Enhancing Public Familiarity in Semi-Public Spaces through Creative and Digital Placemaking: a Scoping Review of the Literature

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[A Scoping Review of the Literature]

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Abstract: This scoping review examines the ways in which creative and digital placemaking can enhance public familiarity in semi-public spaces. Through a systematic analysis of 36 papers published between 2003 and 2023 from various databases, this review identifies key themes and concepts related to placemaking, public familiarity, and semi-public spaces. The analysis highlights the effectiveness of nine placemaking strategies and five smart technology-based solutions for improving public familiarity in semi-public spaces. Additionally, the paper identifies gaps in the current literature, emphasising the need for further research on the long-term impact of placemaking interventions and ethical considerations. This study has important implications for practitioners, policymakers, and researchers interested in enhancing public familiarity and social cohesion in urban semi-public environments through digital technologies. The paper concludes with recommendations for future research and practice, emphasising the significance of thorough evaluation and ethical considerations. In summary, this review provides valuable insights into the potential of creative and digital interventions to improve public familiarity in semi-public spaces.

Keywords: *Creative placemaking, Digital placemaking, Public familiarity, Semi-public space, Smart technologies, Literature review.*

1. Introduction

Semi-public spaces are the heartbeat of cities, serving as the spaces that enable social interactions, community gatherings, and public familiarity [1], [2]. These spaces serve as connectors between private and public spheres, and are essential for creating livable, vibrant, and inclusive communities [3]. However, many semi-public spaces are underutilised, neglected, or designed without consideration for the needs and preferences of their users [3]. As a result, these spaces may fail to foster a sense of community and belonging and may even engender feelings of anxiety and exclusion. To address these issues, creative and digital placemaking has emerged as a powerful tool for transforming semi-public spaces into dynamic and engaging environments that foster social cohesion, cultural exchange, and public familiarity [4].

Placemaking refers to a collaborative, people-centred approach to designing and activating public spaces that places the needs and aspirations of the people who use them at the centre of the process. It involves the careful curation of physical, social, and cultural enhancement of public familiarity in semi-public spaces, which is crucial for fostering a sense of community and belonging. Public familiarity refers to the sense of recognition and connection that people feel when they are in a familiar place [11]–[13]. This feeling is shaped by the physical, social, and cultural dimensions of the environment, as well as the experiences and memories associated with the place [14], [15]. Creative and digital placemaking strategies offer new opportunities to enhance public familiarity in semi-public spaces by integrating art, technology, and digital media into the physical, social, and cultural elements of placemaking. Creative placemaking can take many forms, including public art (e.g., [16]–[18]), temporary installations (e.g., [19]–[21], and community-driven projects [13], [22]. For example, murals or street art can transform the appearance of a neglected or underutilised space [23], while community-driven projects such as public gardens can bring together community members around a shared goal[24]. Digital placemaking, on the other hand, can use technology and digital media to enhance the physical and social environment of a semi-public space. Examples include the use of interactive displays (e.g., [8], [25], [26], augmented reality (e.g., [27], [28]), and gamification (e.g., [29]–[33]) to create new forms of engagement and participation. By integrating these creative and digital elements into the placemaking process, semi-public spaces can become more dynamic, interactive, and culturally rich environments that foster public familiarity.

Despite the growing interest in creative and digital placemaking, there remains a need for a comprehensive review of the literature to assess its impact on public familiarity in semi-public spaces. Thus, this scoping review aims to synthesise the existing knowledge on the theoretical and empirical underpinnings of creative and digital placemaking and its impact on public familiarity in semi-public spaces. The review draws upon a diverse range of literature sources, including peer-reviewed articles, books, reports, and case studies, to provide a comprehensive overview of the state of the art in this field. The findings of this review have important implications for urban designers, planners, policymakers, and other stakeholders involved in the creation and management of semi-public spaces.

The significance of this literature review lies in its potential to advance knowledge on the effectiveness of creative and digital placemaking strategies in enhancing public familiarity in semi-public spaces. This review will provide insights and recommendations for practitioners, policymakers, and researchers seeking to create more vibrant and engaging semi-public spaces. By synthesizing and interpreting the results of previous research, this review will contribute to the development of best practices and guidelines for the use of creative and digital placemaking strategies in the design and activation of semi-public spaces.

The paper's outline is as follows: firstly, we will provide a conceptual framework defining key concepts, including public familiarity and semi-public spaces, followed by an overview of creative and digital placemaking strategies. Secondly, we will present the methodology used to conduct the scoping review, including the search strategy, inclusion criteria, and data extraction process. Thirdly, we will present the results of the review, organised around themes that emerged from the literature, such as the theoretical and empirical underpinnings of creative and digital placemaking, the impact of these strategies on public familiarity in semi-public spaces, and the challenges and opportunities associated with their implementation. Fourthly, we will discuss the implications of the review findings for urban designers, planners, policymakers, and other stakeholders involved in the creation and management of semi-public spaces, as well as identify gaps and limitations in the literature. Finally, we will draw conclusions and provide recommendations for future research and practice, emphasising the potential of creative and digital placemaking to transform semi-public spaces into more vibrant, engaging, and inclusive environments.

2. Background

2.1. Definition of public familiarity

The concept of public familiarity departs from Simmel's traditional view of the city as an anonymous space characterised by a blasé attitude [34], as well as from the urban village argument [35] that emphasises the role of local social networks in shaping neighbourhood experiences [11]. Rather, public familiarity is a social space

that is constructed in physical space through interactions in which individuals participate, as well as those that they observe. As Fischer (1982) suggests, public familiarity is often mistaken for private intimacy, and public impersonality is often perceived as private estrangement, but such public familiarity need not be directly tied to an individual's private life [36]. For example, a friendly greeter on the street may have few friends, while a reserved subway rider may have a thriving social life.

While more recent approaches to living in hyper-diverse neighbourhoods [37] focus on the presence of strangers and the processes of familiarisation of people in co-presence, the social-psychological understanding of experiencing familiar strangers, as originally discussed by Milgram (1992) and developed by Ye (2019) as an individual's "special grammar of public spaces," is less relevant to the current study [38], [39]. Instead, the concept of public familiarity as it relates to this study is characterised by loosely "thematised" knowledge and a mix of anonymity and intimacy [40].

Familiarity emerges from repetitive encounters in sites with accessibility to everyone who "conforms somewhat to the very generally expected patterns of action" [41]. This type of familiarity is rooted in the neighbourhood's daily use and the interactions among inhabitants in public space, which may result in the sense of belonging to the territory that distinguishes it from stronger neighbourhood ties that are typically the focus of neighbourhood and community research [42]–[44].

Overall, public familiarity is widely understood as a result of the local socio-spatial experiences that individuals have as a result of their daily interactions in the neighbourhood's public spaces. It is a social space that is shaped by weak ties among neighbours and the feelings of familiarity and belonging that emerge from these contacts. Public familiarity is a principal factor in understanding the sense of territorial belonging that is experienced by individuals living in specific neighbourhoods.

2.2. Definition and typology of semi-public spaces

Defining semi-public space can be challenging, as it is often specified by less obvious borders and characterised by social, rather than physical, boundaries. Semi-public spaces are typically outdoor areas that are widely accessible but more intimate and restricted than purely public spaces [3]. In residential areas, semi-public spaces are visually connected to surrounding buildings, providing a greater sense of responsibility and control over the space [1], [45]. The placement of semi-public spaces is critical, with activities and places to stay outside positioned directly in front of buildings and around entrance spaces to promote engagement.

According to Gehl (2001), it is crucial to provide an effortless way in and out of buildings, avoiding raised entry zones and changes in level that may hinder activities or create unwanted borders [3]. Creating places to sit, wait, and observe

in the most obvious semi-public spaces can facilitate spontaneous meetings, promote safety through neighbourhood watching, and encourage engagement. Gehl also suggests the creation of semi-private spaces, such as porches and front yards, that smooth the transition between degrees of privacy and encourage community engagement without requiring immediate participation. It is important to note that opportunities to observe activities can also inspire further action.

The transition between private and semi-public zones is marked by diverse types of borders and edges. Walls and other impermeable surfaces are hard edges that do not allow for contact and interaction, while height differences and levels can disrupt easy connections, change views, and lessen sound relations [46]. Long distances and high speeds of movement can also inhibit contact and create borders. Planning and development of semi-public spaces, however, can serve as anchor points for activities and meetings, providing a sense of comfort, safety, and protection, and fostering community bonds [47]. Borders of these spaces should be inviting while clearly stating the rules of accessibility and usage possibilities. Planning should also include left-over spaces that can be given identity, connections, and transformed into places to stay and take care of [2], [48]. All these elements encourage meeting, action, building of community, and a sense of belonging.

In the next section, we will provide an overview of distinct types of placemaking strategies and examine their potential to enhance public familiarity in semi-public spaces.

2.3. Overview of the different types of placemaking strategies, with a focus on creative and digital approaches

Placemaking is a fundamental process in creating vibrant and engaging semi-public spaces [49]. While traditional placemaking strategies tend to focus on physical interventions, such as street furniture, lighting, and landscaping, more recent approaches have incorporated creative and digital elements [6]–[8], [50]. This section provides an overview of the different types of placemaking strategies, with a particular focus on creative and digital approaches.

The term "place-making" was first used in the 1960s by architects, urban planners, and designers who sought to renew public spaces, modify the image of cities, and develop tourism destinations [51], [52]. Since then, "placemaking" has been studied under various keywords and variant spellings, such as "cultural mapping," "creative placemaking," and "digital placemaking" by scholars from different disciplines.

Creative placemaking involves the use of arts, culture, and creativity to enhance the interest of a place by incorporating digital technologies and narratives, such as through public art walks and mobile games [7]. In recent years, there has

been a growing emphasis on more creative applications of "digital placemaking" that incorporate the combination of resources, meanings, and creativity to capture public attention through narratives (e.g., [32], [33], [53], [54]).

For instance, the concept of "cultural mapping" is a methodological tool used in urban planning, cultural sustainability, and community development to highlight local stories, practices, relationships, memories, and rituals that make places meaningful locations [55]. These thematic foci have converged in the form of interactive digital narratives, such as serious games, interactive documentaries, and transmedia stories, to provide "edutainment" experiences where digital users are educated in an entertaining manner to maintain their interest.

Combined, creative and digital placemaking approaches can produce dynamic and engaging semi-public spaces that foster social interaction, community building, and a sense of place [9]. The use of digital technologies can also help bridge the gap between physical and virtual spaces, enhancing the connection between people and their environment [53].

While creative and digital placemaking approaches are gaining recognition as effective ways to transform semi-public spaces, it is crucial to acknowledge that they are not universally applicable. The success of placemaking strategies depends on a deep understanding of the local context, including the social, cultural, and economic dynamics of the area [4], [49]. Additionally, any placemaking approach should be developed through a participatory process involving the community in the strategy's design, implementation, and evaluation of the strategy. This collaborative process ensures that the placemaking strategy aligns with the community's needs and values and fosters a sense of ownership and belonging among residents, visitors, and other stakeholders [46]. By engaging the community in placemaking initiatives, it is possible to create more inclusive, responsive, and sustainable public spaces that promote social interaction and enhance public familiarity.

In the next section, we will provide a systematic review of the literature on creative and digital placemaking in semi-public spaces. This review will examine the effectiveness of different strategies in enhancing public familiarity and promoting social interaction.

3. Methodology

This study employed a scoping review methodology to identify and analyse existing literature (published between 2003 and January 2023) on creative and digital placemaking strategies that enhance public familiarity in semi-public spaces. A scoping review is a systematic review that aims to map and analyse the literature on a specific topic or research question, identifying key concepts and themes in the

process [56]. By using a scoping review, this study provides a comprehensive overview of the literature on creative and digital placemaking, including theoretical and empirical underpinnings, as well as challenges and opportunities associated with their implementation. The review synthesizes diverse literature sources, such as peer-reviewed articles, books, reports, and case studies, to provide a comprehensive understanding of the state of the art in this field. Through this approach, the study aims to contribute to the advancement of knowledge on the use of creative and digital placemaking as a strategy to enhance public familiarity in semi-public spaces.

The search strategy for this scoping review consisted of multiple stages. Firstly, a broad keyword search was conducted using online academic databases such as Google Scholar, Scopus, PubMed, and Web of Science. The search terms used included variations of "creative placemaking," "digital placemaking," "public art," "urban design," "community engagement," "place identity," "semi-public spaces," and other related terms.

Following the initial search, inclusion and exclusion criteria were used to filter the results. Inclusion criteria included peer-reviewed journal articles, books, and book chapters that discussed creative and digital placemaking strategies and their effectiveness in enhancing public familiarity in semi-public spaces. Exclusion criteria included non-English language publications, grey literature, and publications that focused solely on private or completely public spaces. A total of 36 studies met our inclusion criteria, which were then analysed and synthesised (Table 1).

To assist with our systematic literature review, we employed ChatGPT, a state-of-the-art natural language processing tool developed by OpenAI[57]. ChatGPT was used to generate summaries and insights from large volumes of text quickly, allowing us to identify key concepts and themes within the literature that might have been missed through manual review alone. By analysing the summaries generated by ChatGPT, we were able to quickly identify commonalities and differences between the papers and develop a better understanding of the overall trends and patterns within the literature [58]–[60].

However, we acknowledge that ChatGPT may not be able to capture the nuances and complexities of certain types of text, and that its summaries are subject to biases based on the training data it has been exposed to. Given these limitations, and since this review is one of the first to use ChatGPT as an analytical tool, we used it in conjunction with manual review to ensure accuracy and completeness.

The identified themes and concepts were organised into a table that provided a brief description of each category, as well as the author(s) and year(s) in which

they were mentioned. The findings of the review were synthesised into a comprehensive analysis of the effectiveness of different placemaking strategies in enhancing public familiarity in semi-public spaces, and a discussion of the factors that contribute to success. This analysis was based on the key themes and concepts identified in the literature and was informed by the theoretical frameworks and models used to understand creative and digital placemaking in semi-public spaces.

Overall, the use of a scoping review methodology allowed for a comprehensive and systematic analysis of the existing literature on creative and digital placemaking in semi-public spaces. The use of ChatGPT was an effective tool for our literature review, providing a useful way to quickly review and summarize large volumes of text, and helped us to identify key concepts and themes within the literature. However, we caution that ChatGPT should not be relied on exclusively, and that it is important to review the literature in full to ensure accuracy and completeness.
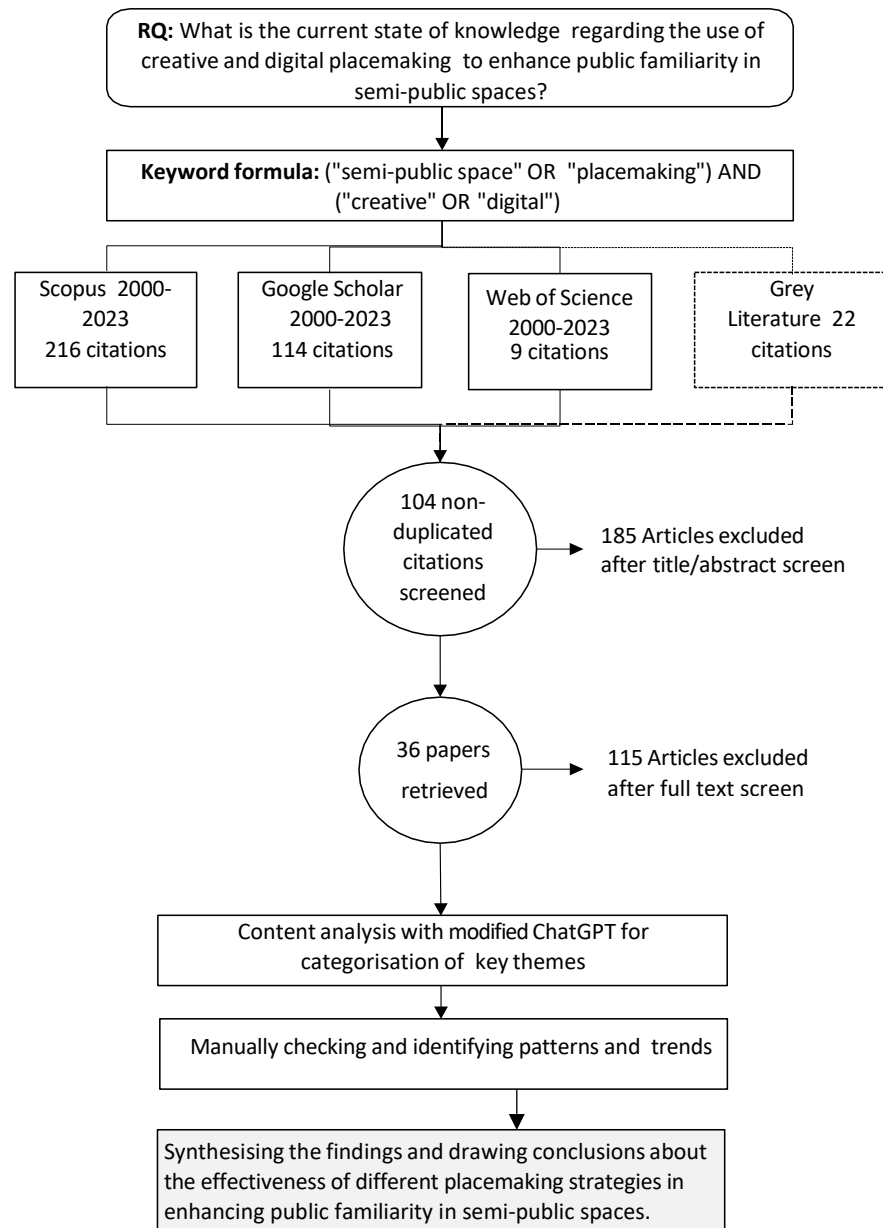
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│  "placemaking") AND ("creative" OR "digital")         │
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| Scopus 2000-2023 216 citations | Google Scholar 2000-2023 114 citations | Web of Science 2000-2023 9 citations | Grey Literature 22 citations |

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│ Synthesising the findings and drawing conclusions     │
│  about the effectiveness of different placemaking     │
│  strategies in enhancing public familiarity in        │
│  semi-public spaces.                                  │
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Figure 1. Selected paper for reviews using PRISMA statement

The findings of this study have the potential to inform future research and practice in the field of creative and digital placemaking, contributing to the development of effective placemaking strategies that enhance public familiarity in semi-public spaces. The methodological framework used to select and review the relevant papers in this study is illustrated in Figure 1.

3.1.   Summary of the literature reviewed and the key themes found

Placemaking, particularly in the form of creative and digital placemaking, is a rapidly growing field that offers innovative and exciting possibilities for enhancing public familiarity in semi-public spaces. Existing literature on this topic identifies several strategies and concepts related to creative and digital placemaking to enhance public familiarity in semi-public space, which can be classified into distinct categories. Table 1, summarises the distinct categories of placemaking strategies and their associated explanations, and authors who have mentioned or cited the category.

Table 1. The categories of ideas and concepts related to enhancing public familiarity in semi-public spaces through creative and digital placemaking

Category	Explanation	Reference(s)
Trans-scale placemaking, Digital media and technology	includes concepts and ideas related to the use of extended-reality or cross-reality technologies to evoke a stronger sense of place. Also, it includes the use of digital media and technology in creative placemaking. Virtual and augmented reality, location-based games, and digital heritage narratives are some examples of such concepts.	[8], [25], [27], [29], [53], [61]–[65]
Public art and culture	includes ideas and concepts related to the use of public art and culture as a means of placemaking. Murals, street performances, and festivals are some examples of such concepts. Public art and culture can be used to create a sense of place, attract tourism, and promote a more vibrant and engaging public space.	[6], [16], [18], [23], [54], [66]
Embedded artists	Embedded artists in government can incorporate artistic methods and perspectives in non-art contexts, often in collaboration with government staff, leading to cross-sector collaboration and idea generation. Void Deck Galleries in Singapore can serve as a case study for examining the relationships between the state, artists, and local communities in the context of creative placemaking and community art.	[67]–[70]

Category	Explanation	Reference(s)
Community engagement and participation	involves involving the community in the design and planning of public spaces to ensure that they meet the needs and desires of the people who use them. Co-design and participatory tactics are some examples of such concepts.	[13], [17], [53], [71], [72]
Place identity and heritage	includes ideas and concepts related to the use of heritage and identity to create a sense of place. Preserving heritage public spaces and integrating cultural heritage into placemaking are some examples of such concepts.	[6], [42], [62], [73]
Aesthetics and design	concepts and ideas related to the design of physical and digital spaces. Multisensory ambiance, design patterns, and environmental graphic design are some examples of such concepts.	[74], [75]
Community development and well-being	Impact of community arts centres on social cohesion, use of creative placemaking in informal care for older adults	[4], [12], [63]
Bottom-up placemaking	includes concepts and ideas related to bottom-up placemaking, such as the everyday creative practice of eyebrow grooming and the use of irregular yet civic-minded do-it-yourself urban design projects.	[76]
Temporary installations and events	Temporary installations and events can also be used to activate underutilized areas, encourage community engagement, and test new ideas. For example, pop-up installations, festivals, and exhibitions can be used to create a buzz and generate interest in a place, while also providing opportunities for experimentation and innovation.	[19]–[21], [65], [71], [77], [78]

3.2. Summary of the literature on the use of smart technology to enhance public familiarity in semi-public spaces

Our review of the literature reveals that the rise of digital technologies, such as social media, mobile applications, and interactive installations, has transformed the way people connect and communicate, and these technologies have been explored as

potential tools for enhancing public familiarity in semi-public spaces. Table 2 demonstrates the existing literature on the use of smart technologies in semi-public spaces to promote public familiarity, and we will highlight the key findings and challenges that have emerged from this research.

Table 2. The use of smart technology to enhance public familiarity in semi-public spaces

Technology	Benefits	Mechanisms	Conditions for Success	Ethical Considerations
Social media platforms	Effective tool for building social capital in public spaces Provides a platform for sharing information, building trust, and forming new relationships Promotes social connections among community members	Facilitates the sharing of information, building of trust and forming of relationships	Access to social media, familiarity with digital devices and technology, and protection of privacy and prevention of cyberbullying	Risk of cyberbullying, erosion of privacy, and reinforcement of existing social hierarchies, exclusion of groups without access to technology
Mobile applications	Facilitates communication and cooperation among park visitors Effective in fostering a sense of community and promoting collective decision-making Effective in building social connections and reducing traffic congestion	Facilitates communication and cooperation, and provides information for collective decision-making	Access to mobile applications, digital literacy, and compatibility with mobile devices	Association with social isolation, lack of face-to-face communication, exclusion of groups without access to technology, and potential for privacy violations
Interactive installations	Effective in fostering social connections and building a sense of community Provides real-time environmental information to community members Encourages collaboration and play among park visitors	Encourages social interaction and communication through interactive experiences	Affective design, accessibility, and ease of use of the interactive installations	Potential for exclusion, reinforcement of existing power imbalances, and ethical implications for privacy, safety, and data protection

Technology	Benefits	Mechanisms	Conditions for Success	Ethical Considerations
VR / AR	Effective in promoting community engagement and a sense of place by allowing community members to explore the history of their neighbourhood - Effective in supporting local economic development by providing information about local businesses and services	Promotes immersive experiences and information-sharing for community engagement and development	Access to virtual or augmented reality systems, affordability, and compatibility with digital devices	Ethical considerations for exclusions, privacy and data protection
IoT / IoB	Provides real-time information to reduce traffic congestion and promote cooperation among drivers Effective in promoting community engagement and awareness by providing environmental information to community members	Provides real-time information to facilitate cooperation and awareness	Access to IoT-based systems, technological expertise, and privacy and security protections	Ethical implications for privacy, data protection, and the potential for exclusions and digital divides

4. Discussion

4.1. Interpretation of the results

This scoping review has explored the literature on the use of creative and digital placemaking to enhance public familiarity in semi-public spaces. Our findings indicate that there is a growing interest in the potential of creative and digital placemaking to transform semi-public spaces into more engaging and inclusive public spaces. The review has highlighted several strategies that have been used to achieve this goal, including the use of public art, interactive installations, and digital technologies, among others. The review also identified several factors that contribute to the success of these strategies, including community engagement, stakeholder collaboration, and the effective use of technology.

One of the key findings of this review is the potential of digital technologies to enhance public familiarity in semi-public spaces. Digital placemaking has the potential to engage diverse communities and promote social interaction. Examples of digital placemaking initiatives include interactive installations, augmented reality experiences, and mobile apps that provide information and facilitate communication between community members.

Digital placemaking can also provide opportunities for data collection and analysis, which can inform decision-making and enhance the effectiveness of placemaking initiatives.

The use of digital technologies in placemaking is intricately linked to the emerging field of the Internet of Things (IoT) and the Internet of Behaviours (IoB). IoB is a subset of IoT that involves the collection, analysis, and use of data from various sources, including sensors, social media, and other digital platforms, to understand and influence human behaviour [4], [53]. The potential of IoB in placemaking is significant, as it can provide insights into how people interact with the built environment and inform the design of more effective and engaging public spaces. For example, IoB can be used to monitor foot traffic, analyse user behaviour, and provide real-time feedback to inform the design and management of public spaces.

Despite the potential benefits, the review also identifies several limitations and gaps in the literature. One of the limitations is the lack of a standardised approach for evaluating the effectiveness of placemaking interventions. Additionally, most studies focus on short-term outcomes, with few studies investigating the long-term impacts of placemaking interventions. Furthermore, this review raises several implications and ethical considerations for practitioners, policymakers, and researchers:

1) Privacy concerns: The use of smart technologies in semi-public spaces may raise concerns about privacy and data security. For example, the collection and storage of personal data may be viewed as intrusive or a potential threat to the privacy of community members. There is a need to consider how data will be collected, stored, and used, and to ensure that appropriate safeguards are in place to protect the privacy and security of community members. This may include adopting data protection policies and procedures, limiting the collection and use of personal data, and ensuring that community members are fully informed about the use of smart technologies in the space.

2) Equity concerns: The use of smart technologies in semi-public spaces may also raise concerns about social equity. For example, the cost of implementing and maintaining smart technologies may create inequities between communities that have access to these technologies and those that do not. There is a need to ensure that the use of smart technologies in semi-public spaces is accessible and inclusive for all community members, regardless of socioeconomic status. This may include developing strategies to ensure that the cost of implementing and maintaining smart technologies is not prohibitive, and considering how the needs and preferences of marginalised or disadvantaged groups can be taken into account.

3) Technological limitations: While smart technologies hold great promise, there are also limitations to their effectiveness. For example, the accuracy of sensors may be affected by environmental factors, and the effectiveness of smart technologies may be limited by the physical layout of the space in which they are implemented. There is a need to consider the limitations of smart technologies when designing and implementing these technologies, and to develop strategies for overcoming these limitations. This may include adopting a multi-modal approach to data collection, such as using a combination of sensors and user-generated data, or developing algorithms that can account for environmental factors.

4) Community engagement: The success of smart technologies in enhancing social connections in semi-public spaces is heavily dependent on community engagement and support. There is a need to involve community members in the design and implementation of smart technologies, and to ensure that their needs and preferences are taken into account. Additionally, community members should be involved in the monitoring and evaluation of these technologies, to ensure that they are meeting the needs of the community. This may include holding community workshops or consultations to gather feedback and input, and establishing community committees or groups to oversee the implementation and evaluation of smart technologies.

5) Maintenance and upkeep: Smart technologies require ongoing maintenance and upkeep to ensure their effectiveness. There is a need to consider the resources and expertise required to maintain and update smart technologies, and to develop strategies for ensuring that these technologies remain effective over time. This may include developing a maintenance plan or schedule, training staff or community members to conduct maintenance and repairs, and ensuring that sufficient resources are allocated to the ongoing upkeep of smart technologies.

6) Legal and regulatory considerations: The use of smart technologies in semi-public spaces may also raise legal and regulatory considerations. For example, there may be regulations or guidelines in place that restrict the collection or use of personal data, or that require the implementation of specific security measures. There is a need to ensure that the use of smart technologies in semi-public spaces is in compliance with applicable laws and regulations, and to ensure that any potential legal or regulatory issues are identified and addressed.

7) Social and cultural factors: Smart technologies are embedded in social and cultural contexts that can shape their impact on social connections in semi-public spaces. There is a need to consider the social and cultural factors that may influence the use and effectiveness of smart technologies in different

contexts. For example, cultural norms and values may affect how community members perceive and interact with smart technologies, and social dynamics within the community may impact the uptake and acceptance of these technologies. There is a need to consider the social and cultural factors that may influence the use and effectiveness of smart technologies in different contexts, and to develop strategies for adapting these technologies to meet the needs and preferences of diverse communities.

8) Ethical considerations: The use of smart technologies in semi-public spaces raises important ethical considerations, such as the potential for these technologies to reinforce existing power dynamics or to create new forms of social exclusion. There is a need to consider the ethical implications of the use of smart technologies in semi-public spaces, and to ensure that these technologies are designed and implemented in ways that are consistent with ethical principles and values. This may include adopting ethical frameworks or guidelines to guide the development and implementation of smart technologies, and ensuring that the needs and preferences of diverse user groups are taken into account.

4.2. Recommendations for Future Research and Practice

The scoping review conducted in this study has revealed the potential of creative and digital placemaking to enhance public familiarity in semi-public spaces. However, the review has also identified gaps in the literature, suggesting the need for further research and practice in this area. The study provides a foundation for future investigations and highlights the importance of interdisciplinary collaboration, stakeholder engagement, and sustainable funding in the development and implementation of creative and digital placemaking initiatives. Ongoing research and evaluation of placemaking strategies are critical to ensure their effectiveness in creating vibrant, inclusive, and sustainable semi-public spaces.

One key area for future research is the development of more rigorous evaluation methods. While some studies have attempted to measure the impact of creative and digital placemaking on public familiarity, there is a need for more robust evaluation methods that can measure the impact on a range of outcomes, such as social cohesion and community well-being. In addition, future research should seek to understand the factors that contribute to the success or failure of creative and digital placemaking interventions, including the role of community engagement and the importance of context.

Another major area for future research is the exploration of the potential of IoB technologies in creative and digital placemaking. While some studies have highlighted the potential of these technologies, there is a need for more

research that can demonstrate the impact of IoB technologies on public familiarity and other outcomes. In addition, future research should explore the ethical considerations associated with the use of these technologies in creative and digital placemaking.

Finally, practitioners and policymakers should continue to prioritize the inclusion of long-time residents and other marginalized groups in the planning and implementation of creative and digital placemaking interventions. This can help to ensure that the benefits of these interventions are distributed equitably and that unintended consequences are avoided. In addition, practitioners and policymakers should work to develop more inclusive and participatory processes for the planning and implementation of creative and digital placemaking interventions.

5. Conclusion

This scoping review has provided a comprehensive overview of the literature on enhancing public familiarity in semi-public spaces through creative and digital placemaking. The findings suggest that creative and digital placemaking interventions can effectively enhance public familiarity in semi-public spaces through various strategies, such as providing amenities and social gathering spaces, promoting local culture and identity, and utilizing technology to facilitate communication and interaction among individuals.

However, the review also highlights the need for more rigorous evaluation and reporting of the effectiveness of placemaking interventions in enhancing public familiarity. Furthermore, the review reveals the limited attention paid to ethical considerations in placemaking, such as issues of inclusivity, accessibility, and privacy, which should be considered when designing and implementing placemaking interventions.

The implications of this study for practitioners, policymakers, and researchers are significant. Practitioners and policymakers can use the findings of this study to guide the design and implementation of effective placemaking interventions that foster public familiarity and enhance the livability of cities. Researchers can build on the gaps and limitations identified in this study to develop more rigorous and comprehensive evaluations of placemaking interventions.

In conclusion, this scoping review underscores the importance of creative and digital placemaking in enhancing public familiarity in semi-public spaces. While there is a need for more research on the effectiveness of placemaking interventions and the ethical considerations associated with them, the findings of this study offer valuable insights for creating more livable and inclusive cities through effective placemaking interventions.

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