

Augmenting places: The impact of placemaking on behavioral intentions

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ABSTRACT

Despite its undeniable popularity, the concept of placemaking continues to suffer from a lack of clarity, valid performance indicators and robust data to attest of its effectiveness. Still to this day, understanding what placemaking actually does to people and, in turn, makes them want to do, all the while accounting for its contribution separate from other contextual factors, remains both a practical and scientific challenge. Hence, this experimental study investigates the impact of placemaking on affective and cognitive evaluations, self-congruity, and behavioral intentions across five very different built environments. Results show that environments 'augmented' through placemaking generate significantly more positive responses, be it in terms of emotions, perceptions, identification, or intended behaviors. In the process, the study sheds light on the underlying mechanisms by which behavioral intentions are induced through placemaking.

1. Introduction

Placemaking describes a process that mobilizes the physical, cultural, and social identities of a given place to shape it and increase shared value (Project for Public Spaces, 2016). Over the years, it has become a prevalent interdisciplinary concept to discuss the ways in which built environments are planned, designed, and experienced. Namely, it has informed studies in many disciplines, including urban design (e.g., Day, 1992; Horvath, 2004), social sciences (e.g., Eck-enwiler, 2016; Halperin, 2014; Wight, 2005) and tourism (e.g., Lew, 2019; Richards, 2020).

While the notion of placemaking as a collaborative and community-building affair has been studied extensively over the years (e.g., Beza, 2016; Boeri, 2017), there has been a notable shift in perceptions in recent times (Strydom et al., 2018). Early work introduced the concept as one that explored people-place relationships, examining the role urban development has on a setting's social environment (e.g., Jacobs, 1961; Whyte, 1968). From there, studies focused on the development of physical change in an environment as a result of placemaking (e.g., Andrews, 1975; Burgess, 1979; Motloch, 1990), as well as on the role of decision-making in the design process, paying specific attention to the

active involvement of the community (e.g., Schneekloth & Shibley, 2000; Shibley, 1998). Modern placemaking then, is said to be designed for and by people, performed at an appropriate scale for its function, and focused on enhancing safety, accessibility, and engagement (Duconseille & Saner, 2020; Wyckoff, 2014).

However, given the difficulty of measuring how perceptual qualities of a place directly impact individuals, the field still lacks empirical evidence to support claims on placemaking's potential (Hu & Chen, 2018). Specifically, there appears to be a need for quantitative research on the relationship between designers' aims and users' perceptions, as well as for a more holistic understanding of the different tools and associated benefits of placemaking (Beidler & Morrison, 2016). The challenge here is to effectively control for placemaking, and to establish valid indicators (Iyengar, 2018; Markusen, 2013). In addition, placemaking is often studied in single, very large public settings, whereas it also applies to smaller, private environments such as a retail, real estate or office spaces (e.g., Pine & Gilmore, 2007). Thus, while placemaking stands to enhance the value, broadly defined, of a given place, its ongoing "outcome issues" (Stern, 2014) stem from a lack of clarity about what those are and how they come to be.

We posit that none of these outcomes are possible without people.

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Indeed, placemaking really comes down to attending to those present, all the while drawing outside people in (Fincher et al., 2016). As such, this experimental study focuses on what placemaking *actually* does to people and, in turn, on what placemaking makes people do. It proceeds from a more fundamental understanding of place, and the fact that placemaking ultimately boils down to human activity (Courage et al., 2021). To do so, this study draws from prior research on sense of place (Ewing et al., 2006; Green, 1999) as well as destination image (Beerli & Martin, 2004; Dubois et al., 2021) that centers on attributes that make people want to be in, or intentionally travel to, a given place. Namely, it investigates placemaking's impact across five virtual environments (i.e., retail, real estate, office, public place, transit) on evaluative judgments and behavioral intentions, such as wanting to spend time in a place, recommending it to others, or sharing information about it.

This study extends and contributes to placemaking research in several ways: First, it demonstrates that placemaking boosts individuals' likelihood of using and sharing of the environment with others across different settings, contributing to the generalizability of the impact of placemaking. Second, this research sheds light on the process by which the impact of placemaking occurs: Augmented environments improve affect-based and cognitive evaluations and result in higher self-identification with the environment which, in turn, lead to more sought-after behaviors. Thirdly, involvement of interdisciplinary industry collaborators in the selection and augmentation of the environments, as well as real metropolitan residents in the sample contributes to ecological validity of the environments and the external validity of the findings. Finally, from a practical standpoint, this research suggests a host of potential impacts and, more importantly, re-emphasizes the importance of community participation in placemaking.

The rest of the article is structured as follows. We first provide a brief overview of the placemaking literature, with a focus on known limitations, tools, and impact measurement, as well as its overlap with tourism research. We then describe our experimental methodology, present the results, and discuss them in light of the literature. This article concludes with theoretical and practical implications, as well as limitations and future directions for research.

2. Literature review

Generally speaking, placemaking interventions, which can be both government-led or community-driven, are said to be intended to spark economic development and community gains in livability, inclusion, jobs, and income by making 'better' use of underutilized space or physical assets (Duconseille & Saner, 2020). This includes both 'green-field' settings that sit empty, as well as 'brownfield' projects that seek to revitalize a given area. In its 'top-down' incarnation, placemaking is often prompted by an initiator with an innovative vision that attracts private and public buy-in, enjoys support from local leaders, builds partnerships across sectors, and leverages funds from diverse sources (Markusen & Gadwa, 2010). Through these projects, environments are intentionally repurposed to foster more 'attractive' functional and experiential functions that then contribute to unique site-specific characteristics (e.g., community-based arts, historical educational elements, and/or social interactions) (Green, 1999; Strydom et al., 2018). Examples include the opening of the Casa Vicens and the creation of a 'Gaudi Route' in Barcelona to enhance areas outside of the historic core (Mansilla & Milano, 2019), the creation of entertainment districts in Montreal and Toronto (Darchen & Tremblay, 2013), or downtown Chicago's Millennium Park that features prominent art installations (Al-Kodmany, 2020).

There are, however, important limitations to top-down placemaking. These include forging partnerships, countering community skepticism, avoiding displacement and gentrification and promoting inclusion (Wyckoff, 2014). In addition, many failed projects show how a place can quickly become stagnant without continual reactivation by community members; in other words, that ongoing participation from locals is vital

to the success of placemaking (Duconseille & Saner, 2020). Problem is, not every usage, nor everybody's participation appears desirable. Indeed, many scholars have pointed to a growing imbalance between commercial and societal objectives in placemaking. Often enough, such projects remain exclusionary, neglecting to involve key stakeholders and consult with disenfranchised groups (Toolis, 2021). They also fail to consider that the locations on which projects take place may already amount to places to some, and thereby may be contributing to 'un-making' them (Douglas, 2022). As such, rather than improving the functional and experiential value for all, placemaking becomes a 'mask' for the displacement of marginalized groups (Fincher et al., 2016). This is particularly true for black and indigenous communities in North America who often find themselves living in deeply racialized environments that erase their history, devalue their contributions, and even carry hurtful stereotypes (Hunter et al. 2016; Nejad et al. 2020).

Rather than seeing social justice and commercial-driven agendas as mutually exclusive, recent literature highlights the importance of balancing them. For instance, Toolis (2021) argues that placemaking must account for both use value - the community's ability fulfill material needs - and exchange value geared towards generating profit. In other words, good placemaking is about striking a balance between wanting to exhibit a place and attending to those who inhabit it (Fincher et al., 2016). New York City's High-line, or Buenos Aires' *Parque de la Memoria* are good examples of projects that have sought, from the onset, the meaningful inclusion of all stakeholders and protected their ability to influence the design throughout the process (Cremaschi, 2021; Littke et al. 2016). Bottom-up placemaking also implies involving the community in monitoring and governance later on (Richards, 2020), as well as embracing everyday initiatives that occur outside - and at times in defiance of - formal projects or that require an unmediated process (Nejad et al., 2020). Done this way, placemaking can build human connections, promote civic engagement and enable positive social change (Duconseille & Saner, 2020; Silverberg et al., 2013). In short, rather than catering to the needs of the few, it should also improve an entire community's well-being, health, happiness, and overall quality of life (Wyckoff, 2014).

2.1. Placemaking tools

Interior design, multifunctional or green spaces, or even just color are all potential ways to enhance the functional and experience value of a place. Similarly, imaginative architecture, landscaping, and materials can create a sense of visual continuity and unity while also making a given environment more welcoming and inviting. Meanwhile, simple tools such as signage and wayfinding add to the quality and identity of a place by projecting, for instance, diversity and inclusivity through multilingual signs (Knight, 2016).

Public art and installations are also invaluable to augmenting an environment, as displays of history, culture, and community values can be appealing (Hagtvedt & Patrick, 2008). People are drawn by art for its ability to create peaceful or inquisitive ambiance, to generate inspiration, or simply for the promise of an enjoyable moment (Adler, 2015; Venir & Lockwood-Lord, 2014). Hence, the presence of art is said to be attractive to prospective residents, especially to educated, affluent individuals and industries (Florida, 2019). Last, while outside the scope of this study, creative placemaking is a specialized case that seeks to institutionalize arts and culture in the built environment often through ephemeral projects (art displays, exhibits, etc.) and live activities (concerts, movies in the park, etc.) (Richards, 2020; Wyckoff, 2014). Yet, as Salzman and Yerace posit (2018), the distinction between the two is not always clear, which explains why many still use placemaking and creative placemaking quite interchangeably.

2.2. Metrics for quantifying sense of place and placemaking

Evidence of placemaking's performance generally stems from

qualitative case studies, in which a given project's outcomes are documented. However, while they may be useful to uncover variables, of interest, qualitative studies are by nature bound to a unique context, which make the findings difficult to test further or apply in other settings (Corbin & Strauss, 2008; Patton, 2002). In addition, placemaking remains a fundamentally fuzzy and dynamic concept that makes its dimensions difficult to identify, and in turn, to test empirically (Markusen, 2013).

Many of the metrics that have been proposed in recent years focus on large, government-led interventions at the level of a city, district or even entire country (Iyengar, 2018). The resulting analyses look for variations between territories for factors such as crime rate and education that could be attributed to placemaking (e.g., Noonan, 2013). Yet, how those metrics apply to smaller or private environments is unclear. Indeed, placemaking considers any setting that people seek to make more meaningful (Wilhoit Larson, 2021). In fact, even one's home or office can be seen as a place that people intentionally spend time in (Valero-Silva & Lawley, 2017). Further, most metrics come from industry 'grey' literature as opposed to scholarly studies and are limited to high-level measurement (Cohen et al., 2018). For proprietary reasons, they often lack information about the constructs that are measured, the methodology, and whether the results are statistically significant (Dynamometrics, 2020). Many studies are also primarily based on data gathered 'after' implementation, and fail to control for other variables that may have contributed to the observed impacts. Stern's (2014) 'vibrancy' indicators, comprised of a range of social well-being variables pulled from the Census and other secondary sources, is one notable attempt at developing rigorous quantitative metrics. Likewise, Silverberg et al.'s (2013) civic participation metrics are useful to assess community level impacts.

That said, a key concept in the study of placemaking is sense of place (SOP), which refers to the emotional connection and set of associations that develop between people and places (Devlin & Nasar, 1989; Hu & Chen, 2018). SOP is not entirely created via the built environment; but rather by users whose perceptions can shift even without the environment changing due to personal experiences, evolving needs or cultural trends (Wyckoff, 2014). Prior studies have identified the dimensions of SOP, such as imageability, legibility and human scale, transparency, linkage, complexity, and coherence (Devlin & Nasar, 1989; Ewing et al. 2006; Hu & Chen, 2018). Similarly, Green (1999) uncovered a range of environmental stimuli (manmade and natural) that contribute to SOP, including beautiful/ugly, inviting/uninviting, distinctive/ordinary, relaxed/stressful, and pleasant/unpleasant. Yet, that literature finds no direct link between artistic value and place identity or perceived SOP. In fact, generically "beautiful" designs lack diversity, place identity and meaningfulness (Hu & Chen, 2018). Thus, beyond perceptual qualities, SOP research also draws attention to the important holistic dynamic between the self, the environment, social interaction, and time ().

The concept of SOP also features preeminently in the tourism literature. Indeed, the ability to communicate about a place to prospective visitors is said to follow from an understanding of what it means, from a SOP standpoint, to the locals (Campelo et al. 2014). Hence, place or destination image (e.g., Echtner & Ritchie, 1993; Kock et al., 2016; Tasci & Gartner, 2007), which considers one's evaluative judgment of a given place, draws extensively from SOP (Campelo et al., 2014). Broadly, destination image comprises of affective and cognitive elements. While the former relates to the emotional response and feelings toward a destination, the latter concerns the awareness of what is available within it such as activities, people and infrastructure (San Martín & Del Bosque, 2008; Wang & Hsu, 2010). This also includes perceptions about its culture, history, safety, and friendliness (Beerli & Martin, 2004). One's overall image of said destination then impacts behavioral intentions, for example, searching for more information about it and the likelihood of visiting it (MacKay & Fesenmaier, 1997), but also, word-of-mouth, as well as repeat visitation (Bigné Alcañiz et al., 2009; Qu et al., 2011).

Both placemaking and tourism understand the importance of

"strengthening the inside while inviting the outside in" (Fincher et al. 2016, p. 19), as well as the fact that a place is shaped not just by the built environment, but also by the networks, social relations and shared experiences that inhabit them (Campelo et al., 2014). Hence, we argue that destination image offers an original framework for studying placemaking, and more specifically, to better understand what it does to people. Of interest is the fact that destination image focuses on the locals and visitors 'demand-side' feelings, interpretations, and behaviors, as opposed to the planners and designers' 'supply-side' vision (Acharya & Rahman, 2016), consistent with this study's goal to shed light on more fundamental outcomes of placemaking at an individual level.

3. Methodology

The study consisted of a 2 (Placemaking: Plain vs. Augmented) \times 5 (Environment: Retail, Office Space, Condo Lobby, Public Plaza, and Transit Station) between-participants experimental design. The focus was on investigating the effects of placemaking on behavioral outcomes. Different environments were included to increase generalizability of the impact of placemaking.

The selection of environments and development of the renderings involved a series of discussions, design meetings, and concept testing with industry experts. Specifically, this team of collaborators consisted of architects, public art curators, interior designers, and placemaking professionals. The design process started with an initial ideation session where the team met to discuss high-level objectives, review relevant past client projects, listed common functional and experiential features related to each of the five environments, and proceeded to sketch the baseline (plain) versions. From these sketches, basic 3D models were developed and defined the overall raw space without placemaking. Namely, the investigators modelled the environments using a combination of *Rhino3d* and *SketchUp* software and rendered using the *V-Ray* plugin. The output was a spherical panorama that was then uploaded to the *Yulio* platform which can be accessed through a smartphone or VR headset. It also offers 360 renderings on a web browser where viewers can pan around the environment. Industry collaborators met in a subsequent session to discuss ways to enhance the plain environments using placemaking tools. This involved reflecting on who the main and occasional users would be, and on what they would seek to achieve, as well as brainstorming on desirable attributes specific to each environment and sketching the 'augmented' environments. Once more, 3D renderings were developed and presented to the team for further review. Finally, a group critique session identified each environments' strengths and weaknesses before commencing a final round of design revisions. The renderings, as well as sketches from collaborators, are presented in Appendix I.

Participants were recruited via the social media network of the research team and randomly assigned to only one of ten experimental conditions in order to avoid potential contrast effects and fatigue. Participants were simply instructed to spend as much time as desired "browsing" through the virtual space, with the option to scan the environment 360° (up, down, sideways, and rotate). After unconstrained reviewing of the environment, participants completed the survey that included self-report measures of the variables of interest.

Survey items from established scales were adapted and presented as seven-point scale items. Namely, cognitive evaluation was measured using eight Likert scale items that included environmental attributes, such as culture, history, safety, and friendliness (Beerli & Martin, 2004). Affect based evaluation was measured using 13 semantic differential scale items adapted from Green (1999), including items such as beautiful/ugly, stressful/relaxing, with/without charm, stimulating/unstimulating. One's self-congruity with the environments was also measured using four items adapted from Sirgy and Su (2000). Simply put, this scale asks participants to imagine people in the environment and to report the extent to which it matches how they [see themselves/would like to see themselves/think others see them/would like

others to see them]. Lastly, behavioral outcomes were measured using four items: The intent to purposefully spend time in the environment, to seek further information about it, to suggest it to family and friends, and to share information about it with others.

4. Results

A total of 586 participants completed the study, with more than 53 participants in each condition. 56.1% of them identified as female, 41.1% as male, and 2.7% did not report. The participant age ranged between 18 and 74, with 63% of the participants below 35 years old. Before investigating the impact of placemaking, we first reviewed the dimensionality and reliability of our measures. Namely, exploratory factor analysis using principal component analysis resulted in a single-factor solution for *affect-based evaluation* scale (13-items, Cronbach's $\alpha = 0.97$, Green, 1999), *cognitive evaluation* scale (8-items, Cronbach's $\alpha = 0.99$, Beerli & Martin, 2004), and *self-congruity* scale (4-items, Cronbach's $\alpha = 0.97$, Sirgy & Su, 2000). We developed and used average scores for affect based evaluation, cognitive evaluation, and self-congruity with environment in our analyses.

We then conducted a series of ANOVAs with placemaking and environment as the independent variables and each behavioral intention measure as the dependent variable. For all behavioral intention measures, the main effects of placemaking and environment were both significant (all F values > 3.50 , $p < .01$). Although the environment had a main effect, the effect size of placemaking was at least 5 times larger across all intentions. The interaction effect of placemaking and environment was not significant for any of the behavioral intentions (at $p < .05$) except for intention to recommend to others ($p = .048$). As will be explained further in the next section, the interaction pattern indicated an impact of placemaking on intention to recommend in all environments, but particularly a stronger effect in retail environment. In short, these results suggest a strong effect of placemaking on all behavioral intentions for all environments.

Specifically, the participants displayed higher intentions to purposefully “spend time” (i.e., live, shop, hang out, work, commute through) in the augmented (vs. plain) environments ($F(1, 576) = 112.85$, $p < .01$, $partial\ eta^2 = 0.164$). Environment also had a significant main effect ($F(1, 576) = 5.03$, $p < .01$, $partial\ eta^2 = 0.034$), however, the effect of placemaking on intentions to spend time in was not moderated by environment ($F(4, 576) = 1.93$, $p > .10$). Figs. 1–4 display the means.

Participants also had higher intentions to seek information in an augmented environment compared to a plain environment ($F(1, 576) = 141.13$, $p < .01$, $partial\ eta^2 = 0.197$). The main effect of environment was also significant ($F(4, 576) = 5.89$, $p < .01$, $partial\ eta^2 = 0.039$), however, it did not moderate the impact of placemaking ($F(4, 576) = 1.44$, $p > .10$).

Similarly, participants had higher intentions to recommend the augmented environments compared to the plain environments ($F(1, 576) = 190.19$, $p < .01$, $partial\ eta^2 = 0.248$). The main effect of environment was also significant ($F(4, 576) = 7.13$, $p < .01$, $partial\ eta^2 =$

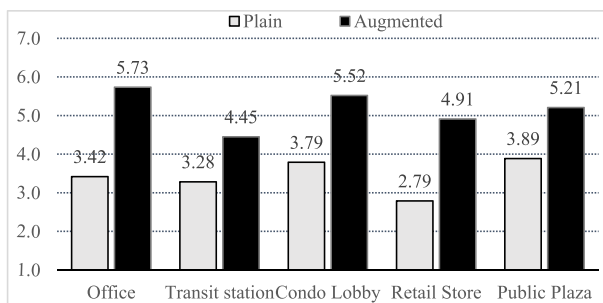


Fig. 1. Intention to spend time in environment.

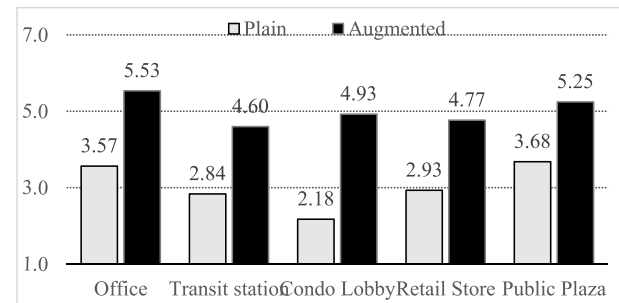


Fig. 2. Intention to seek information about the environment.

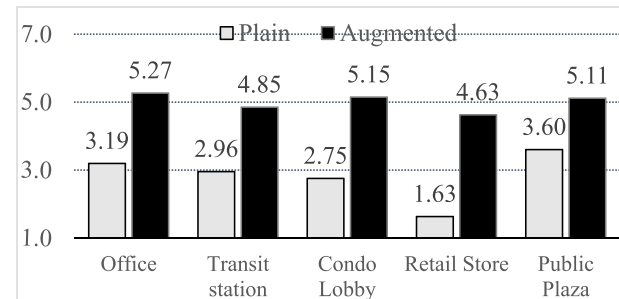


Fig. 3. Intention to recommend the environment to others.

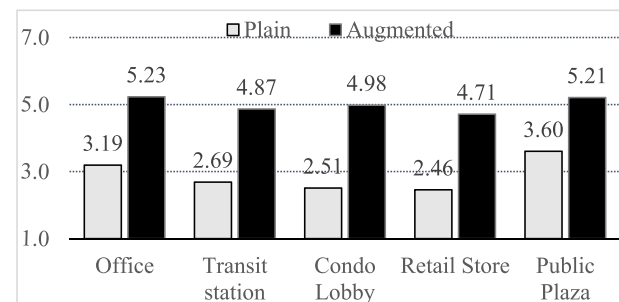


Fig. 4. Intention to Share info about the Environment with Others.

0.047) and in this case moderated the impact of placemaking ($F(4, 576) = 2.42$, $p < .05$, $partial\ eta^2 = 0.017$). The interaction pattern revealed that the difference between augmented and plain retail environment was much larger than other environments (Fig. 3).

Finally, participants had higher intentions to share content about augmented environments with others compared to plain environments ($F(1, 576) = 168.86$, $p < .01$, $partial\ eta^2 = 0.227$). Environment also had a significant main effect ($F(4, 576) = 3.53$, $p < .01$, $partial\ eta^2 = 0.024$), but no interaction effect ($F(4, 576) = 0.74$, $p > .10$).

To understand the process by which placemaking influences behavioral intentions, we conducted mediation analysis using PROCESS model (Hayes, 2013), with placemaking as the independent variable (augmented = 1, plain = 0), affect-based evaluation, cognitive evaluation, and self-congruity as parallel mediators, and intention to spend time as the dependent variable (model = 4, 10,000 bootstrapping samples). We present partially standardized coefficients for ease of comparison of indirect effects. Results indicate that placemaking led to a total indirect effect (0.90, [95% CI: 0.77, 1.03]) on intention to spend time through affect-based evaluation (0.24, 95% CI: [0.08, 0.42]), cognitive evaluation (0.15, 95% CI: [0.01, 0.29]), and self-congruity (0.51, 95% CI: [0.39, 0.63]).

When we replicate the analysis for intention to seek information, the results indicate that affect-based evaluation (0.37, 95% CI: [0.20,

0.54]), cognitive evaluation (0.32, 95% CI: [0.18, 0.48]), and self-congruity (0.24, 95% CI: [0.14, 0.36]) mediate the effect of placemaking (total indirect effect: 0.93, 95% CI: [0.82, 1.05]). Similarly, the impact of placemaking on intention to recommend is mediated (total indirect effect 0.91, 95% CI: [0.80, 1.03]) by affect-based evaluation (0.40, 95% CI: [0.23, 0.57]), cognitive evaluation (0.30, 95% CI: [0.16, 0.44]), and self-congruity (0.21, 95% CI: [0.11, 0.31]). Finally, affect-based evaluation (0.39, 95% CI: [0.23, 0.55]), cognitive evaluation (0.32, 95% CI: [0.19, 0.46]), and self-congruity (0.24, 95% CI: [0.14, 0.34]) mediated the impact of placemaking on intention to share content or information about the environment (total indirect effect 0.95, 95% CI: [0.83, 1.06]).

Overall, the results demonstrate that placemaking significantly improves how individuals feel, form thoughts and cognitions, and identify with an environment. In turn, these positive feelings and thoughts, as well as the stronger identification with the environment lead individuals to want to spend more time in the environment, seek and share information about it, as well as recommend the environment it to others. These mechanisms are presented in Fig. 5.

5. Discussion

A study on placemaking, and more fundamentally, on what makes people want to be in a given place, bears a special connotation coming out of a pandemic that mandated inherently anti-place public health measures (Courage et al., 2021). For one, it reminds us that placemaking has the power to draw people out of isolation and back into shared environments (Douglas, 2022), but also to create places that allow for physical, rather than social distancing (Courage, 2021). Further, while the pandemic accelerated digital placemaking in which places can be experienced remotely (Norum & Polson, 2021), it has also brought a renewed appreciation of built environment's impact and of what was taken away during that time. More importantly, this study acts as a reminder that still too many people find themselves permanently locked out of places.

The results provide insights on what makes people want to spend time, be it for the first time in a while, or for the first time ever, in a built environment. Indeed, while prior research has uncovered drivers of SOP (e.g., Devlin & Nasar, 1989; Green, 1999), this study goes one step further by establishing the impact of placemaking-induced perceptions on behavioral outcomes. It shows how placemaking leads to significant improvements in all metrics - whether it is how individuals identify with the environment, feel, form cognitions about it, or their behavioral intentions related to the environment. But more importantly, they show that affective and cognitive evaluations, as well as self-congruity all serve as mechanisms by which placemaking affects behaviors, although the role of these mechanisms vary across behaviors: For instance, self-congruity serves as the dominant mechanism through which augmented environment increases the likelihood to spend time in an environment (57% of the indirect effect) whereas affect-based

evaluation serve as the dominant mechanism (44%) in how placemaking increases likelihood to recommend it to others.

To an extent, placemaking's ability to affect congruity between people and places, and in turn, the intention to visit is consistent with prior findings on destination image (Sirgy & Su, 2000). It is also a reminder that placemaking is a highly contextual practice, bound to fail without community input (Duconseille & Saner, 2020). Those results are particularly relevant to creating places that appeal to both locals and visitors. Indeed, when we replicated the analysis for each behavioral outcome, only participant's identification with the environment consistently and significantly appeared as the mechanism for this particular behavioural outcome.

Further, knowing that intent to be in a place follows from self-congruity indicates that placemaking must fulfil people's desire for authenticity and fully embody who they are (Pine & Gilmore, 2007). It ought to instill pride, and "celebrate what is real" (Salzman & Yerace, 2018, p. 60). This also suggests that to further increase the impact of placemaking, it can be calibrated to improve self-identification by customizing environments to the "ideal" or "desired" self of the community, rather than a standard augmentation approach (Sirgy & Su, 2000). People want to connect with places, engage on a more meaningful level instead of simply looking at some flashy installation. The challenge here is to ensure that said ideal also reflects that of marginalized groups, for it seems safe to assume that the same self-congruity mechanism also acts as a repellent for those who do see themselves reflected in a given place. Shaping a place, much like shaping a destination's image, is a highly political endeavor and should involve sustained collaboration with locals (Campelo et al., 2014; Hanna et al., 2021). In other words, there is a risk of reinforcing power dynamics by using these findings uncritically, whereas they should invite for meaningful dialogue and engagement with all stakeholders, especially those whose ideals may conflict with the promoters' vision. While we knew that genuine participation in the placemaking process and co-creation with the community led to social and civic benefits, this study clarifies what should be sought-after through those interactions. Furthermore, having drawn from the tourism literature, we understand that finding out what locals are all about enriches subsequent interventions on the built environment, but also enhances the experience for outsiders. Indeed, Richards (2020) and Russo and Richards (2016) show that living like a 'local' is increasingly sought after, and that experiences that feel 'real' trump those that feel 'exceptional'. However, that literature also points to the risks of making it too inviting to visitors, to a point where locals are severely hindered in their ability to also enjoy places (Dodds & Butler, 2019).

That affective or cognitive considerations are only secondary drivers of one's desire to be in an environment is a reminder that placemaking ought to be more than just generically "pretty" places (Hu & Chen, 2018). Placemaking is more than just aesthetics and 'instagramable' settings. Yet, this does not mean that these evaluations should be discounted. For one, they still impact all behavioral outcomes to some extent, and even at times act as the primary mediator (i.e., recommending to others). One possible explanation is that individuals refrain from assuming that others will connect the same way with a given environment, and consequently choose to put forth its aesthetic qualities when talking about it. In addition, sometimes a behavior is not what is sought *per se*, but rather a feeling or a perception. For instance, while placemaking can make a public place feel more stimulating have limited *direct* impact on time spent hanging out in it, it may very well still be what some locals and visitors are looking for. It can, as Cremaschi (2021) explains, trigger equally important individual or collective memories, sense-making, and reinterpretations of built environments, without necessarily having to result in a clear behavioral outcome, or at least, not in any of the specific behaviors measured here.

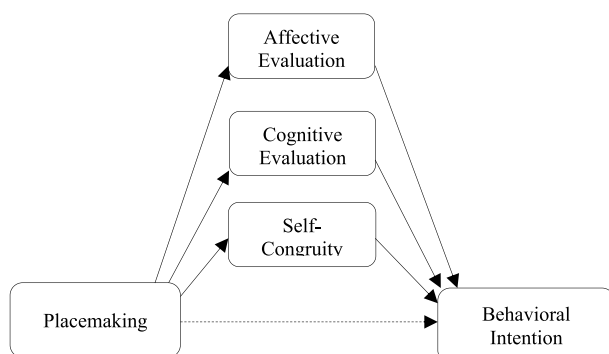


Fig. 5. How placemaking impacts behavioral intentions.

6. Implications

While there is no denying that placemaking is fundamentally contextual, this study's experimental design sought to isolate the placemaking variable and to demonstrate its impact on behavioral outcomes independently of context. For a field long hampered by ill-defined indicators and definitions (Markusen, 2013), we posit that such an understanding of placemaking's influence on people and underlying behavioral mechanisms is an important step forward. Furthermore, using tourism concepts and constructs removes some of the fuzziness around placemaking, and provides tangible behaviors that can easily be operationalized. Yet, that the findings are context-independent does not make them generic, but on the contrary renders placemaking's impact more approachable and pragmatic: Are more people using the place, are they more inclined to talk about it to others, and they are generally more curious about it?

Inherent to placemaking is the tension between social justice and commercial and economic agendas (Tuan, 2013). Rather than pitting the two against each other, this study brings a renewed attention on placemaking's impact on people and argues that maximizing the locals' identification to a built environment is bound to also reflect positively on the experience of those more external to it. Despite deep contradictions, those objectives remain intrinsically connected: Shops, housing and offices follow people, and vice-versa (Salzman & Yerace, 2018). Hence this study's renewed focus on people shows how placemaking can improve feelings and perceptions across a host of places, all the while – rather than instead – feeling more genuine. For instance, for all environments combined, placemaking led to a 50% (1.72 scale points) jump in the likelihood to spend time in it, in addition to much stronger affective and cognitive evaluations. When used in conjunction with company or community data, this number can then be used to project potential sales uptake in retail (commercial impact), usage rate in public places (societal impact) or new commuters (environmental impact) that stands to be gained because of placemaking. What remains contextual here, and left for designers, project managers and community members to determine together, is which of those emotions, perceptions, and behaviors matter most, and why. Such delicate, yet necessary conversations should be conducted in genuine spirit of inclusion, interdependence, and mutual acknowledgement. There is no tapping into a given community's identity and values without having established trust first.

7. Limitations and conclusions

As with any research, this study presents some limitations. For instance, it did not probe for the respondents' culture, social conditioning, or personal experience, all of which are likely to shape their taste in aesthetics and responses to placemaking interventions. Doing so would give a better sense of whose identity is overly present, or on the

contrary, is left out. Additional research may also attempt to test the coefficients found here against real-life environments, probe for other context-specific behaviors, and compare time spent in augmented versus baseline environments. More broadly, research on the benefits of placemaking should ideally account for the opportunity cost of projects as to better measure efficiency over their effectiveness. Future experimental studies should measure the impact of creative placemaking's activations, as well as consider how participation in the placemaking process itself impacts one's self-congruity, and in turn, behaviors. Last, more work that recognizes and seeks ways to reconcile placemaking's dual objective to enhance value for the locals while also appealing to visitors appears necessary.

Affective, cognitive, and self-congruity evaluations are obviously only one part of the story - it does not make, for instance, a workplace *actually* safer, nor a job more challenging. Nor do these evaluations account for changes in people's needs and priorities over time. And so while this study shows how placemaking signals certain things and induces behaviors for a majority of people, it does not make one's real experience less valuable if it does not align or reflect with our findings. On the contrary, such contradicting instances should equally be seen as important insights and probed further, for they likely belie a collective blind spot or bias. In the end, good placemaking needs to be in tune with what it does to people and entices them to do, even if the result runs counter to some's objectives. It can only succeed when all want to and can 'hang out'.

CRedit authorship contribution statement

Louis-Etienne Dubois: Conceptualization, literature review, Methodology, Formal analysis, writing. **H. Onur Bodur:** Formal analysis, editing, writing. **Jonathon Anderson:** Methodology, design. **Dogan Tirtiroglu:** Formal analysis, editing. **Frederic Dimanche:** Conceptualization, editing.

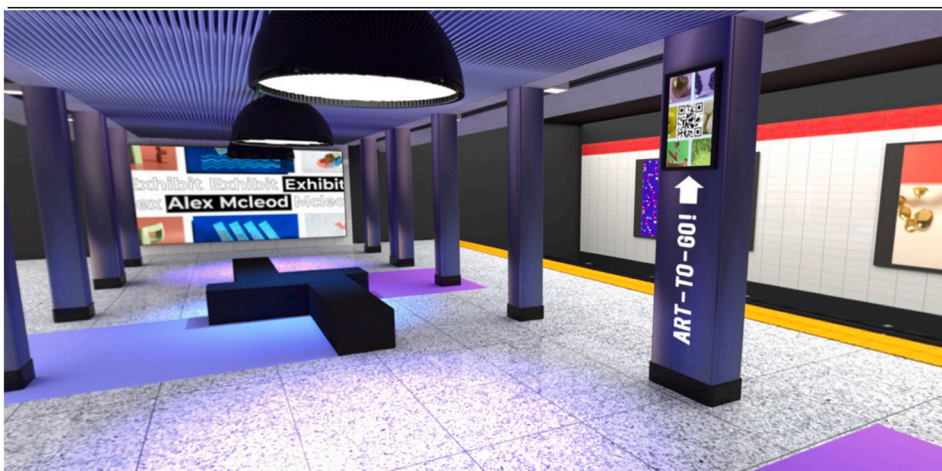
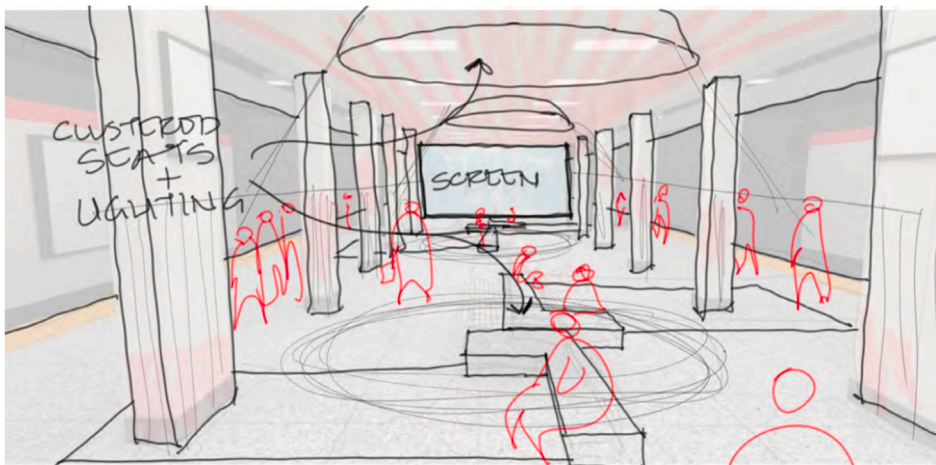
Data availability

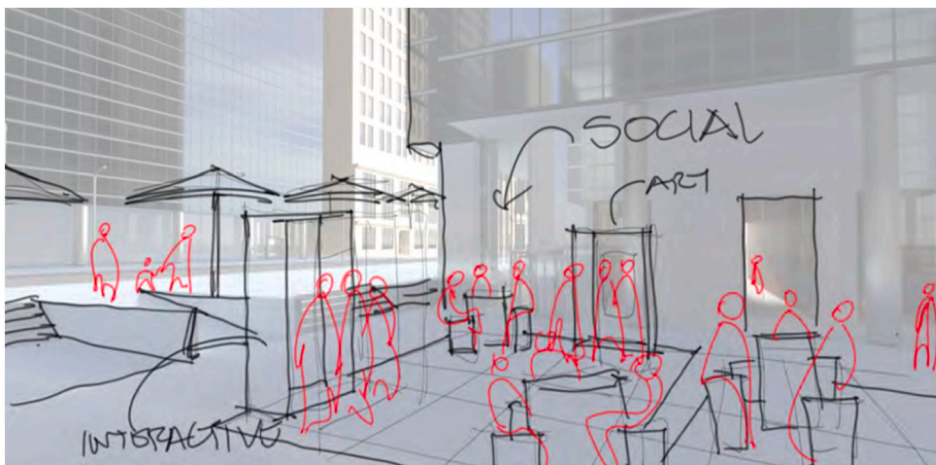
Data will be made available on request.

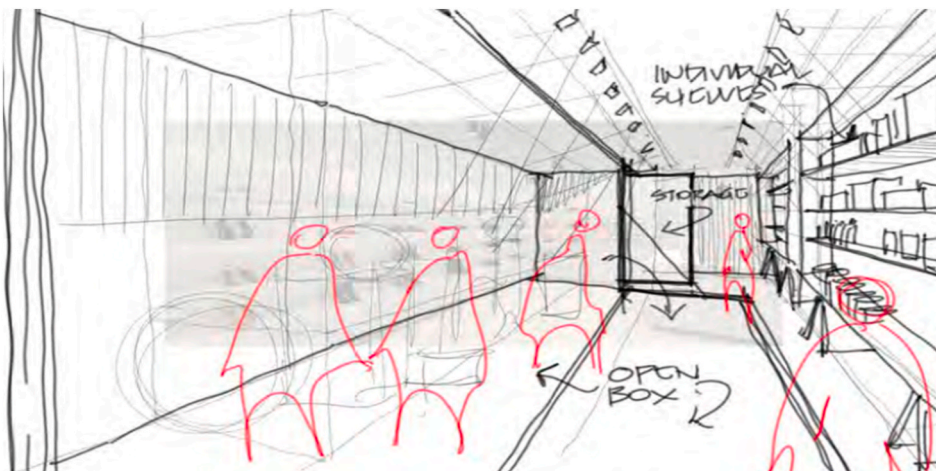
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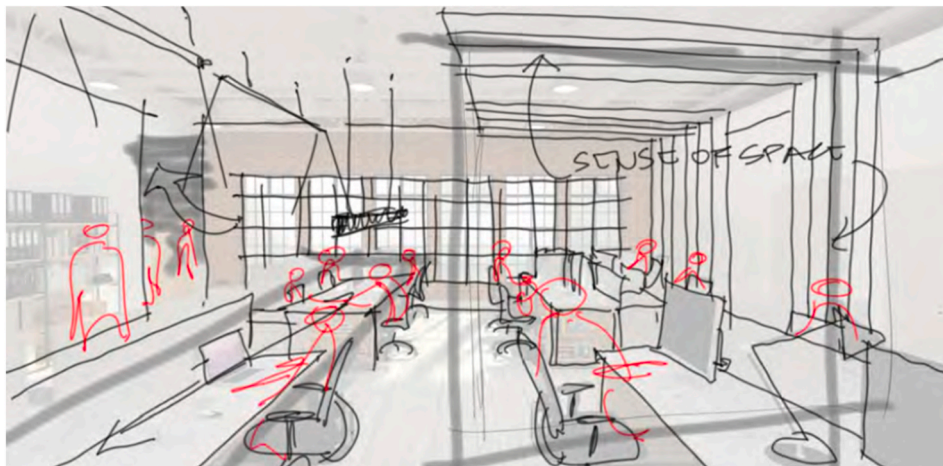
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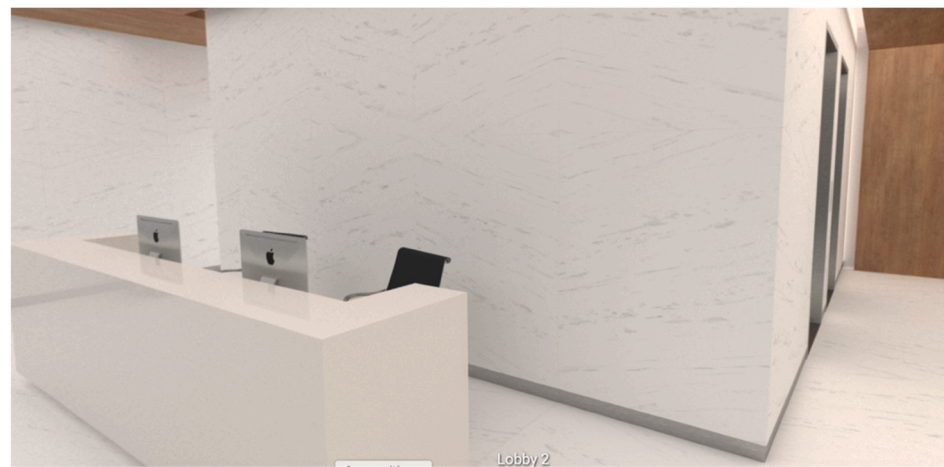
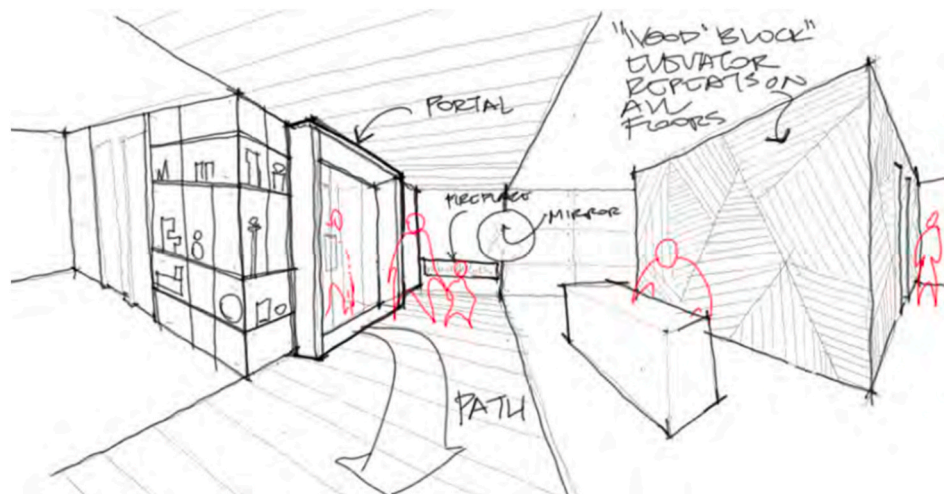
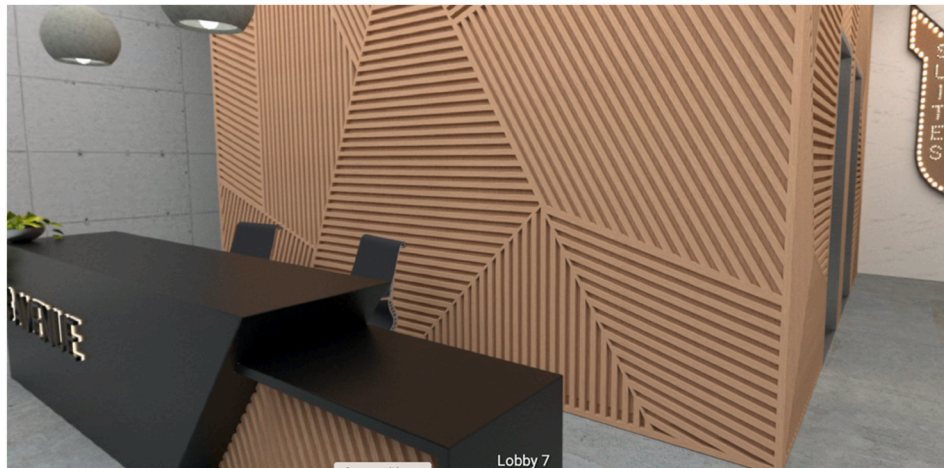
Appendix I











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