# Cognitive Image, Mental Imagery, and Responses (CI-MI-R): Mediation and Moderation Effects

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# Cognitive Image, Mental Imagery, and Responses (CI-MI-R): Mediation and Moderation Effects

## Abstract

As intangible experiences are crucial for approach tendencies toward a destination, this research proposes the CI-MI-R framework linking cognitive image (CI) to response (R) via mental imagery (MI). Cosmopolitanism, escapism, and cognitive thinking style are examined as moderators in the relationship between cognitive image and mental imagery. Two studies from USA and Germany confirmed the role of mental imagery as a mediator between cognitive image and tourist response. The three segmentation-based moderators decrease the strength of the link between cognitive image and mental imagery, suggesting that targeting tourists, who are low (high) in cosmopolitanism, escapism, and cognitive thinking style, with cognitive images will be more (less) effective in increasing their mental imagery of the destination and subsequently approach responses.

**Keywords:** cognitive image, mental imagery, place attachment, word of mouth communication, S-O-R framework

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## 1. Introduction

In today's tourism context, tourists are dreaming of visiting unique destinations, swapping crowded hotspots for less familiar places (Southan, 2020). The pandemic situation due to Covid-19 forced citizens to stay at their home countries, creating an unprecedent crisis in the tourism sector. According to the UNWTO World Tourism Barometer, international tourist arrivals (overnight visitors) fell by 72% in January-October 2020 over the same period last year (UNWTO 2020). Restlessly waiting to travel again, tourists are daydreaming and mentally visualizing destinations while they watch advertisements (e.g., on traditional and social media channel but also in virtual reality contexts) and read books (Travel pulse 2020). Thus, tourists are remembering experiences that they paint in their minds elicited from exposure to external stimuli about destinations (MacInnis and Price 1987; Cardoso et al. 2019). This mental experience is called mental imagery (MI) and can be evoked from memories about the experience lived in a certain destination or created through advertisements. Academics and tourism managers—destination mangers, tour operators, and travel agencies—can benefit from a deeper understanding of the effects triggered by imaginations and fantasies about the trip and market experiences (Dung et al. 2018) since this understanding may influence destination choice (Stylidis 2020). MI appears a promising yet unexplored candidate for gaining insight on how destination attributes (stimuli) link to tourist responses (responses).

The current research addresses this gap by introducing MI of the destination for understanding how cognitive image (CI) translates into tourist responses (R), yielding the hereinafter proposed CI-MI-R model. CI as the stimulus component reflects the destination's attributes and represents a key factor that drives tourist responses (Afshardoost and Eshaghi 2020). For the response component (R), we consider place attachment and word of mouth communication as both are salient outcomes that predict tourist behavior (Line et al. 2018),

destination selection (Pike and Ryan 2004), and tourist consumption (Martins 2015). Thus, the first objective of this research is to analyze MI as a mediator between CI and R.

To create positive approach responses toward destinations, tourism managers can use argument and narrative appeals (Zheng 2010; Escalas 2004). Argument appeals are based on CI, seeking to differentiate the destination via its attributes, such as great beaches and good value for money (Kim and Jang 2016; Stylos et al. 2016). For example, Rotorua is positioned via its attributes as a destination that offers a good lifestyle, high-quality cafés and restaurants, and hot pool bathing (Pike 2002). Yet, some managers use narrative appeals seeking to create a mental image of the destination. In such cases, the advertising appeals not to a specific attribute, but rather to the experience by creating a MI of the place. For example, the Azores create a MI of a destination with thousands of experiences and a feeling-alive sensation by using music, pictures, and videos on their website (Visitazores 2020). Thus, tourism managers will value to know how they can adapt their marketing policies to their target group. From a scholarly point of view, this relates to the question, which moderators strengthen the link between CI and MI. Considering narrative appeals as costlier than argument appeals, answering this question can help practitioners balancing their actions. This can be particularly relevant where high-profile visitors, such as cosmopolitanisms, are costly to target. Therefore, the second objective is to identify different psychological segmentation bases (cosmopolitanism, escapism, and cognitive thinking style) that moderate the CI-MI relationship.

In sum, the contributions of our research to the tourism literature are threefold. First, we propose the CI-MI-R framework founded on the well-known S(Stimulus)-O(Organism)-R(Response) framework (Roschk et al. 2017), which represents a crucial step in examining destination attributes (Stylos et al. 2016) as stimuli that influence tourists' responses. Second, MI acts as organism, where prior studies traditionally consider emotional states such as

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pleasure, arousal or even satisfaction (Roschk et al. 2017; Kucukergin et al. 2020). Third, instead of considering the typical demographic characteristics as segmentation base (Dolnicar 2008), our research explores three psychological segmentation-based moderators, namely, cosmopolitanism, escapism, and cognitive thinking style (e.g., Labrecque et al. 2011; Loureiro 2014).

## 2. Literature review and hypotheses development

### *2.1 Cognitive image as stimulus (CI)*

Cognitive image represents the total knowledge and beliefs used by tourists to evaluate the attributes of a destination, even without having visited the destination (Stylos et al. 2016; Tasci et al. 2021). The focus of CI is mainly on tangible, physical attributes (Pike and Ryan 2004), such as hotels, infrastructures, restaurants, and cultural attractions. CI relates to response outcomes such as destination preference (Lin et al. 2007), destination choice (Baloglu and Brinberg 1997), and intentions to revisit a destination (Stylos et al. 2016), which has also been corroborated by recent integrative work (Afshardoost and Eshaghi 2020). Thus, CI represents stimuli that can induce responses (see Figure 1).

*[Insert Figure 1 about here]*

### *2.2 Place attachment and WOM communication as response (R)*

Place attachment (PA) refers to tourists' emotional response to the place, reflecting tourists' place relationship (Lalicic and Garaus 2020; Prayag and Ryan 2012; Tasci et al. 2021). PA comprises identification, affection, passion, and connection toward the place (Loureiro 2014) with strong emotions toward it (Hosany et al. 2020; Patwardhan et al. 2020; Ramkissoon et al. 2013). Word of mouth (WOM) communication of tourists is a behavioral response, dealing with the willingness of tourists to share their thoughts about the destination to others

(Hwang and Lee 2019; Yang et al. 2018). Both responses are positively related to customer lifetime value, loyalty, repeated purchases, and brand profitability (Yoon and Uysal 2005).

*2.3 Mental imagery (MI) as organism*

Mental imagery is regarded as part of the organism, which is an internal visualization process operates in the tourist's mind (MacInnis and Price 1987). MI activates concrete representations of beliefs and feelings related to the tourist's experience in a pictorial mode (MacInnis and Price 1987). MI includes three core dimensions: vividness, quantity, and valence (Miller et al. 2000). Vividness is the quality of the imagery, including its clarity, intensity, and distinctiveness evoked in the individual (Lee and Gretzel 2012). Quantity refers to the number of images that come to mind while processing information of the mental picture (McGill and Anand 1989). Valence indicates the tourist's interpretation of the emotional meaning attached to concrete memories, representing whether the affective meaning of imagery carries a positive or negative connotation (Lee and Gretzel 2012).

Interiorized stimuli can influence the images stored by tourists (Lin et al. 2007). As such, CI may elicit the image processing of the destination (Tapachai and Waryszak, 2000), with the destination attributes evoking images of different levels of clarity and intensity and of differing emotional valence (Miller et al. 2000). Thus, we expect that more positive CI attributes yield to more positive imagery, in terms of vividness, quantity, and valence (Lee and Gretzel, 2012). Further, we argue that MI facilitates individuals' emotional bonds toward the destination (place attachment) and the social identification with it by talking positively about the destination and its attributes to others (WOM communications; Lee and Gretzel 2012; Loureiro 2014; Yoon and Uysal 2005).

Factors, such as stimuli and attributes, that facilitate the construction of mental models increase approach behaviors, while those that undermine this process decrease approach

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behaviors (Green et al. 2002; Zheng 2010). Considering that MI is evoked from the exposure to destination attributes (Cardoso et al. 2019) and relates to positive tourist responses (e.g., Green et al. 2002; Lee and Gretzel 2012), we expect positive emotional bonds and WOM toward a destination when the MI features a vivid representation of the destination, comprises a large number of stored images in tourists' mind, and is associated with a positive interpretation. Therefore,

H1: Cognitive image causes via mental imagery positive tourist responses, specifically place attachment and WOM communication.

*2.4 Moderator variables on the CI-MI-R framework*

Scholars recommend using customer characteristics as a segmentation basis, since management often depends on a well-formulated combination of firm actions toward its target group (Riefler et al. 2012). Likewise, prior works suggest that different segmentation bases can moderate the relationship within the S-O-R framework (Goi et al. 2014; Kucukergin et al. 2020). For instance, tourists differ in terms of how they picture destinations and their ideal vacation (Dolnicar 2008). These differences can be attributed to different lifestyles, travel motivations, and information processing; all of which are relevant psychological segmentation bases (e.g., Labrecque et al. 2011; Loureiro 2014). Thus, to reflect the heterogeneity of tourists along the lines of their lifestyles, travel motivations, and information processing, we use cosmopolitanism, escapism, and cognitive thinking style as moderators in our analysis. Those variables represent a psychological segmentation basis and provide different angles for management practice.

In specific, cosmopolitans are considered as a particularly attractive target group (Riefler et al. 2020). Escapists, by desiring experiences different from everyday life, can exhibit a strong travel motivation (Ponsignon et al. 2020). Individuals' cognitive thinking

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style, by reflecting the mode of information processing, captures a relevant decision-making facet of tourists (Hong and Desai 2020).

### 2.4.1 Cosmopolitanism

Cosmopolitanism means citizen of the world (Riefler et al. 2012). Cosmopolitan individuals have an affinity for cultural diversity and the proclivity to master it (Cleveland et al. 2014). In their value structure, they emphasize universalism, benevolence, and openness-to-change more than non-cosmopolitan citizens (Schwartz 2012). Cosmopolitans are considered as expatriate professionals, who actively collect different experiences thorough their lives (Thompson and Tambyah 1999) and so hold a diversified and complex picture of the world (Calhoun 2003).

With cosmopolitanism being related to openness-of-mind and the search for what is universal, the focus on a particular aspect or destination is likely less pronounced (Calhoun, 2003). We expect that this may impair the MI pathways, since the generation of picture-like representations in tourists' minds through the destination attributes may be more effective, when tourists focus on a particular environment or destination. Beyond that, due to their international outreach, cosmopolitans may have a richer travel experience and so a larger set of destination images already stored in their minds, making it difficult to create new distinct pictures that receive their attention. In contrast, less cosmopolitan tourists may not be that familiar with different destinations, which presumably leads to a more effective translation of the destination attributes into mental images and subsequently to tourist responses. Thus,

H2: Increasing (decreasing) cosmopolitanism of tourists leads to a smaller (larger) indirect effect of cognitive image via mental imagery on tourist responses

### 2.4.2 Escapism

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Escapism is a travel motivation that drives people to escape from their daily life and return to their routines after experiencing the extraordinary (Labrecque et al. 2011; Loureiro 2014). This kind of experience involves tourists, who travel to destinations 'worthy of their time,' which are different from those most people are familiar with (e.g., long-distance travels, cyberspace; Pine and Gilmore 1998; Ponsignon et al., 2020).

Given their motivation to break away from daily routines, individuals exhibiting a high degree of escapism may integrate a richer set of experiences, including travel, into their lives than individuals scoring low on this characteristic. Accordingly, escapists are likely to have a larger set of images stored in their memory, either as a result from different experiences or the experience itself (e.g., virtual realities), thus making it difficult to create new mental images that attract their attention. Moreover, it may be reasoned that the escapist's pursuit for the extraordinary yields to a higher bar for creating distinct mental images that stand out and so receive the individual's attention. For these reasons, escapism may weaken the MI pathways, since it makes the translation of the destination attributes into picture-like representation more difficult than for individuals low on escapism. Thereby,

H3: Increasing (decreasing) escapism of tourists leads to a smaller (larger) indirect effect of cognitive image via mental imagery on tourist responses

2.4.3. Cognitive thinking style (CTS)

Individuals differ in their preference for one of two thinking styles that help organizing information for making decisions (Ares et al. 2014). One is more intuitive (i.e., experiential) and the other more rational (i.e., deliberative-systematic; Epstein et al. 1996). Both styles are distinguishable, with high CTS being more rational while low CTS more intuitive (Witteman et al. 2009).

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We expect that tourists with a high CTS, exhibit weaker MI pathways of CI on tourist responses. High CTS is associated with a more rational and analytical mode of processing information, leading tourists to be more systematic in evaluating the attributes of a destination (Ares et al. 2014; Epstein et al. 1996). In contrast, low CTS is associated with a more intuitive information processing, emphasizing the experiential nature of a purchase decision (Ares et al. 2014). The translation of a destination's attributes into picture-like representations speaks to rather an experiential than to a rational information processing. Accordingly, high CTS and the corresponding preference for rational decision making may impair the translation of CI into MI and subsequent tourist responses (Ballantyne et al. 2011). Thus,

H4: Increasing (decreasing) cognitive thinking style of tourists leads to a smaller (larger) indirect effect of cognitive image via mental imagery on tourist responses

## 3. Overview of Studies and Methodological Approach

The CI-MI-R framework represents a complex relational structure among different variables. We thus embark on a correlational approach with structural equation modelling (SEM) due to its explanatory power of complex phenomena, such as in our case (Ryan 2020), and alignment to prior research on CI and MI (Stylos et al. 2016). We use a multi-study approach with respondents from the USA and Germany to increase external validity. Both countries differ in their travel patterns (see Table 1), while at the same time both are "Western" cultures, which is desirable as place attachment may be culture-bound (Scannell and Gifford 2014).

Across both studies, we include prior experiences and gender as control variables. Prior experiences are likely relevant for the formation of mental images and present an important predictor for tourist responses (Dolnicar et al. 2015). Gender differences can

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influence the formation of MI, due to findings rendering women as more emotional expressive and memorizing than men (Iachini et al. 2019), which can influence behavioral intentions (Melnyk et al. 2009). For examining the segmentation-base moderators, Study 2 additionally comprises affect intensity, since it can overlap with them, especially with cognitive thinking style.

## 4. Study 1: Mental Imagery Dimensions

### *4.1 Method: sampling and data collection*

The aim of Study 1 is to test the links from CI to tourist responses via MI (see Figure 1). Participants were paid a modest fee for their participation through an online panel provided by Qualtrics, using the US census as target population. We sent out an online questionnaire as a one-time invitation, lasting for one week during June 2018. Thus, data collection was unaffected due to the Covid-19 pandemic. We determined sample size using power considerations for which we anticipated a small-to-medium effect size of .20 to consider that indirect effects are less in size than direct effects (Stylos et al. 2016). A SEM-based power analysis ($\alpha = .05$, power = .80, 6 latent variables with 45 indicators) yielded a minimum sample size of 538 due to model complexity (Ali et al. 2018; Soper 2020). Thus, study 1 sampled data from 806 US citizens.

Actions were in place to avoid or minimize recall bias and ensure data quality. To tackle recall bias, we collected information in the same way from all respondents, utilized commitment techniques (asking participants to respond conscientiously), and provided memory aids (asking participants to think about the place they visited for vacations; Kopec and Esdaile 1990). We deleted 13 participants due to missing data on most items, thus the final sample comprised of 793 USA respondents. Table 1 summarizes their profile. The median time to fill out the survey was 11 minutes.

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*[Insert Table 1 about here]*

*4.2 Measures*

We measured CI with an 18-item-scale, adopted from Stylos et al. (2016). Reviewing research on CI, we concluded that Stylos et al.'s (2016) scale provides the most comprehensive assessment and informed further research (Afshardoost and Eshaghi 2020). The MI dimensions of quantity, vividness, and valence were measured with three, seven, and six items, respectively, based on Miller et al. (2000). This scale has been successfully used as primary source for analyzing MI in tourism (Lee and Gretzel, 2012). Finally, place attachment and WOM communication were measured with seven items from Ramkissoon et al. (2013) and four items from Brüggen et al. (2011), respectively, who provide applications in the context of tourism and sensory marketing. For all constructs, we used seven-point Likert scales, ranging from 1 "strongly disagree" to 7 "strongly agree", except for vividness and valence. For these, we used 7-point semantic differential scales. Seven-point (Likert) scales can reduce measurement error (Stylos et al. 2016) but require attention to skewed distributions and non-linear relationships due to their interval treatment.

*4.3 Analysis approach*

Figure 2, panels (a) to (d) depict the possible model variants for the second order structure of the MI dimensions (Rindskopf and Rose 1988). The model fit indices of a CFA indicate that the models (b) and (c) fit better than the models (a) and (d). The equal fit of (b) and (c) is due to the special case of three dimensions, where both models are statistically equivalent (Rindskopf and Rose 1988). For further analysis, we use model (c). Its separate treatment of the dimensions enables us to consider potential idiosyncratic effects of the dimensions while, at the same time, we can assess the effect of MI as a total across the dimensions.

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Subsequently, we focus on the total effect of mental imagery, with the dimension-wise results as supplementary information.

*[Insert Figure 2 about here]*

To test our hypotheses, we use SEMs with Bayesian estimation. Research advocates a Bayesian estimation because it focuses on the data sensitivity of models rather than on their "correct" specification and so allows to capture lack of fit and skewed distributions as well as to accommodate more complex relationships (Zyphur and Oswald 2013). SEMs have two other characteristics, which require attention. First, albeit SEMs are favored for their explicit estimation of measurement errors (Ryan 2020), this also leads to a loss of information of the original variables. Thus, for robustness across analysis approaches, we test if the SEM results replicate in a regression-based approach. Second, SEM as used in our case, treats the model relationships as linear. Thus, given prior research (Dolnicar et al. 2015), we explore the data for non-linear effects between the MI dimensions and tourist responses. The control variables are included in all subsequent analyses.

### *4.4 Measurement properties*

*Convergent and discriminant validity.* We ran a CFA (see Table 2 for the items and their descriptive data), which yielded a satisfactory model fit, $\chi^2/df = 3.18$, SRMR = .041, CFI = .94, TLI = .93, RMSEA = .052 (Hair et al. 2006). All items loaded significantly ($p < .001$) on their corresponding construct and the composite reliabilities (around .90) exceeded the required .60 threshold. The average variances extracted (AVEs) met the Fornell-Larcker criterion (see Tables 2 and 3). Additionally, negatively skewed items and exceptions in factor loadings (< .5) make a Bayesian estimation desirable.

*[Insert Tables 2 and 3 about here]*

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*Common method variance.* We assessed common method variance (CMV) with the marker variable approach by Williams et al. (2010). We used the attitude toward the color blue (three items, composite reliability = .92) as marker, because it is suggested to be largely independent to model constructs and shown to capture CMV (Simmering et al. 2015). The suggested test by Williams et al. (2010) yielded a nonsignificant result ($\chi^2 = 6.0$, df = 15, $p$ = .98), indicating that the correlations do not significantly vary whether the influence of the marker is accounted for or not. Calculating the substantive reliabilities (composite reliabilities corrected for the influence of the marker; Table 3) we obtained values close to or larger than .80 (Williams et al.'s 2010). In sum, we conclude that the measurement properties are satisfactory and common method variance—to the extend the marker allowed to capture it—does not threaten our results.

### *4.5 Results*

In Bayesian analysis the parameter estimates are represented by probability distributions, for which we provide the mean (M) and the 95% credible interval (CR); the latter indicating that, given the data, the estimate lies with a 95% probability within the interval and so an effect can be understood as existent if CR excludes zero. Table 5 shows the model estimation results. In support of H1, CI caused a positive indirect (standardized) effect via MI on place attachment (M = .39, CR: .32, .46) and WOM communication (M = .49, CR: .42, .57). Inspecting the MI dimensions, we see positive indirect effects of CI via quantity and vividness on place attachment, and via quantity and valence on WOM communication (Table 5). To provide robustness across different analysis approaches, regression-based mediation analysis (model 4, Hayes 2018) replicates the SEM pattern for the paths through MI (and its dimensions). Additionally, we explored the data for quadratic effects using the approach by

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Marsh et al. (2004), with results not showing non-linear trends in the effects of the MI dimensions on tourist responses.

*4.6 Discussion of Study 1*

We find that CI is positively related to tourist responses via MI, indicating that individuals form responses based on their picture-like imaginations of the attributes they believe to know about a destination. Providing more nuanced insight, we observed that indirect effects via vividness linked only to place attachment and via valence only to WOM communication. One possible explanation is that for an emotional response as place attachment, tourists need a vivid picture of the place, but not necessarily a bad or good experience, as they will feel unconsciously involved even if the valence is negative (Ward and Dahl 2014), while whether the mental image of the place being good or bad (valence) is critical for actively spreading positive WOM communication. Nonetheless, analyzing MI supports the central mediating role of MI for the influence of the cognitive image about a destination on tourist responses.

## 5. Study 2: Moderators

*5.1 Method: sampling, and data collection*

Study 2 seeks to replicate study 1 in a different national context and examine moderating effects that can yield differences in the strength of mediation of MI on the CI-R relationship (see Figure 1, H2-H4). The sampling and data collection procedures were the same as before, with the following adjustments. For power analysis, adding further latent variables (e.g., 5 items) did not fundamentally change sample size requirements, since the Soper (2020) procedure identified the ratio of latent variables to indicators (i.e., model complexity) as the limiting factor. Data were collected from German citizens via the crowd source panel clickworker.com, which has served as a reliable data source in another research, for a modest

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fee (Roschk and Gelbrich 2017). We run the survey for one week during March 2019, thus again, answers were unaffected by the Covid-19 pandemic. The median time to fill out the survey was 13 minutes. Overall, 585 German respondents participated, and none was excluded due to missing values. Table 1 summarizes the profile of the respondents.

### *5.2 Measures*

We used the same measures as in the first study (see Table 1). Additionally, we measured cosmopolitanism as a second order construct, using the scale developed by Cleveland et al. (2014), which comprises the three pertinent subdimensions—open mindedness (eight), diversity appreciation (three), and consumption transcending borders (three items)—and advances other scales by being cross-culturally valid. For escapism, we used five items based on Kargaonkar and Wolin (1999) and Labrecque et al. (2011). Cognitive thinking style was measured by three items adapted from Vinitzky and Mazursky (2011), who provide an application in the context of sensory marketing and so close to our field of research. Finally, we measured affect intensity, which is used as a control in the analysis, with six items from Doucé and Janssens (2013), who provide an application in the context of sensory marketing. All scales that were added for Study 2 used seven-point Likert scales, ranging from "1 strongly disagree" to "7 strongly agree."

### *5.3 Analysis approach*

The analysis approach followed study 1 (see also Figure 2). To examine our hypotheses, we formed latent interaction terms according to Marsh et al. (2004). The items for the latent interaction term were calculated by multiplying each centered indicator of the moderator with the composite index of CI. Using the composite index of CI was due to avoiding unequal number of items and subsequent measurement properties. All means of the latent variables

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were constrained to zero and that of the latent interaction to the value of the covariance with CI.

*5.4 Measurement properties*

*Convergent and discriminant validity.* Running a CFA yielded a satisfactory model fit ($\chi^2$/df = 2.70, SRMR = .068, CFI = .88, TLI = .87, RMSEA = .053) and measurement properties (see Tables 2 and 4). Attention was required for the AVE of CI (.34), which indicated that this scale may not be unidimensional (Stylos et al. 2016). Exploring the factorial structure (varimax rotation), yielded a three-factor solution that explained 59.5% of the variance of the CI items. We thus substituted the latent variable with a composite index formed from the scores of the three factors. Whether using a composite index or a latent variable for CI did not influence the result pattern, yet the former uses more information what is beneficial for the latent interactions. Importantly, the Fornell-Larcker criterion was met (see Table 4). Negatively skewed items and exceptions in factor loadings (< .5) again render a Bayesian approach desirable.

*Common method variance.* Testing if the marker attitude toward the color blue (same items from Study 1; composite reliability = .94) caused a difference in the model correlations yielded a nonsignificant result ($\Delta\chi^2$ = 72.3, $p$ = .66), indicating that the correlations do not vary as function of the marker. Likewise, the substantive reliabilities exceeded .80 (Table 4).

*[Insert Table 4 about here]*

*5.5 Results*

Table 5 shows the results of the Bayesian model estimations. Data in support of H1 indicated in Model 1 positive indirect effects of CI via MI on place attachment (M = .18, CR: .13, .24) and WOM communication (M = .38, CR: .32, .45). In Models 2 to 4 we added the moderators

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and their interactions with CI to analyze the indirect effects of the interaction term via MI. The interaction term with cosmopolitanism yielded negative indirect effects on the responses (place attachment: M = -.04, CR: -.06, -.02 and WOM communication: M = -.07, CR: -.11, -.03), as was the case for cognitive thinking style (place attachment: M = -.05, CR: -.08, -.03 and WOM communication: M = -.08, CR: -.13, -.04) and escapism (place attachment: M = -.04, CR: -.07, -.02 and WOM communication: M = -.07, CR: -.12, -.02). Figure 3, panels a to c, show the moderated indirect effects. Higher values in the moderators yield to a reduction in the indirect effect of CI via MI, thus supporting H2, H3, and H4. Inspecting the MI dimensions, we see again that the indirect effects of CI go through quantity and vividness on place attachment, and through quantity and valence on WOM communication (Table 5). Regression-based mediation results for the indirect effects (model 4) and moderated indirect effects (model 7, Hayes 2018) replicate the SEM results. We also do not find quadratic trends in the effects of the MI dimensions on tourist responses.

*[Insert Table 5 about here]*

Finally, we tested place attachment for metric invariance across both country samples. Constraining the factor loadings to be equal across countries, except for item PA5, a $\chi^2$ difference test was not significant ($\chi^2[6] = 10.14$, $p = .12$), indicating metric invariance for most items. Following on PA5, omitting this item from the model estimations did not alter results. Thus, US and German respondents had a comparable understanding of place attachment so that potential culture-bound elements do not threaten our results.

### *5.6 Discussion of Study 2*

Study 2 substantiates the links from CI to tourist responses via MI. The relationships are consistent to Study 1, suggesting robustness of our results for a different national

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background. Together, the findings indicate that in the tourism field MI can be considered as an important theoretical linkage between CI and tourist responses, given a field of application where mental pictures and imaginations can help promoting tourist destinations.

Another aim of Study 2 was to examine possible segmentation bases (i.e., moderators) that moderate the indirect effects of CI through MI. Results show more pronounced MI pathways for consumers scoring low on cosmopolitanism than high. This result reveals another specific aspect of cosmopolitans as a group of interest in international marketing that appears to need a differentiated appeal strategy for destination promotion. We identify escapists to be less receptive to CI for forming mental images, suggesting that the desire to break away from the daily routines can outweigh picture-like formed representations. Finally, we found for those high on logic reasoning that CI evokes fewer mental images of the destination.

## 6. Conclusions and implications

### *6.1. Theoretical contribution*

This research makes three contributions to the tourism destination literature. First, the results using panel samples from USA and Germany offer support for our CI-MI-R framework. Thus, we contribute to the knowledge on tourism destination showing that CI influences tourist response. Second, MI coming from the context of advertising (McGill and Anand 1989; Zheng 2010), can act as organism in tourism destination context and, thus, mediate the link of CI to positive tourist responses. Third, we analyzed three psychological segmentation-based moderators, which tend to decrease the strength of the link between CI and MI, what constitutes another valuable theoretical contribution.

The fact that data were collected before the COVID-19 pandemic makes it likely that the responses of the participants differ from those that would be obtained after the pandemic

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situation (Williams et al. 2020). On the one hand, the relationships from CI via MI to tourist responses may be stronger since a travel experience after a long absence could be particularly salient for shaping tourists' mental images. On the other hand, the relationships could also be weaker, if tourists, for example, find value in places, such as beaches or restaurants, being crowded, something that is not experienced. Yet, the overall structure of the CI-MI-R framework is expected to remain and only the strength of the relationships may differ.

### *6.2 Managerial implications*

Tourist managers—destination mangers, tour operators and travel agencies—can benefit from our findings to enhance destination marketing and management in five major aspects. First, the way a destination presents its offer (e.g., infrastructure, cultural attractions) is crucial to capture tourists. Destination managers should work with local hospitality managers to communicate what is the core proposal of the destination to achieve congruency between what tourists expect and what they get at the destination. Generally, argument appeals can be used to deliver knowledge about the destination's core attributes. For example, these days, tourists will likely search for destinations that communicate a CI as being clean and safe, particularly in a pandemic and post-pandemic situation.

Second, the images created in tourists' mind influence their emotional bonds with the destination and their recommendations to others. Thus, narrative advertising appears effective in stimulating the tourist experience: the number of images in memory contribute significantly to develop an attachment to the destination and to recommend the destination. An effective way of developing pre-consumption imagery appears using emerging technologies such as virtual reality and 360-degree videos on DMO websites. Destination managers and owners of facilities should then provide a rich, diversified, and stimulated experience to enhance the bonds and encourage more visits. Positive and numerous images of

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the destination in tourists' minds also lead them to encourage others to experience the destination.

Third, cosmopolitan tourists regard themselves as world citizens. Cosmopolitans more than non-cosmopolitans tend to store images about several different destinations, what can result in a doppelgänger effect when visiting a new destination. The mental images of a destination can be confounded with other destination in tourists' minds. Thus, destination managers should realize when they are receiving a cosmopolitan tourist and understand what stimuli can be more effective in creating distinctive, clear, intense, and emotionally positive images in their minds, in a such manner that they can consider the destination as unique and unforgettable. Cosmopolitan tourists need to be targeted using narrative advertising, where the core message is conveyed by telling a story. The narrative of a story about the destination together with images works together to enrich the mental imagery of the tourists. The same narrative can be lived in local when they visit the destination.

Fourth, generally, when tourist think that the destination is too far away from what they are used to, the process of creating images can be more difficult, thus the CI-MI link is weaker. Managers should then balance between novelty and some familiar features in order to facilitate the creation of numerous, vivid, and emotionally positive images which, in turn, will enhance the ties between the tourists and the destination and the willingness to recommend to others. Yet, in the case of escapist tourists, managers should be more careful and creative because escapists desire to be in a different space or time than they have in their daily lives. Therefore, they should be targeted using immersive tools such as virtual reality to increase MI and facilitate the tourism experience (Loureiro et al. 2020).

Finally, the mechanism of visualizing stimuli in tourists' minds is more difficult to occur for tourists, who are more analytical-rational than for less analytical-rational tourists. Effectively, more rational-analytical minds tend to be more critical and detailed when

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analyzing stimuli (attributes of a destination). For these tourists not all stimuli will lead to a network of images in their mind. Thus, for them, mangers should use mental imagery elements in narrative advertising, such as sensory images, including music or smell combined with image and text. Tourism managers target based mainly on demographics characteristics (Dolnicar 2008), but they should also strive for obtaining a better understanding of their target customers' level of psychological segmentation bases, which can be achieved by using a simple survey with psychological based measurement scales.

*6.3 Limitations and further research*

Although this research provides insights for academics and destination managers, it has also limitations that provide opportunities for future research. First, future research can expand the CI-MI-R framework, by analyzing further stimuli (e.g., place authenticity), MI dimensions (sensory modality; Miller et al. 2000), outcomes (e.g., relationship with the destination, its perception as a "cool" place; Warren et al. 2019), and moderators (e.g., tourists' familiarity with the destination, personality traits, travel motivation, lifestyles, and cultural values). Second, research may also explore other countries and destinations. Third, although the S-O-R framework is well-established, exploring the causal priorities among the model elements appears a promising research avenue (Roschk and Hosseinpour 2020). Likewise, while we did not find non-linear effects, future research may tap into this domain. In our analysis respondents held majorly a positive picture of the destination (positive valence) and it seems conceivable that there may be non-symmetrical effects of positive and negative images. Fourth, researchers may consider how memory changes tourists' imagery perception over time. Fifth, it might be interesting to explore our framework during or after the Covid-19 pandemic. As such, more data may indicate either robustness of our findings or insightful differences, being of value in either case. Finally, with the evolution of facilitating-

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engagement technologies (e.g., virtual reality, artificial intelligence; Loureiro et al. 2020), managers are provided with new tools that may be explored in relation to mental imagery.

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# Figures

Figure 1. CI-MI-R framework across studies

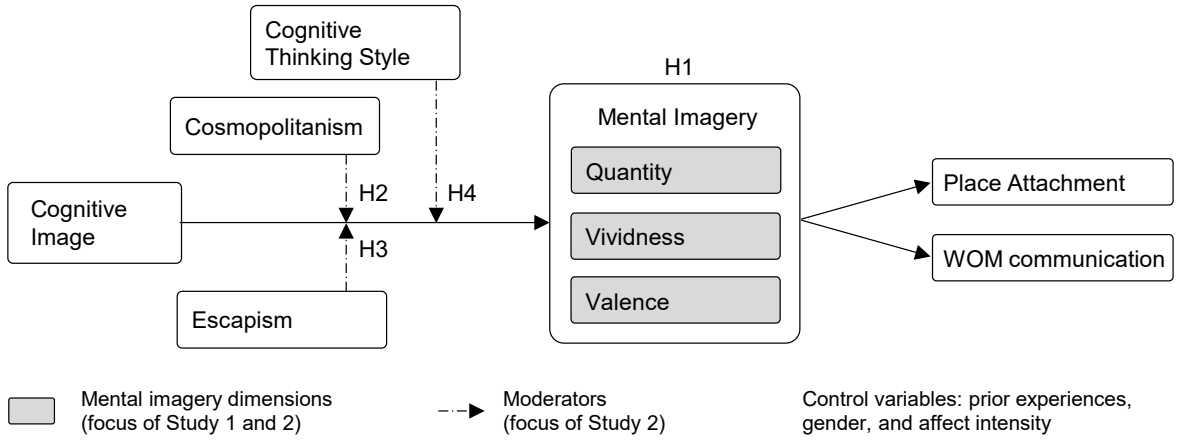

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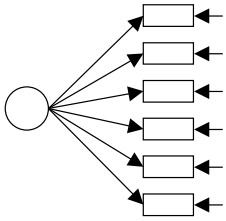
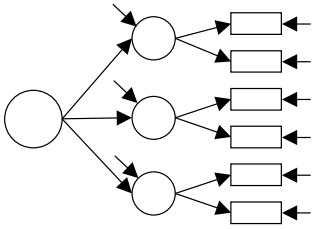
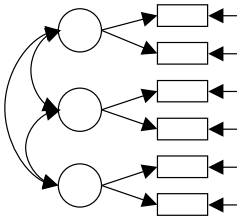
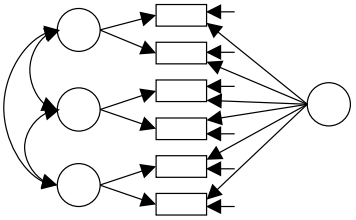
Figure 2. Modelling options for mental imagery

<table>
<tr>
<td>(a)<br>  <br>Model fit<br>Study 1: χ²/df = 31.06, CFI = .79, TLI = .76, SRMR = .10<br>Study 2: χ²/df = 18.92, CFI = .77, TLI = .73, SRMR = .08</td>
<td>(b)<br>  <br>Model fit[a]<br>Study 1: χ²/df = 4.88, CFI = .97, TLI = .97, SRMR = .03<br>Study 2: χ²/df = 5.01, CFI = .95, TLI = .94, SRMR = .04</td>
</tr>
<tr>
<td>(c)<br>  <br>Model fit[a]<br>Study 1: χ²/df = 4.88, CFI = .97, TLI = .97, SRMR = .03<br>Study 2: χ²/df = 5.01, CFI = .95, TLI = .94, SRMR = .04</td>
<td>(d)<br>  <br>Model fit<br>Study 1: χ²/df = 7.46, CFI = .96, TLI = .95, SRMR = 'na'[b]<br>Study 2: χ²/df = 6.29, CFI = .94, TLI = .92, SRMR = 'na'[b]</td>
</tr>
</table>

[a]As in our case, when there are three dimensions, the Models (b) and (c) lead to the same model fit as they are statistically equivalent (Rindskopf and Rose 1988).
[b]SRMR could not be calculated in Model (d).
Note: For illustrational purposes, a schematic representation of the models is shown.

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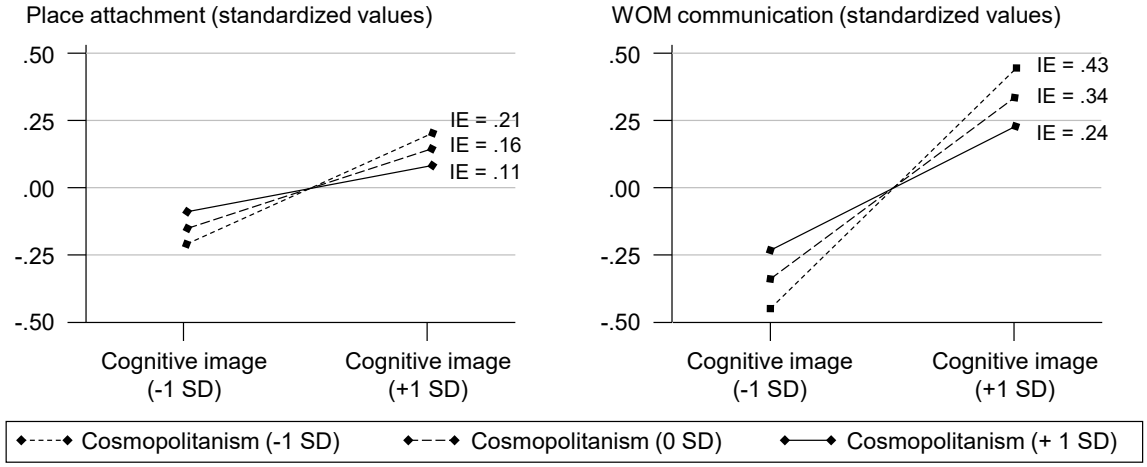
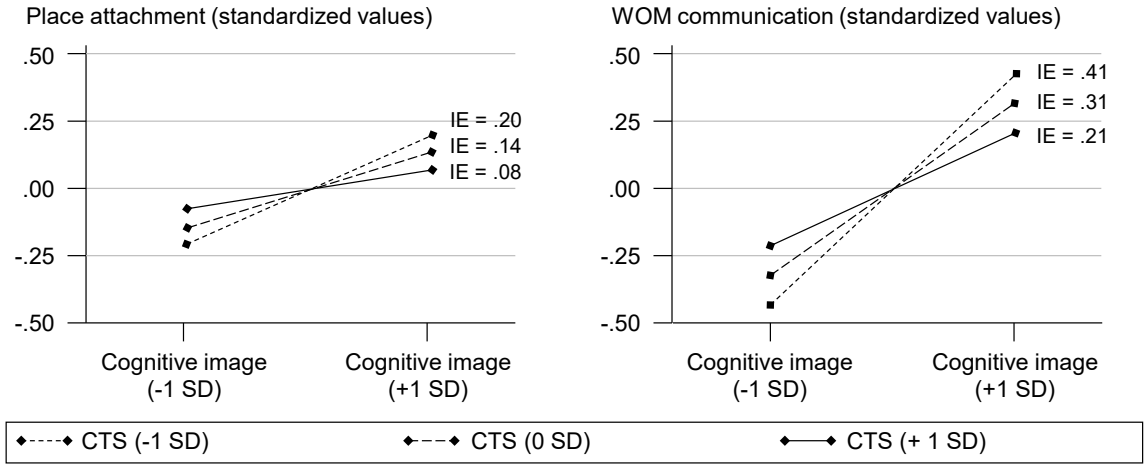
Figure 3. Graphical plots of the moderated indirect effects

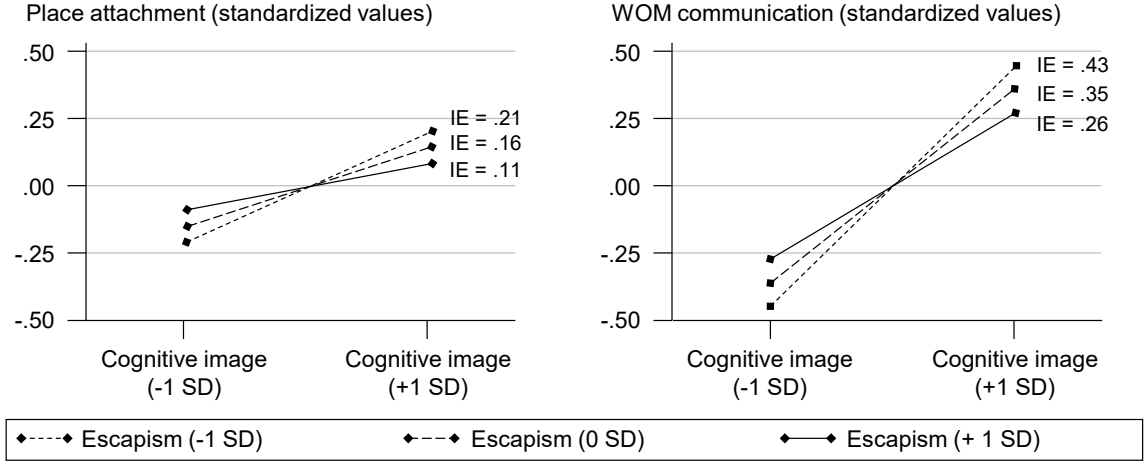
**a Cosmopolitanism**




**b Cognitive Thinking Style (CTS)**




**c Escapism**



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## Tables

Table 1. Profile of study participants across studies

| Characteristics | Study 1 (USA) | Study 2 (Germany) |
|---|---|---|
| *Sample size (n)* | 793 | 585 |
| *Gender (in %)* | | |
| Female | 52.1 | 47.4 |
| Male | 47.9 | 52.6 |
| *Age (in %)* | | |
| < 19 | 0.4 | 1.7 |
| 20 to 29 | 15.8 | 31.6 |
| 30 to 39 | 22.1 | 36.4 |
| 40 to 49 | 14.2 | 16.4 |
| 50 to 59 | 15.1 | 10.9 |
| 60 to 69 | 21.3 | 2.9 |
| > 70 | 11.1 | 0.0 |
| *Relative household income (in %)*[b] | | |
| Very much less | 9.3 | 4.4 |
| Much less | 11.9 | 7.9 |
| Less | 25.9 | 22.4 |
| Equal | 32.5 | 36.9 |
| More | 16.8 | 24.3 |
| Much more | 2.4 | 3.4 |
| Very much more | 1.3 | 0.7 |
| *Highest level of education (in %)* | | |
| Secondary degree | 29.9 | 49.7 |
| Post-secondary degree | 28.5 | 13.8 |
| Undergraduate degree | 30.4 | 9.7 |
| Postgraduate degree[a] | 11.2 | 26.7 |
| *Employment status (in %)* | | |
| Freelancer / entrepreneur / businessperson | 5.3 | 16.8 |
| Part time employee | 11.0 | 12.1 |
| Full time employee | 38.2 | 44.3 |
| Household | 7.1 | 3.8 |
| Student | 2.0 | 16.8 |
| Pensioner | 11.9 | 2.7 |
| Unemployed | 13.1 | 2.6 |
| Other | 11.3 | 1.0 |
| *Marital status (%)* | | |
| Married | 45.8 | 31.8 |
| Spouse | 12.6 | 28.7 |
| Divorced / separated / widowed | 17.9 | 5.8 |
| Living alone | 23.7 | 33.7 |
| *Number of children (in %)* | | |
| 0 | 42.9 | 66.3 |
| 1 | 16.4 | 15.2 |
| 2 | 22.3 | 15.4 |
| 3 | 11.1 | 1.5 |
| >3 | 7.3 | 1.6 |
| *Times travelled to the destination during the last five years (%)* | | |
| First time | 30.0 | 38.5 |
| 1 to 5 times | 52.8 | 52.3 |
| 6 to 10 times | 8.2 | 7.7 |

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Table 1. Profile of study participants across studies

| Characteristics | Study 1 (USA) | Study 2 (Germany) |
|---|---|---|
| 11 to 20 times | 5.0 | 0.9 |
| More than 20 times | 3.9 | 0.7 |
| *Typical travel party to the destination (%)* | | |
| Alone | 15.9 | 9.6 |
| Couple | 32.7 | 37.1 |
| Friends / relatives | 18.5 | 20.5 |
| Familiy members | 31.5 | 29.9 |
| Organized groups | 1.4 | 2.9 |
| *Preferred travel model (1 = "strongly disagree," and 7 = "stongry agree")* | | |
| Organize travelling myself | 5.2 | 5.8 |
| Use travel packages | 3.2 | 3.0 |
| Varies on the specific destination | 4.9 | 5.0 |
| *Places most often named as destinations.*[c] | | |
| 1st | Florida (13.1%) | Spain (13.3%) |
| 2nd | Las Vegas (4.8%) | Italy (8.9%) |
| 3rd | South Carolina (4.4%) | Austria (5.6%) |
| 4th | Europe (4.3%) | UK and Ireland (4.1%) |
| 5th | California (4.2%) | Netherlands (3.9% |

[a]Completed or not.

[b]Assessed in a relative manner “How much income has your household available in comparison to other households in your country?” to avoid non-response drop outs and to make different income structures comparable across countries.

[c]Travel patterns varied across the USA (intranational) and Germany (international). Similar to the USA, the largest share of German respondents (19.1%) named a place within Germany. Yet different to the USA, a particular place or area was not as often mentioned as places outside.

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Table 2. Means, standard deviations, standardized factor loadings, and critical ratios used in the measurement models of Studies 2 and 3.

| | Study 1 | | | | | | Study 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item | Mean | SD | Skew-ness | Kur-tosis | FL | t | Mean | SD | Skew-ness | Kur-tosis | FL | t |
| *Cognitive Image*[a] | | | | | | | | | | | | |
| CI01 | 5.77 | 1.49 | -1.31 | 1.31 | .66 | 20.7 | --- | --- | --- | --- | --- | --- |
| CI02 | 4.91 | 2.01 | -0.69 | -0.66 | .39 | 11.2 | --- | --- | --- | --- | --- | --- |
| CI03 | 5.86 | 1.46 | -1.37 | 1.48 | .74 | 23.8 | 5.87 | 1.38 | -1.27 | 0.98 | .49 | 11.8 |
| CI04 | 5.42 | 1.45 | -0.81 | 0.37 | .70 | 22.2 | --- | --- | --- | --- | --- | --- |
| CI05 | 5.90 | 1.35 | -1.36 | 1.71 | .66 | 20.7 | 5.70 | 1.27 | -1.15 | 1.27 | .52 | 12.7 |
| CI06 | 6.01 | 1.32 | -1.46 | 2.07 | .74 | 24.0 | 5.89 | 1.27 | -1.22 | 1.06 | .61 | 15.4 |
| CI07 | 5.10 | 1.71 | -0.70 | -0.20 | .49 | 14.3 | 4.96 | 1.71 | -0.68 | -0.30 | .45 | 10.8 |
| CI08 | 6.01 | 1.37 | -1.60 | 2.33 | .82 | 28.0 | 5.98 | 1.27 | -1.43 | 1.82 | .66 | 16.9 |
| CI09 | 5.20 | 1.72 | -0.76 | -0.25 | .53 | 15.8 | --- | --- | --- | --- | --- | --- |
| CI10 | 5.54 | 1.63 | -1.02 | 0.30 | .59 | 17.7 | 5.53 | 1.46 | -1.01 | 0.53 | .59 | 14.7 |
| CI11 | 5.99 | 1.34 | -1.57 | 2.29 | .81 | 27.6 | 5.75 | 1.32 | -1.17 | 1.00 | .70 | 18.2 |
| CI12 | 5.92 | 1.31 | -1.41 | 1.94 | .76 | 24.9 | --- | --- | --- | --- | --- | --- |
| CI13 | 5.41 | 1.51 | -0.87 | 0.47 | .62 | 18.9 | 5.69 | 1.42 | -1.13 | 0.87 | .66 | 16.8 |
| CI14 | 5.95 | 1.31 | -1.47 | 2.14 | .82 | 27.9 | 5.66 | 1.23 | -0.96 | 0.72 | .68 | 17.8 |
| CI15 | 5.60 | 1.47 | -1.12 | 0.89 | .72 | 23.1 | --- | --- | --- | --- | --- | --- |
| CI16 | 5.31 | 1.43 | -0.77 | 0.49 | .65 | 20.0 | --- | --- | --- | --- | --- | --- |
| CI17 | 5.75 | 1.36 | -1.22 | 1.34 | .69 | 21.6 | 5.75 | 1.22 | -0.98 | 0.66 | .53 | 13.0 |
| CI18 | 5.52 | 1.52 | -1.07 | 0.74 | .58 | 17.4 | 5.62 | 1.33 | -1.08 | 1.12 | .48 | 11.5 |
| *Mental Imagery* | | | | | | | | | | | | |
| *Quantity* | | | | | | | | | | | | |
| MIQu1 | 5.53 | 1.32 | -0.66 | 0.09 | .82 | 27.5 | 5.94 | 1.13 | -1.18 | 1.38 | .88 | 26.1 |
| MIQu2 | 5.61 | 1.35 | -0.86 | 0.46 | .89 | 31.0 | 5.84 | 1.23 | -1.11 | 0.71 | .91 | 27.4 |
| MIQu3 | 5.52 | 1.40 | -0.79 | 0.25 | .90 | 31.6 | 5.65 | 1.39 | -1.14 | 0.97 | .77 | 21.4 |
| *Vividness* | | | | | | | | | | | | |
| MIViv1 | 5.86 | 1.37 | -1.39 | 1.98 | .86 | 29.9 | 5.95 | 1.17 | -1.25 | 1.47 | .76 | 21.4 |
| MIViv2 | 5.89 | 1.34 | -1.39 | 1.86 | .90 | 32.2 | 5.82 | 1.31 | -1.31 | 1.37 | .83 | 24.3 |
| MIViv3 | 5.84 | 1.29 | -1.22 | 1.46 | .86 | 30.3 | 5.84 | 1.26 | -1.18 | 0.99 | .90 | 27.9 |
| MIViv4 | 5.73 | 1.37 | -1.13 | 1.19 | .88 | 31.1 | 5.62 | 1.40 | -1.13 | 0.97 | .82 | 24.1 |
| MIViv5 | 5.43 | 1.41 | -0.70 | 0.25 | .80 | 27.1 | 5.56 | 1.41 | -1.05 | 0.92 | .81 | 23.3 |
| MIViv6 | 5.77 | 1.34 | -1.25 | 1.74 | .84 | 28.8 | 5.75 | 1.28 | -1.15 | 1.24 | .82 | 23.8 |
| MIViv7 | 5.74 | 1.35 | -1.20 | 1.58 | .89 | 31.8 | 5.60 | 1.32 | -1.01 | 0.80 | .81 | 23.7 |
| *Valence* | | | | | | | | | | | | |
| MIVal1 | 6.00 | 1.36 | -1.56 | 2.29 | .90 | 32.8 | 6.06 | 1.20 | -1.54 | 2.46 | .89 | 27.1 |
| MIVal2 | 6.01 | 1.40 | -1.78 | 3.09 | .92 | 34.0 | 6.12 | 1.18 | -1.74 | 3.42 | .87 | 26.2 |
| MIVal3 | 6.03 | 1.32 | -1.73 | 3.09 | .94 | 35.6 | 6.17 | 1.18 | -1.80 | 3.45 | .85 | 25.4 |
| MIVal4 | 6.02 | 1.34 | -1.71 | 2.97 | .94 | 35.6 | 6.04 | 1.21 | -1.54 | 2.58 | .88 | 26.6 |
| MIVal5 | 6.01 | 1.36 | -1.68 | 2.77 | .94 | 35.1 | 6.05 | 1.29 | -1.67 | 2.61 | .88 | 26.6 |
| MIVal6 | 6.09 | 1.33 | -1.82 | 3.36 | .93 | 34.8 | 5.80 | 1.26 | -1.24 | 1.78 | .67 | 18.0 |
| *Place Attachment* | | | | | | | | | | | | |
| PA1 | 4.76 | 1.65 | -0.43 | -0.41 | .74 | 24.3 | 4.41 | 1.65 | -0.22 | -0.69 | .75 | 21.0 |
| PA2 | 5.17 | 1.53 | -0.63 | 0.00 | .86 | 30.3 | 4.65 | 1.68 | -0.38 | -0.63 | .86 | 25.7 |
| PA3 | 4.96 | 1.61 | -0.54 | -0.22 | .89 | 32.1 | 4.11 | 1.82 | -0.02 | -0.98 | .88 | 26.6 |
| PA4 | 4.85 | 1.62 | -0.46 | -0.28 | .82 | 28.0 | 4.29 | 1.73 | -0.26 | -0.78 | .79 | 22.7 |
| PA5 | 4.93 | 1.70 | -0.58 | -0.36 | .89 | 32.1 | 5.19 | 1.49 | -0.71 | 0.04 | .79 | 22.7 |
| PA6 | 4.93 | 1.66 | -0.56 | -0.27 | .91 | 33.2 | 4.43 | 1.73 | -0.31 | -0.72 | .88 | 26.9 |
| PA7 | 5.15 | 1.64 | -0.73 | -0.06 | .88 | 31.4 | 4.61 | 1.72 | -0.40 | -0.71 | .87 | 26.3 |
| *WOM Communication* | | | | | | | | | | | | |

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Table 2. Means, standard deviations, standardized factor loadings, and critical ratios used in the measurement models of Studies 2 and 3.

| | Study 1 | | | | | | Study 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item | Mean | SD | Skew-ness | Kur-tosis | FL | t | Mean | SD | Skew-ness | Kur-tosis | FL | t |
| WOM1 | 5.72 | 1.38 | -1.01 | 0.76 | .89 | 31.9 | 5.92 | 1.21 | -1.26 | 1.73 | .88 | 26.3 |
| WOM2 | 5.65 | 1.47 | -1.05 | 0.75 | .94 | 35.2 | 5.71 | 1.39 | -1.11 | 0.76 | .83 | 24.1 |
| WOM3 | 5.76 | 1.37 | -1.16 | 1.29 | .93 | 34.5 | 5.73 | 1.33 | -1.06 | 0.76 | .90 | 27.4 |
| WOM4 | 5.67 | 1.45 | -1.08 | 0.92 | .90 | 32.7 | 5.57 | 1.47 | -1.02 | 0.54 | .80 | 22.7 |
| *Cosmopolitanism*[b] | | | | | | | | | | | | |
| *Open mindedness* | | | | | | | | | | | | |
| COOM1 | | | | | | | 5.28 | 1.50 | -0.72 | -0.08 | .81 | 23.7 |
| COOM2 | | | | | | | 5.39 | 1.48 | -0.97 | 0.67 | .81 | 23.4 |
| COOM3 | | | | | | | 5.02 | 1.53 | -0.53 | -0.39 | .90 | 27.6 |
| COOM4 | | | | | | | 5.02 | 1.48 | -0.48 | -0.36 | .88 | 27.0 |
| COOM5 | | | | | | | 5.30 | 1.44 | -0.76 | 0.02 | .88 | 26.8 |
| COOM6 | | | | | | | 4.88 | 1.57 | -0.44 | -0.48 | .78 | 22.4 |
| COOM7 | | | | | | | 5.30 | 1.43 | -0.77 | 0.23 | .80 | 23.0 |
| COOM8 | | | | | | | 5.22 | 1.48 | -0.68 | -0.07 | .83 | 24.3 |
| *Diversity appreciation* | | | | | | | | | | | | |
| CODA1 | | | | | | | 4.58 | 1.68 | -0.46 | -0.51 | .80 | 22.7 |
| CODA2 | | | | | | | 4.78 | 1.62 | -0.46 | -0.45 | .85 | 24.6 |
| CODA3 | | | | | | | 4.89 | 1.54 | -0.48 | -0.35 | .90 | 27.0 |
| *Consumption transcending borders* | | | | | | | | | | | | |
| COCTB1 | | | | | | | 5.44 | 1.54 | -0.91 | 0.12 | .89 | .89 |
| COCTB2 | | | | | | | 5.47 | 1.55 | -0.96 | 0.10 | .91 | .91 |
| COCTB3 | | | | | | | 5.30 | 1.50 | -0.75 | -0.11 | .89 | .89 |
| *Cognitive Thinking Style*[b] | | | | | | | | | | | | |
| CTS1 | | | | | | | 5.24 | 1.35 | -0.69 | 0.07 | .80 | 21.4 |
| CTS2 | | | | | | | 5.15 | 1.31 | -0.54 | 0.08 | .83 | 22.6 |
| CTS3 | | | | | | | 5.18 | 1.26 | -0.60 | 0.13 | .79 | 21.1 |
| *Escapism*[b] | | | | | | | | | | | | |
| ESC1 | | | | | | | 4.83 | 1.66 | -0.51 | -0.53 | .92 | 28.3 |
| ESC2 | | | | | | | 4.70 | 1.69 | -0.38 | -0.73 | .94 | 29.0 |
| ESC3 | | | | | | | 3.39 | 1.85 | 0.32 | -0.97 | .65 | 17.1 |
| ESC4 | | | | | | | 5.67 | 1.36 | -1.22 | 1.35 | .41 | 10.1 |
| ESC5 | | | | | | | 5.58 | 1.35 | -0.99 | 0.79 | .47 | 11.7 |
| *Affect Intensity*[b] | | | | | | | | | | | | |
| AI1 | | | | | | | 5.21 | 1.39 | -0.65 | 0.10 | .79 | 21.9 |
| AI2 | | | | | | | 4.44 | 1.77 | -0.18 | -1.02 | .68 | 17.7 |
| AI3 | | | | | | | 4.80 | 1.67 | -0.46 | -0.71 | .55 | 13.7 |
| AI4 | | | | | | | 4.39 | 1.77 | -0.18 | -0.92 | .67 | 17.4 |
| AI5 | | | | | | | 4.42 | 1.71 | -0.26 | -0.73 | .72 | 19.1 |
| AI6 | | | | | | | 5.09 | 1.50 | -0.61 | -0.20 | .80 | 22.0 |
| *Gender*[c] | 0.52 | 0.50 | -0.08 | -2.00 | NA | NA | 0.47 | 0.50 | 0.02 | -2.00 | NA | NA |
| *Prior Experiences*[d] | 0.70 | 0.46 | -0.87 | -1.24 | NA | NA | 0.62 | 0.49 | -0.48 | -1.78 | NA | NA |

Note: FL, standardized factor loading, NA, not available.

[a]Shortened scale in Study 2 due to survey length. Item selection was guided by representing all facets of cognitive image as identified by Stylos et al. (2016) and measurement property considerations.

[b]Analyzed in Study 2, only.

[c]Coded as 1 = "female," and 0 = "male"

[d]Number of times travelled to the destination during the last five years; the response options from Table 1 were coded as 0 = "once," and 1 = "more than once."

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Table 3. Correlations Between Study 1 Variables

| | $CR_T$ | $CR_S$ | AVE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Cognitive Image | .94 | .82 | .46 | *.68* | | | | | | | |
| 2. Mental Imagery – Quantity | .90 | .78 | .76 | .51 | *.87* | | | | | | |
| 3. Mental Imagery – Vividness | .95 | .89 | .74 | .41 | .60 | *.86* | | | | | |
| 4. Mental Imagery – Valence | .97 | .91 | .86 | .45 | .51 | .80 | *.93* | | | | |
| 5. Place Attachment | .95 | .90 | .74 | .43 | .57 | .47 | .40 | *.86* | | | |
| 6. WOM Communication | .95 | .85 | .84 | .56 | .65 | .56 | .59 | .61 | *.92* | | |
| 7. Gender[a] | NA | NA | NA | .09 | .12 | .14 | .10 | .05 | .07 | *NA* | |
| 8. Prior Experiences[b] | NA | NA | NA | .10 | .05 | .10 | .05 | .19 | .10 | -.01 | *NA* |

Note: N = 793, values greater than .069 are significant at $p < .05$. $CR_T$, total composite reliability (total); $CR_S$, substantive composite reliability; AVE, average variance extracted; NA, not available. For each construct, the square root of the AVE (shown on the diagonal in italics) exceeds the correlation with all other constructs, thus satisfying the Fornell-Larcker criterion.

[a]1 = "female," and 0 = "male"

[b]Number of times travelled to the destination during the last five years; 0 = "once," and 1 = "more than once"

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Table 4. Correlations Between Study 2 Variables

| | $CR_T$ | $CR_S$ | AVE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Cognitive Image | .85 | .83 | .60[a] | *.77* | | | | | | | | | | | | | |
| 2. Mental Imagery – Quantity | .89 | .87 | .73 | .47 | *.85* | | | | | | | | | | | | |
| 3. Mental Imagery – Vividness | .94 | .94 | .68 | .52 | .62 | *.82* | | | | | | | | | | | |
| 4. Mental Imagery - Valence | .94 | .93 | .71 | .54 | .56 | .74 | *.84* | | | | | | | | | | |
| 5. Place Attachment | .94 | .94 | .69 | .35 | .34 | .40 | .29 | *.83* | | | | | | | | | |
| 6. WOM Communication | .91 | .91 | .72 | .53 | .57 | .56 | .59 | .52 | *.85* | | | | | | | | |
| 7. Cosmopolitanism - OM | .95 | .93 | .70 | .30 | .36 | .31 | .27 | .23 | .34 | *.84* | | | | | | | |
| 8. Cosmopolitanism - DA | .89 | .88 | .73 | .15 | .22 | .17 | .14 | .15 | .24 | .48 | *.85* | | | | | | |
| 9. Cosmopolitanism - CTB | .92 | .91 | .80 | .22 | .28 | .20 | .22 | .10 | .26 | .56 | .50 | *.89* | | | | | |
| 10. Cognitive Thinking Style | .85 | .84 | .65 | .28 | .31 | .33 | .31 | .14 | .26 | .18 | .22 | .13 | *.80* | | | | |
| 11. Escapism | .82 | .82 | .51 | .27 | .45 | .39 | .32 | .49 | .43 | .27 | .14 | .18 | .25 | *.71* | | | |
| 12. Affect Intensity | .86 | .85 | .50 | .24 | .33 | .27 | .22 | .28 | .27 | .37 | .32 | .25 | *.15* | *.32* | *.71* | | |
| 13. Gender[b] | NA | NA | NA | .09 | .15 | .15 | .14 | .01 | .09 | .16 | .05 | .03 | -.05 | .02 | .29 | *NA* | |
| 14. Prior Experiences[c] | NA | NA | NA | .08 | -.04 | .08 | .02 | .29 | .04 | -.04 | -.07 | -.08 | -.07 | .00 | .00 | .00 | *NA* |

Note: N = 585, absolute values greater than .081 are significant at $p < .05$. $CR_T$, total composite reliability (total); $CR_S$, substantive composite reliability; AVE, average variance extracted; OM, open mindedness; DA, diversity appreciation; CTB, consumption transcending borders; NA, not available. For each construct, the square root of the AVE (shown on the diagonal in italics) exceeds the correlation with all other constructs, thus satisfying the Fornell-Larcker criterion.

[a]Principal component analysis extracted 59.6% of variance from the cognitive image items (note that discriminant validity would also been met in the confirmatory factor analysis that models cognitive image as latent variable from the cognitive image items).

[b]1 = "female," and 0 = "male"

[c]Number of times travelled to the destination during the last five years; 0 = "once," and 1 = "more than once"

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Table 5. Results of Bayesian SEM estimations for Study 1 and Study 2

| | | | | | Study 2 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Study 1 | | [1] No Moderator | | [2] Cosmopolitanism | | [3] Escapism | | [4] CTS | |
| Model relationships[a] | | | M | LL, UL | M | LL, UL | M | LL, UL | M | LL, UL | M | LL, UL |
| *Direct effects* | | | | | | | | | | | | |
| CI | → | Quantity | .60 | .51, .69 | .42 | .34, .51 | .35 | .26, .43 | .37 | .29, .45 | .33 | .24, .42 |
| | → | Vividness | .44 | .37, .53 | .49 | .41, .57 | .43 | .35, .51 | .44 | .36, .52 | .38 | .30, .46 |
| | → | Valence | .51 | .43, .60 | .54 | .45, .63 | .49 | .41, .58 | .51 | .42, .60 | .45 | .36, .54 |
| Quantity | → | PA | .55 | .46, .65 | .19 | .07, .31 | .19 | .08, .31 | .20 | .08, .32 | .16 | .04, .29 |
| | → | WOM C. | .56 | .49, .64 | .34 | .24, .45 | .35 | .24, .45 | .35 | .24, .46 | .34 | .23, .44 |
| Vividness | → | PA | .11 | .01, .21[b] | .24 | .10, .39 | .24 | .10, .39 | .25 | .10, .40 | .28 | .13, .43 |
| | → | WOM C. | -.09 | -.20, 02 | .08 | -.04, .21 | .08 | -.04, .21 | .09 | -.04, .21 | .09 | -.03, .22 |
| Valence | → | PA | .02 | -.09, .13 | -.03 | -.16, .10 | -.03 | -.15, .10 | -.05 | -.18, .09 | -.05 | -.18, .09 |
| | → | WOM C. | .39 | .29, .48 | .37 | .25, .49 | .36 | .25, .49 | .35 | .24, .48 | .36 | .24, .50 |
| Moderator [2 to 4] | → | Quantity | | | | | .24 | .13, .34 | .31 | .23, .40 | .21 | .13, .30 |
| | → | Vividness | | | | | .14 | .04, .24 | .24 | .17, .32 | .23 | .14, .31 |
| | → | Valence | | | | | .13 | .03, .24 | .13 | .05, .21 | .20 | .12, .29 |
| CI x Moderator | → | Quantity | | | | | -.13 | -.21, -.06 | -.12 | -.20, -.02 | -.11 | -.19, -.02 |
| [2 to 4] | → | Vividness | | | | | -.12 | -.20, -.05 | -.12 | -.20, -.04 | -.17 | -.25, -.09 |
| | → | Valence | | | | | -.10 | -.17, -.03 | -.09 | -.17, -.01 | -.12 | -.20, -.05 |
| *Indirect effects* | | | | | | | | | | | | |
| CI / CI x | → | Quantity → PA | .33 | .26, .40 | .08 | .03, .12 | -.02 | -.04, -.01 | -.02 | -.04, -.01 | -.02 | -.03, -.01 |
| Moderator | → | Quantity → WOM C. | .34 | .28, .41 | .14 | .10, .20 | -.03 | -.06, -.01 | -.03 | -.06, -.01 | -.03 | -.06, -.01 |
| [2 to 4][c] | → | Vividness → PA | .05 | .00, .12[b] | .12 | .05, .19 | -.02 | -.04, -.01 | -.02 | -.05, -.01 | -.04 | -.07, -.02 |
| | → | Vividness → WOM C. | -.04 | -.09, .01 | .04 | -.02, .10 | -.01 | -.02, .00 | -.01 | -.03, .00 | -.01 | -.04, .00 |
| | → | Valence → PA | .01 | -.05, .06 | -.01 | -.09, .06 | .00 | -.01, .01 | .00 | -.01, .02 | .01 | -.01, .02 |
| | → | Valence → WOM C. | .19 | .14, .26 | .20 | .13, .26 | -.03 | -.05, -.01 | -.03 | -.05, -.01 | -.04 | -.07, -.01 |

*$p < .05$, **$p < .01$. Note: Standardized effects. For the probability distributions from the Bayesian estimation, the table shows the mean (M) and the lower limit (LL) and upper limit (UL) of its 95% credible interval. The models include the control variables gender and prior experiences and in Study 2 affect intensity. PA, Place attachment; WOM C., WOM communication; CTS, Cognitive thinking style.

[a]For reference to traditional estimation, the model fit of study 1/study 2 (model[1]) is $\chi^2$/df = 3.37/3.58, SRMR = .05/.06, CFI = .93/.91, TLI = .92/.90, and RMSEA = .05/.07. Explained variances are 34%/30% of quantity, 21%/32% of vividness, 25%/33% of valence, 44%/31% of PA, and 59%/54% of WOM C.

[b]Based on 90% credible interval.

[c]The independent variable is CI in Study 1 and Study 2, model [1]; it is CI x Moderator in Study 2, models [2] to [4].