

**AUTHENTICITY AND PRIDE DRIVE LOYALTY?  
EVIDENCE FROM AR-POWERED HERITAGE**

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**ABSTRACT**

Disruptive technological innovations, such as immersive technologies, are important for hospitality and tourism, and heritage in particular. One of such technologies is Augmented Reality (AR), which is increasingly adopted by heritage sites. Yet, the exact role of AR for amplifying the behavioural outcomes of visitors requires further study. Informed by appraisal theory, this study aims to (i) investigate how cognitive and affective appraisals influence the loyalty toward heritage destination, and (ii) examine the interaction of AR with the behavioural outcomes of such appraisals.

**Introduction**

Technological innovation is important for the hospitality and tourism industry (Balakrishnan et al., 2021; Floros et al., 2021). Immersive technologies, in particular, gained importance in business practices, as well as in scientific research (Loureiro and Nascimento, 2021; Nascimento and Loureiro, 2023), due to its impacts on customer experience (Flavián et al., 2019; Tussyadiah et al., 2018). One of such technologies is Augmented Reality (AR), an interactive technology that alters physical surroundings by overlaying virtual objects (Javornik, 2016). Contrary to virtual reality, virtual and real objects coexist in AR, supplementing rather than replacing reality (Bec et al., 2021). AR applications are relevant for heritage destinations. As the AR global market is expected to grow around 700% yearly during the 2017-2025 period (Statista, 2022), it is increasingly adopted by heritage sites, namely art galleries, museums, and religious sites (Chung et al., 2018; tom Dieck et al., 2018). The experiential and educational benefits are widely described in the literature (Graziano and Privitera, 2020; tom Dieck and Jung, 2017). Heritage visitors seek to learn more and discover tangible or intangible elements of local attractions (UNWTO, 2022), yet the exact role of AR for amplifying the behavioral outcomes of visitors requires further study.

One of the most observed outcomes is loyalty, “*willingness to continue patronizing a firm over the long term, purchasing and using its goods and services on a repeated and preferably exclusive basis, and voluntarily recommending the firm’s products to friends and associates*” (Lovelock, 2001, p. 151). Loyalty captures both revisiting and recommendation intentions in tourism, associated with memorable tourism and heritage

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experiences (Zhang et al., 2018). Informed by appraisal theory, this study aims to (i) investigate how cognitive and affective appraisals influence the loyalty toward heritage destination, and (ii) examine the interaction of AR with the behavioral outcomes of such appraisals.

### **Theoretical Development**

Cognitive-affective-conative frameworks are suitable for hospitality and tourism research (Huang et al., 2023; Li et al., 2021). The cognitive aspects are often captured by authenticity, which accounts for the perceived value of experiences and destinations (Kolar and Zabkar, 2010; Wang, 1999). Authenticity is of particular interest in explaining how visitors assess - at a cognitive level - and engage with heritage sites. In this context, the concept of authenticity represents an evaluative judgment that represents how people assimilate knowledge about, and are inspired by, their heritage experiences. The most widely cited authenticity approach in the literature (Kolar and Zabkar, 2010; Wang, 1999) offers two dimensions, separating the appraisals grounded on objectively identifiable properties (object-based authenticity), from subjective perceptions (existential authenticity). Consequently, for this study, authenticity is interpreted as a bi-dimensional concept that captures cognitive appraisals.

Appraisal theory specifies that people rely on their thoughts (cognitive appraisals), and feelings (emotional appraisals) to determine their behavioral responses. In this vein, emotions hold a fundamental role in decision-making processes (Roseman et al., 1996). Emotions are mental states of readiness, in response to external or internal stimuli (Briñol et al., 2018). While basic emotions (e.g., happiness, joy) represent primary mental and/or physiological responses, self-conscious emotions (e.g., pride, guilt) enfold personally relevant self-reflective or self-evaluative appraisals, which are linked with self-worth in one's own (or others') eyes (Bagozzi et al., 2016, 1999).

Powerful emotional responses, such as pride, are closely linked to volitions, influencing the motivation and decision to act (Bagozzi et al., 1999; Briñol et al., 2018). Pride is a prevalent emotion in consumer behavior literature, motivating favourable self-perceptions and goal pursuit (Tracy and Robins, 2007, 2004). Pride is associated with goal attainment and enhancing our status through group experiences (Tong, 2015), such as occurs when visiting heritage sites. Cognitive appraisals are thus resolved by emotional responses, which subsequently drive behavioral decisions. We propose that pride stems from authenticity and shapes its influence on the formation of loyalty toward heritage destinations:

*H1: The impacts of object-based (H1a) and existential authenticity (H1b) on destination loyalty are mediated by pride.*

However, a key conceptual distinction should be made between the two dimensions of authenticity. Existential authenticity is not formed on the basis of how specific objects or events are perceived. Instead, it is associated with intense enjoyment and escapism (Wang, 1999). Due to its transformative nature, existential authenticity should exert a more profound impact on visitors - and their decisions - than object-based authenticity (Kolar and Zabkar, 2010). Thus, we argue that (contrarily to object-based) existential authenticity drives behavioral outcomes directly, beyond the mediation of pride:

*H2: Existential authenticity positively and directly influences destination loyalty.*

Innovative technologies create more satisfying and memorable impressions in touristic experiences (Balakrishnan et al., 2021). AR enhances the learning experiences of heritage visitors, in particular, providing enriched emotional interactions (Jiang et al., 2022). Therefore, we find plausible to assume that the downstream consequences of cognitive/affective appraisals driving loyalty directly are amplified for those who experienced AR. We examine the role of AR as a boundary condition for magnifying the effects of such appraisals on behavioral outcomes:

*H3: AR strengthens the impacts of pride (H3a) and existential authenticity (H3b) on destination loyalty.*

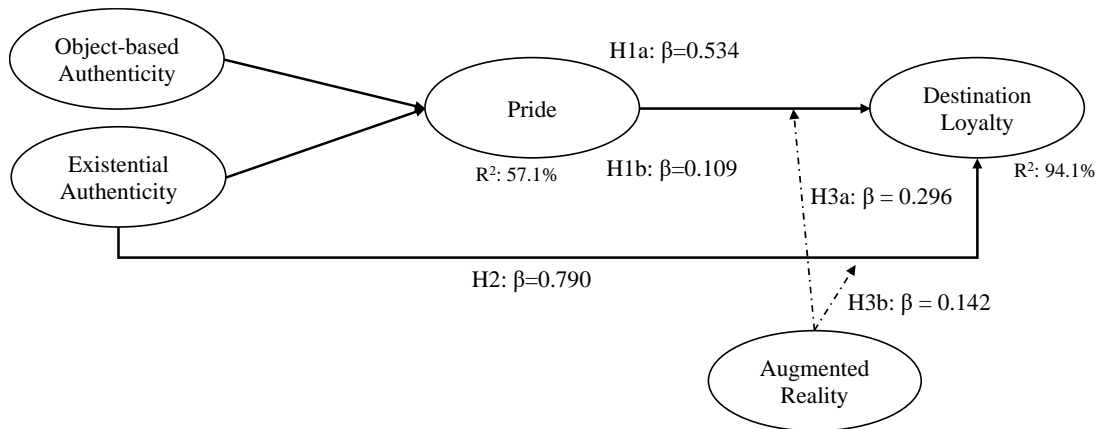
## **Methodology**

Data was collected on-site in 2023, through an online questionnaire amongst 316 English-speaking visitors of Fátima's Monastery, one of the most popular heritage sites in Europe. Part of the sample (44.9%) visited the interactive museum featuring an immersive AR experience. All items were rated on a seven-point Likert scale relying on previously validated scales from literature: authenticity (Kolar and Zabkar, 2010), pride (Onwezen et al., 2013), revisiting (Zhang et al., 2018) and recommendation intentions (Olya et al., 2019). Demographic data were collected and controlled for gender, age, nationality, and education.

Data analysis was performed on RStudio v2023.12.0. A confirmatory factor analysis was implemented to assess the measurement model (Bagozzi and Yi, 2012; Hair et al., 2014; Hu and Bentler, 1999). Acceptable levels of reliability and validity were achieved, based on the suggested cut-off values (Bagozzi and Yi, 1988; Fornell and Larcker, 1981; Hair et al., 2014): composite reliability and Cronbach alpha values were  $>0.70$ , and Average Variance Extracted (AVE) was  $>0.50$  for all constructs. All items loaded significantly and achieved item reliabilities  $>0.70$ . Discriminant validity was confirmed based on Fornell and Larcker's criterion, with the square root of each construct's AVE greater than the correlation coefficient with any other construct.

## **Results**

The model yielded an overall satisfactory fit (e.g., SRMR: .06, CFI: .95; TLI: .91), which was unchanged when treating Destination Loyalty as a second-order factor composed by Recommendation and Revisiting Intentions. All hypotheses and results are exhibited in Figure 1.



**Fig. 1** - Proposed conceptual framework and structural model results (all hypothesized paths were significant,  $p < 0.001$ ). *Source:* Created by the authors.

First, the mediating role of Pride was evaluated with PROCESS model 4 (Hayes, 2014), and bias-corrected confidence intervals (CI) with bootstrapping. We assessed the direct paths first. Object-based (OA) ( $\beta = 0.827$ ;  $t = 29.87$ ;  $p < 0.001$ ) and Existential Authenticity (EA) ( $\beta = 0.231$ ;  $t = 4.87$ ;  $p < 0.001$ ) significantly and positively influenced Pride, and subsequently, Pride significantly and positively determined Destination Loyalty ( $\beta = 0.471$ ;  $t = 26.86$ ;  $p < 0.001$ ). Then, the indirect paths were evaluated. As hypothesized, Pride significantly mediated the indirect effects of OA (H1a:  $\beta = 0.534$ , CI = [0.36,0.66]) and EA (H1b:  $\beta = 0.109$ , CI = [0.04,0.17]). Second, H2 was supported: EA significantly and positively influenced Destination Loyalty ( $\beta = 0.790$ ;  $t = 54.70$ ;  $p < 0.001$ ) beyond the mediation of Pride. Moreover, we confirmed that the Pride fully mediated the effects from OA, as the direct path was non-significant (CI = [-0.15,0.12]).

Lastly, we examined the moderation effects (H3) by AR<sup>3</sup>. AR significantly ( $p < 0.001$ ) interacted with the impacts from both Pride (H3a:  $\beta = 0.296$ ;  $t = 4.30$ ) and EA (H3b:  $\beta = 0.142$ ;  $t = 5.16$ ) on Destination Loyalty, implying that the behavioral outcomes were amplified for visitors that experienced AR on-site. The bootstrapping confidence intervals did not include zero for neither the Pride\*AR (CI = [0.16,0.43]) and EA\*AR interactions (CI = [0.09,0.20]).

## Discussion

The empirical results obtained present important indications that should be further discussed. According to the data, self-conscious emotions (e.g., pride) derive from cognitive appraisals (e.g., perceived authenticity) and shapes its impacts on behavioral outcomes, in support of the premises of appraisal theory (Roseman et al., 1996). The overall importance of self-conscious emotions should be emphasized in future research. In the heritage context, we verified that not only for influenced destination loyalty directly, but also mediated the influence of authenticity. The latter is a core concept in hospitality and tourism literature (Kolar and Zabkar, 2010; Wang, 1999). Accordingly, both object-based and existential dimensions played a significant role as antecedents in the cognitive-affective-conative framework. Although these findings resonate with prior studies, the

<sup>3</sup> Using PROCESS models 8 and 15.

novelty factor is that existential authenticity influenced behavioral outcomes directly, even in the presence of Pride. The justification lies in the deeper transformative nature of existential authenticity (Wang, 1999).

In addition, the importance of AR for heritage suggested previously (Graziano and Privitera, 2020; Jiang et al., 2022; tom Dieck and Jung, 2017) was confirmed in our study. Experiencing an on-site AR attraction amplified the effects of visitors' cognitive and emotional appraisals, forming stronger loyalty towards the destination. The potential of immersive technologies for heritage (or other types of cultural and touristic sites) offers important managerial implications.

**Keywords:** Authenticity, Pride, Heritage, Augmented Reality, Tourism

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