apply to the place you described?"; $1 = not \ at \ all$, $6 = a \ great \ deal$) was blue (e.g., sea, river, lake), grey (e.g., urban area, building, neighborhood), or green (e.g., forest, park, garden). ¹²

7.1.3. Results

7.1.3.1. Manipulation check. As in Study 2, we checked the effectiveness of the manipulation via state nostalgia and dictionary-derived nostalgia. Participants in the nostalgic place condition (M=5.38, SD=0.76) reported higher state nostalgia than those in the ordinary place condition (M=4.44, SD=1.68), t(276.87)=7.22, p<.001, d=0.72. Similarly, participants in the nostalgic place condition (M=0.17, SD=0.10) reported being more nostalgic compared to those in the ordinary place condition (M=0.13, SD=0.09), t(399.98)=4.30, p<.001, d=0.43, as per the Nostalgia Dictionary (Chen et al., 2023). The manipulation was effective.

7.1.4. Physical characteristics of place nostalgia

We tested whether nostalgic (vs. ordinary) places are characterized by distinctive landscapes relying on four sources of data pertaining to the recalled places: self-reported geographic features, coastal location, distance between the current and recalled place, linguistic descriptions.

Geographic Features. Participants described nostalgic places (M = 3.32, SD = 2.01) as more blue than ordinary places (M = 2.28, SD = 2.01) as more blue than ordinary places (M = 2.28, SD = 2.01) as more blue than ordinary places (M = 2.28, M = 2.28).

¹² We additionally included a 5-item scale intended to assess place nostalgia. Participants rated their nostalgia for the place, its meaningfulness, feeling close to the place, thinking often about it, feeling nostalgic for its residents, and its aesthetics. We report relevant results in Supplementary Material.

1.77), t(391.76)=5.53, p<.001, d=0.55. They also described nostalgic places (M=4.07, SD=1.72) as greener than ordinary places (M=3.61, SD=1.85), t(399.22)=2.55, p=.011, d=0.25. Conversely, they described nostalgic places (M=2.90, SD=1.83) as less grey than ordinary places (M=3.70, SD=1.83), t(398)=4.39, p<.001, d=0.44. Consistent with our hypotheses and findings from Studies 1 and 2, nostalgic (vs. ordinary) places were most frequently located in blue landscapes and comparatively less frequently located in grey, urban landscapes. Moreover, nostalgic (vs. ordinary) places were more frequently located in green locations (although, in Study 2, this difference was not significant). 13

Coastal Location. We used the latitude and longitude of the recalled places to test whether nostalgic (vs. ordinary) places are more likely to be located on the coast. We implemented the same methodology as in Study 2 to assign each location to a coastal or non-coastal county in the U.S. (U.S. Census Bureau, 2018; Table 5). ¹⁴ Nostalgic places were more often situated on the coast compared to ordinary places, $\chi^2(1) = 9.15$, p = .002. d = 0.15.

Distance Between the Current and Nostalgic Location. We assessed three types of distance between participants' current location and recalled location: physical, temporal, psychological. We used the places' geolocations to test if nostalgic places are more physically distant from the participants' approximate current location (Fig. 4). Nostalgic places (M=5.44, SD=0.88) were further away in log-transformed distance from the participants' current location than were ordinary places (M=5.10, SD=0.99), t(392.32)=3.63, p<.001, d=0.36. Nostalgic places (M=3.21, SD=0.78) were visited longer ago (i.e., were more temporally distant) than ordinary places (M=2.62, SD=1.25), t(334.63)=5.60, p<.001, d=0.56. Despite being more physically and temporally distant, nostalgic places (M=3.92, SD=0.93) were perceived as psychologically closer than ordinary places (M=3.28, SD=1.31), t(359.09)=5.61, p<.001, d=0.56

7.1.5. Psychological characteristics of place nostalgia

To find out the psychological characteristics of place nostalgia, we used LIWC-derived scores of positive affect, negative affect, and social processes. When describing nostalgic (vs. ordinary) places, participants used more words pertaining to positive affect and fewer words pertaining to negative affect. As hypothesized, participants in the nostalgic place condition used more words pertaining to social processes compared to those in the ordinary condition (Table 6). Taken together, participants described nostalgic (vs. ordinary) places with more positively-toned and socially-relevant words.

7.1.6. Psychological benefits of place nostalgia

As hypothesized, participants in the nostalgic place condition reported higher social connectedness, meaning, self-continuity, self-esteem, and authenticity compared to those in the ordinary place condition (Table 7). Place nostalgia confers psychological benefits.

7.2. Discussion

In Study 3, we expanded on Study 2 by operationalizing and testing the landscape features of nostalgic places along with their physical, temporal, and psychological distance. Across geolocations and self-reports, nostalgic places were more blue, greener, and less grey. Specifically, nostalgic places were more often located by the coast compared to ordinary places. Additionally, nostalgic places were more often

characterized as green, surrounded by trees and grass. In contrast, ordinary places were more likely to consist of concrete, part of buildings, shopping malls, or streets. As hypothesized, nostalgic (than ordinary) places were more physically and temporally distant, yet psychologically closer

We examined the psychological content of place nostalgia through three linguistic markers hypothesized as being connected to nostalgia: positive affect, negative affect, social processes. Consistent with our hypotheses and previous findings (Hepper et al., 2012, 2014), nostalgic places were more socially-charged, and described with more positively-and less negatively-toned terms compared to ordinary places. Lastly, as hypothesized, place nostalgia grants psychological benefits. Bringing to mind nostalgic (vs. ordinary) places fosters social connectedness, meaning, self-continuity, self-esteem, and authenticity.

8. General discussion

What are the geographical features of nostalgic places? What distinguishes nostalgic locations from everyday, ordinary locations? Can places evoke nostalgia? Across three studies, we examined the distinctive physical and psychological profile of the types of places that evoke nostalgia, along with the psychological benefits of place nostalgia.

8.1. Physical characteristics of place nostalgia

We used an explorative approach to identify the physical characteristics of nostalgic places in the form of their landscape (e.g., blue, green, grey) and geographical features (i.e., physical and social size). First, we examined self-reports and geolocation to identify the physical characteristics of nostalgic places. Participants often located nostalgic places by a body of water, yet did not describe nostalgic places as different in physical and social size from ordinary places. When examining their precise geolocation and landscape classification, blue landscapes emerged as the hallmark feature of nostalgic places.

It is conceivable that blue environments represent an unusual location, as most of the U.K.'s and U.S.'s population resides in urban locations (Office for National Statistics (ONS), 2023; U.S. Census Bureau, 2019), making blue places a more probable contestant for nostalgizing due to their uniqueness (Morewedge, 2013). However, urban areas in the U.S. tend to be positioned by large bodies of water, as illustrated by the fact that coastal counties are the most populous, hosting approximately 40 % of the country's population (National Ocean and Atmospheric Administration, 2013). Moreover, if blue landscapes are the most evocative of nostalgia due to their uniqueness, a similar pattern of results would have emerged for green landscapes, yet this is not what we observed.

Human-made landscapes (e.g., buildings, neighborhoods) were also frequent objects of nostalgizing. This likely captures population density (Obschonka et al., 2015), as more people live in urbanized environments and consequently have more memories pertaining to urban locations. Indeed, both nostalgic and ordinary places were located in grey, human-made environments, but nostalgic places were comparatively less grey than their ordinary counterparts.

In all, blueness is the hallmark of nostalgic locations. Little research has addressed how exposure to blue spaces can influence emotions, behaviors, or well-being (Braubach et al., 2021). Our findings add to the growing pool of evidence suggesting that blue spaces are associated with increased psychological well-being among those living in proximity to them (Bratman et al., 2019; Dzhambov et al., 2018).

8.2. Distance and place nostalgia

Nostalgia involves the cognitive ability to self-reflect temporally and abstractly (Routledge et al., 2008; Sedikides, Wildschut, Routledge, Arndt et al., 2015; Van Tilburg, Bruder, et al., 2019), suggesting that nostalgic places could be perceived as more psychologically close, yet

¹³ Additionally, we used structural topic modeling to identify general themes in the language corpus. The topic pertaining to blue landscapes was more prevalent in the nostalgic versus ordinary place condition. We report the results in the Supplementary Material.

 $^{^{14}}$ County allocation of each location resulted in data loss, leaving a final N = 396.

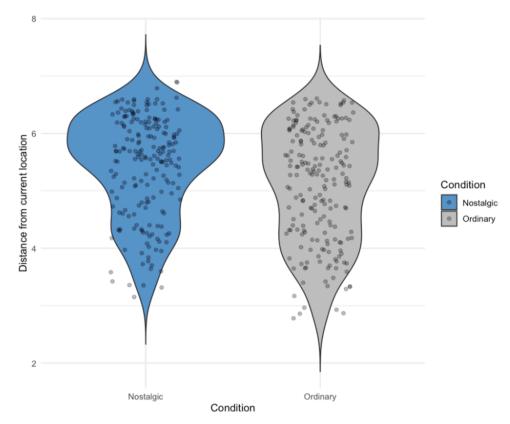


Fig. 4. Distance Between Nostalgic and Ordinary Places from the Current Location in the U.S. in Study 3.

Table 6
Language-Derived Scores as a Function of Place Nostalgia: Means (Standard Deviations), Significance Tests, and Effect Sizes in Study 3.

Dependent variable	Nostalgic Place	Ordinary Place	t-test	df	Cohen's d
Positive affect Negative affect Social processes	4.31(2.94) 0.60 (1.05) 5.23 (3.61)	2.87 (2.56) 0.83 (1.30) 3.81 (3.06)	5.28*** -2.07* 4.27***	392.91 384.79 389.89	0.53 -0.20 0.43

df = degrees of freedom. *p < .05. **p < .01. ***p < .001.

Table 7Psychological Benefits as a Function of Place Nostalgia: Means (Standard Deviations), Significance Tests, and Effect Sizes in Study 3.

Dependent Variable	Nostalgic Place	Ordinary Place	t-test	df	Cohen's d
Social connectedness	4.71 (1.21)	4.05 (1.60)	4.65***	369.69	0.47
Meaning in life	4.92 (1.03)	4.17 (1.49)	5.86***	353.23	0.59
Self-continuity	4.98 (0.94)	4.55 (1.30)	3.75***	362.93	0.37
Self-esteem	4.74 (1.13)	4.21 (1.39)	4.19***	381.15	0.42
Authenticity	5.13 (0.89)	4.53 (1.39)	5.14***	338.21	0.51

Note. df = degrees of freedom. *p < .05. **p < .01. ***p < .001.

more physically and temporally far. We examined the psychological, temporal, and physical distance between oneself and the recalled nostalgic place. Indeed, nostalgic places were seen as psychologically closer than ordinary places, but more physically and temporally distant than them. These findings are consistent with the notion that nostalgia entails the cognitive function of mental time travel into the past (Sedikides et al., 2023; Stephan and Sedikides, 2024), surpassing objective temporal and physical distance, only to bring the object of remembrance within psychological proximity. Additionally, the findings

are aligned with literature indicating that emotion-eliciting memories help to summarize the relevant aspects of distant past experiences to the present self, bringing them into focus (Levine and Safer, 2002; Levine et al., 2009).

8.3. Psychological characteristics of place nostalgia

Participants described nostalgic (compared to ordinary) places with more words that conveyed positive affect and fewer words that conveyed negative affect. Much like nostalgia evoked through other senses (e.g., scents or tastes; Reid et al., 2015, 2023), place nostalgia is a predominantly positively-valenced emotion. Also, we observed that social-related content emerged in the process of nostalgizing. In accord with personal nostalgia (Juhl & Biskas, 2003; Sedikides and Wildschut, 2019), place nostalgia is intrinsically bound to sociality.

8.4. Psychological benefits of place nostalgia

Our findings support the notion that nostalgia enables the capacity to travel psychologically in time and space and retrieve details pertaining to events and places from the past relevant to oneself in the present (Evan et al., 2021; Wildschut and Sedikides, 2022). Place nostalgia offered psychological benefits. In particular, it strengthened social connectedness, meaning, self-continuity, self-esteem, and authenticity.

Personal nostalgia has palliative properties. It buffers against the impact of aversive states (e.g., loneliness, meaninglessness, boredom), while protecting the psychological equanimity of vulnerable individuals (e.g., refugees; Wildschut and Sedikides, 2023a, b). Although personal nostalgia focuses on *events* that one experienced directly in the past (Hepper et al., 2021), place nostalgia refers to the meaningful *places* that one personally visited in the past. Arguably, place nostalgia captures personally relevant memories pertaining to physical locations. We hypothesize that place nostalgia will buffer aversive psychological states due to its similarities to personal nostalgia, but will surpass personal

nostalgia in instances of psychological discomfort directly related to physical locations such as loneliness, displacement, or relocation (Zou et al., 2018; Wildschut et al., 2019).

8.5. Limitations and future directions

Whereas some objective measures allowed us to assess the association between a precise location and one's nostalgic sentiments, we did not set out to test whether places intrinsically elicit such sentiments. Follow-up research will do well to examine whether places gain nostalgic value through transfer of personally meaningful memories at the relevant location (Barrett et al., 2010; Wildschut et al., 2018). This research could expose participants to locations that have the apparent prototypical profile of a nostalgic place (i.e., in a blue landscape, distant from oneself), yet lack autobiographical relevance. The findings would help establish whether places have, in and of themselves, the capacity to be nostalgia-evoking, regardless of autobiographically meaningful experiences occurring in the pertinent location.

We found that blueness is the trademark of nostalgic places. But why would blue places be especially likely to foster nostalgia? Recent work has shown that scenes such as a beach sunset arouse aesthetic responses (i.e., a sense of beauty) due to their contour properties (Farzanfar and Walther, 2023). Regardless, an implication is that places with high aesthetic values are the fodder for nostalgic memories. Research should test this hypothesis.

8.6. Constraints on generality

Nostalgia and its psychological benefits are pancultural (Hepper et al., 2014, 2024), suggesting that place nostalgia and its benefits would similarly unfold panculturally. Given the demographics of our sample, we have no reason to suspect that the results depend on the characteristics of participants, materials or procedure. Nonetheless, geography differentially relates to traits such as openness to experience (Wei et al., 2017), and to states such as happiness (Rychlowska et al., 2015). Certain geographical idiosyncrasies are also possible (Uskul et al., 2023). Given that place nostalgia is tightly linked to geographical features, it is conceivable that access to certain landscapes (e.g., mountains) influences the frequency of nostalgizing for relevant (i.e., mountainous) regions. Future research could examine whether place nostalgia varies across different regions or countries and test the impact of geographical context on place nostalgia.

8.7. Conclusion

Across three studies, using complementary methods, we explored the physical and psychological characteristics of place nostalgia. We drew the portrait of nostalgic places: Situated by bodies of water, they are no different in size than ordinary locations. Also, positively-valenced, place nostalgia makes physically and temporally distant locations feel psychologically close, bringing into focus self-relevant and social aspects of meaningful locations. In so doing, place nostalgia confers five psychological benefits: social connectedness, meaning, self-continuity, self-esteem, authenticity. Our work highlights links among places, memory, and psychological benefits, and is compatible with recent calls for "zooming out" perspectives, which take into account the influence of the broader physical context on thinking, feeling, and behaving (Van de Vliert and Van Lange, 2020; Van de Vliert et al., 2023).

Data availability statement

The data, corresponding analyses code, and Supplementary Material are available on the OSF project page https://osf.io/37c4s/. Cartographic boundaries and coastal counties data were retrieved from www. census.gov and are publicly available. The studies' designs and their analyses were not pre-registered.

Ethics & informed consent statement

The studies received ethical approval from the institutional ethics board at University of Cambridge. Informed consent was obtained from all participants included in the study.

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CRediT authorship contribution statement

Ioana E. Militaru: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Software, Visualization, Writing – original draft, Writing – review & editing. Wijnand A.P. van Tilburg: Conceptualization, Methodology, Resources, Writing – review & editing. Constantine Sedikides: Conceptualization, Resources, Writing – review & editing. Tim Wildschut: Conceptualization, Resources, Writing – review & editing. Peter J. Rentfrow: Conceptualization, Funding acquisition, Resources, Supervision, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.cresp.2025.100223.

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