

“Love the Specific Scene of Life”: A Visual Analysis of User-Generated Narratives on Walkable City Spaces

Izzy Yi JIAN^{1,*}, Xiaosheng ZHU², Yangyang Pan³, Kar Him MO⁴

¹Department of Social Sciences and Policy Studies, The Education University of Hong Kong.

²Department of Land-Surveying and Geo-informatics, The Hong Kong Polytechnic University.

³School of Design, The Hong Kong Polytechnic University.

⁴School of Architecture, The Chinese University of Hong Kong.

*Corresponding Author Email: izzyjian@eduhk.hk, <https://orcid.org/0000-0001-7957-3546>

Abstract

The increasing convergence of technology and media interactivity continues to shape novel urban landscapes and social connections, catalysing the emergence of place in media and the phenomenon of “Wang Hong urbanism”. This research investigates urban aesthetic appeal in the digital era through analysis of photographs posted on the social media platform Douban under #CityWalk, utilising a deep learning scene recognition model with Class Activation Mapping. The visual content analysis established three primary categories: natural landscapes, built structures, and human presence. This classification framework illuminates how distinct aesthetic elements are emphasised in user-generated urban representations. The findings demonstrate how pedestrians reconstruct their perceptions of walkable urban spaces through social media engagement, whilst providing insights into contemporary urban tourism within the context of Wang Hong’s urbanism.

Keywords: Citywalk, wanghong urbanism, social media, urban design

1. Introduction

In recent decades, urban China has witnessed a significant shift in leisure patterns, marked by increased free time and disposable income among city dwellers. Despite these changes, the range of daily leisure activities has remained relatively constant (Newman et al., 2014). Within this context, walking has emerged as a universally appealing leisure pursuit, transcending age barriers and offering an accessible, cost-effective, and flexible form of physical activity. This rise in urban walking not only reflects changing lifestyle preferences but also represents a unique form of engagement with the city itself. As previous research notes, walking serves as a powerful medium through which individuals interact with and interpret urban heritage, embodying qualities that are at once grounded in place, performative in nature, and potentially transformative in impact (Middleton, 2018).

Jan Gehl (1987) highlighted that optional and social activities, particularly non-purposive recreational pursuits, are more sensitive to the built environment than necessary activities, offering rich opportunities for shaping urban spaces. This insight has gained renewed relevance in the post-pandemic era. Since the World Health Organization declared the end of the pandemic in May 2023, there has been a noticeable shift in people’s preferences towards “high-quality” travel and leisure experiences, often beyond conventional tourist destinations (Lehtinen and Vihanninjoki, 2020). In the wake of this global tourism resurgence, localities worldwide are striving to position themselves as objects of the tourist gaze (Zheng et al., 2024). This trend marks a significant shift in urban identity: cities are no longer content to be merely centres of production or symbols of power, but increasingly seek to reinvent themselves as sites of entertainment and leisure (Zhang et al., 2023). Consequently, urban environments now serve a dual purpose - as aesthetic objects and as crucial venues for recreational activities (Li et al., 2024)there is currently limited attention given to related research. Based on this, the study focuses on Jinshan Park in Fuzhou City, Fujian Province, China, to investigate the relationship between landscape features and the coexistence of landscape aesthetics and recreation values of urban parks. The research employed field observations and questionnaire surveys to assess the landscape aesthetic and recreational values of urban parks and explore their coexistence. Additionally, semantic segmentation and other methods were introduced to quantify landscape features. Linear regression analysis was then applied to further examine the impact of landscape features on the landscape aesthetic and recreational values in urban parks, as well as their coexistence. The results revealed: (1. This dual role of urban spaces underscores the importance of balancing aesthetics and functionality. A space that prioritizes only utilitarian functions while neglecting aesthetic considerations would likely be perceived as uninteresting (Li et al., 2024)there is currently limited attention given to related research. Based

on this, the study focuses on Jinshan Park in Fuzhou City, Fujian Province, China, to investigate the relationship between landscape features and the coexistence of landscape aesthetics and recreation values of urban parks. The research employed field observations and questionnaire surveys to assess the landscape aesthetic and recreational values of urban parks and explore their coexistence. Additionally, semantic segmentation and other methods were introduced to quantify landscape features. Linear regression analysis was then applied to further examine the impact of landscape features on the landscape aesthetic and recreational values in urban parks, as well as their coexistence. The results revealed: (1. Therefore, maximizing the synergistic interplay between the aesthetic and recreational values of urban spaces has emerged as a critical focus for urban research and design. This approach not only enhances the appeal of cities for tourists but also improves the quality of life for residents, creating environments that are both visually pleasing and functionally enriching.

On the other hand, there has been a growing emphasis on the quality of leisure activities among the public (Wu, 2023). "City Walk," an emerging travel mode, has gained particular popularity among younger generations due to its focus on "nearbyness" (Xiang, 2021) and authentic experiences. In the digital age dominated by social media, the advent of geomedia has transformed the traditional urban walking experience, creating a dynamic interplay between physical cityscapes and digital representations that allows individuals to engage with urban spaces in unprecedented ways, blending personal narratives with collective urban exploration (McQuire, 2017).

Previous research has identified several factors influencing leisure walking, including built environment features, leisure facility provision, walkability, and land use diversity (Bayar and Yilmaz, 2023; Jian et al., 2020; Wang and Yang, 2019). Walkability encompasses environmental features, outcomes fostered by walkable environments, and serves as a proxy for better urban design (Forsyth, 2015). While extensive research exists on walking tours in tourism and urban morphology from a top-down perspective (Giddy and Hoogendoorn, 2018; Wan, 2023) this exploratory study examined the stimuli that triggered tourists to take a casual walk in an urban tourism setting, whether and how these stimuli interacted, and how the stimuli evoked the tourists' emotions, experiences, and responses. Macao (China, there's a lack of understanding of city walkers' preferences in everyday urban settings. The interaction between urban landscapes, particularly socio-cultural landscapes and built environment elements, and this emerging leisure activity of city walking remains unknown.

In light of this, this study aims to capture and collage the multidimensional experiences of walkers from the landscape of visual accumulation (spectacle), revealing how they encounter, interpret, and present the urban environment. We seek to understand the relationship between landscape elements and aesthetic values during their recreational city walk behaviours in urban settings. This study will provide new perspectives for urban planners, policymakers, and marketers to better understand and promote vibrant interactions with urban daily life.

2. Literature Review

2.1 Wang-hong Urbanism: A Geomedia Perspective

In 18th century Europe, painting was the primary medium for landscape dissemination, giving rise to the picturesque aesthetic. Subsequently, the advent of photography, development of mass media, and widespread transportation contributed to the flourishing of mass tourism and popularization of photo-op spots in scenic areas (Adams, 2009). Since the early 21st century, advancements in geographic information technology have strengthened the connection between media and physical space, promoting research and development in media geography. The widespread adoption of digital technologies, particularly social media platforms that facilitate the sharing of text and images, has transformed how individuals document and share their daily experiences, creating a vast collection of digital data that serves as a powerful medium for communication. Against this background of geomedia (McQuire, 2017), the contemporary urban experience is characterized by a simultaneous engagement with both physical environments and digital media, offering new perspectives on the multifaceted nature of everyday life (Zook and Graham, 2007). Contrary to initial concerns, research suggests that the advent of digital communication technologies has not replaced local community connections but rather enhanced them, fostering a stronger sense of belonging among users (Boy and Uitermark, 2017). The urban landscape is now shaped by a complex interplay between tangible and virtual social dynamics, with physical attributes influenc-

ing digital behaviours, while digital trends reciprocally impact the material world in a continuous cycle of mutual influence (Zook and Graham, 2007).

This study conceptualises “Wang-hong Urbanism” as an urbanization phenomenon rooted in the intricate inter-relationships between physical, digital, and social spaces (Jian et al., 2022, Figure 1). The rise of social media has created a pervasive communication infrastructure that enables instant local and global connections (Adams, 2009). Within this framework, users actively participate in shaping urban narratives by creating and sharing diverse representations of specific places across multiple platforms. This process of digital place-making blends the virtual and physical aspects of urban life, leading to a reimagining of city spaces. The digital footprints left by users through shared photos, stories, and interpretations collectively influence how places are perceived and experienced (Bronsvort and Uitermark, 2021). This interplay between media and urban spaces creates what can be described as “media in place” and “place in media”. “Media in place” refers to how digital platforms intersect with physical urban environments, while “place in media” encompasses the digital representations and narratives that shape perceptions of urban spaces. This digital layer of urban experience has begun to shape physical development, with new spaces being designed to cater to social media aesthetics and “Instagrammable” (Boy and Uitermark, 2017). The constant flow of digital content about urban spaces feeds back into the physical realm, influencing urban planning and design decisions. Wang-hong Urbanism thus represents a cyclical process where digital representations inspire physical changes, which in turn generate new digital content. This phenomenon is reshaping urban landscapes, potentially altering the way cities are developed, experienced, and understood. As this trend continues, it raises important questions about authenticity, inclusivity, and the future direction of urban development in an increasingly digitally-mediated world.

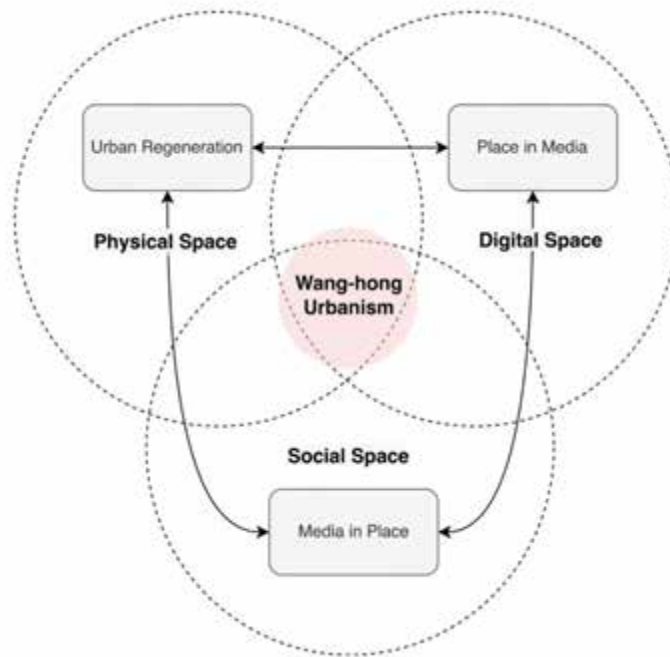


Figure 1. Conceptual framework to understand Wang-hong Urbanism
Source: (Jian et al., 2022)

2.2 City Walk in China: Explore the Nearby

In the context of Chinese urban life, city walking has emerged as a significant cultural phenomenon, embodying the concept of exploring the nearby as a scope of seeing the world (Xiang, 2021). In Chinese social media, City Walk is associated with spontaneity, leisure, and exploring non-mainstream attractions (Wu, 2023). This trend is closely linked to the “micro-vacation” model popularised during the pandemic. The 2023 Tourism Research Report lists city walking as a highly favoured emerging travel mode, with 82% of respondents willing to try it. Social media platforms have seen hundreds of thousands of “#citywalk” tagged posts. This practice, popularised through social media platforms and amplified by pandemic-induced travel restrictions, represents a shift in how urban residents engage with their immediate environments.

This study views City Walk as a daily leisure activity rather than solely a tourism practice. Unlike “commando-style travel,” walking is the goal itself, not just a means to reach a destination. This approach to urban exploration encourages people to discover beauty and meaning in the quotidian aspects of urban landscapes. It serves multiple functions: it re-enchants ordinary cityscapes, prompts the re-discovery of familiar neighbourhoods, and deepens the perception and appreciation of local culture (Borucka, 2019).

The rise of city walking in China reflects a growing desire among urban dwellers to authentically interact with their surroundings in the context of attention economy and digital era (Giddy and Hoogendoorn, 2018), countering the homogenising effects of wang-hong urbanism (Jian et al., 2022). By engaging in this embodied leisure activity, participants not only alleviate stress and anxiety but also develop a more nuanced understanding of urban spaces and issues. This practice transforms urban landscapes into sites of everyday aesthetic discovery, where the physical act of walking intersects with digital documentation and sharing. Consequently, city walk in China has become a powerful tool for (re)connecting with urban spatial landscapes, fostering local identity, and cultivating a sense of belonging. It represents a microcosm of global exploration within the confines of one’s local environment, offering a rich, multifaceted experience that challenges standardised representations of urban life while promoting a more sustainable and mindful approach to urban living and tourism (Wan, 2023).

City Walk has transformed urban landscapes into sites of everyday aesthetic practice, with participants documenting and sharing their experiences through photos (Cao, 2023). This intersection of physical exploration and digital documentation offers a unique window into urban residents’ aesthetic preferences. Despite the proliferation of City Walk imagery, there remains a critical gap in our understanding of what specific urban elements attract walkers’ attention and how they choose to frame and present their city, particularly in the context of China’s diverse and rapidly changing urban landscapes. By analysing these shared images, researchers can gain valuable insights into how individuals perceive, interact with, and value different elements of their urban environment. This visual data provides a nuanced understanding of the evolving relationship between urban residents and their landscapes, revealing both overlooked beauty in everyday scenes and changing patterns of urban appreciation. Such analysis contributes to our understanding of urban aesthetics and holds potential implications for urban planning and design.

3. Methodology

In the realm of urban studies and tourism research, social media data analysis has emerged as a pivotal method for uncovering socio-cultural characteristics and collective digital imaginaries or urban spaces (Kelley, 2013). This approach harnesses the pervasive nature of geographic media and real-time feedback, thereby transcending the constraints of traditional data collection methods in terms of scale and timeliness (reference). Our study employs web scraping techniques to extract user-generated content from the “CityWalk/Urban Street Wandering Project” topic on the Douban website (www.douban.com), a popular Chinese social networking platform focused on user reviews and discussions of various media. This methodological choice aligns with our objective to explore the “place in media” constructed by users, offering insights into contemporary urban experiences (Figure 1). The data collection process, concluded in February 2024, yielded 10,185 valid images. To ensure the integrity and accuracy of our analysis, we implemented rigorous data preprocessing procedures, including data cleaning and error correction. Notably, the absence of geographic tags in Douban posts precluded the inclusion of spe-

cific location information. Moreover, to maintain ethical standards and protect user privacy, we systematically removed all user IDs and identifiable personal information during data processing. We then employed Class Activation Mapping (CAM), an advanced technique for interpreting Convolutional Neural Network (CNN) predictions, to analyse this visual dataset. CAM enables the identification of discriminative image regions crucial for prediction outcomes (Deena Divya Nayomi et al., 2023). In our study, this method allows us to pinpoint the primary elements within urban landscape photos that capture user attention and inform their descriptions of cities on social media platforms.

3.1 Method – Class Activation Mapping

Our study employs the PlacesCNN model, introduced by Zhou et al. in 2017, which offers a multifaceted approach to image analysis by simultaneously predicting scene categories, attributes, and generating Class Activation Maps (CAMs) (Zhou et al., 2018). This model's architecture is based on a ResNet-18 backbone, augmented with two separate fully-connected layers for scene category and attribute prediction, respectively. The core idea behind generating CAMs is to leverage the final convolutional feature maps and the classification layer weights to compute an importance score for each feature map with respect to a particular class. These important scores are then summed and upsampled to obtain the CAM for the input image. The mathematical formulation is as follows:

$$C_c(x, y) = \sum_k w_c^k f_k(x, y)$$

Where $C_c(x, y)$ denotes the CAM for class c , w_c^k is the weight corresponding to the k -th feature map in the classifier for class c , and $f_k(x, y)$ is the value of the k -th feature map at location (x, y) .

3.1.1 Scene Classification Framework

This study uses a scene classification model trained with the Places365 dataset to perform scene recognition on self-collected image samples. To facilitate a more systematic analysis of the model's outputs, we propose a hierarchical classification framework that consolidates the 365 fine-grained scene categories identified by the model into 10 high-level semantic categories. This approach provides a more structured and interpretable analysis framework, enabling us to elucidate the relationship between image content and scene types from a macro perspective. Our proposed high-level categories are as follows:

- Natural environment

This category includes scenes that are identified as natural landscapes that have not been modified by humans. It covers a variety of landforms such as mountains, beaches, forests, deserts, glaciers, etc. These environments usually represent areas with less human activity and reflect the original state of the earth.

- Artificial outdoor environment

This category covers scenes that are identified as outdoor spaces that have been artificially designed and built. Including urban streets, parks, squares, courtyards, etc. These environments reflect how humans shape and organise external spaces to meet social needs.

- Indoor public spaces

This category includes scenes that are identified as indoor places for public use. For example, airport terminals, train stations, shopping malls, libraries, etc. These spaces usually have social, transportation or commercial functions and are an important part of the operation of modern society.

- Private/residential spaces

This category covers scenes identified as private spaces for personal or family life. Including various residential interior spaces, such as bedrooms, living rooms, kitchens, etc. These environments reflect personal lifestyles and home culture.

- Transportation-related places

This category includes scenes identified as places related to various modes of transportation. Such as parking lots, gas stations, airport runways, train platforms, etc. These places support and promote the mobility of mod-

ern society.

- Commercial/service places

This category covers scenes identified as various commercial and service facilities. Including shops, restaurants, bars, beauty salons, etc. These places reflect the characteristics of consumer culture and service economy.

- Cultural/educational places

This category includes scenes identified as places related to cultural dissemination and education. Such as schools, museums, art galleries, libraries, theatres, etc. These places play an important role in knowledge dissemination and cultural protection.

- Sports/entertainment places

This category covers scenes identified as various sports and entertainment facilities. Including stadiums, gyms, amusement parks, cinemas, etc. These places reflect the leisure and entertainment needs of modern society.

- Industrial/production places

This category includes scenes that are identified as places related to industrial production and resource development. Such as factories, mines, farms, construction sites, etc. These environments reflect economic activities and production processes.

- Special/other places

This category covers scenes that are identified as special places that are not easily classified into other categories. Including religious places, medical facilities, military bases, etc. These places often have unique functions or social significance.

The framework demonstrates the complexity of urban environments, breaking down each main category into numerous specific locations (e.g., alley, skyscraper, subway station). This granular approach enables us to explore the distribution of different environmental types within our collected image samples and investigate potential correlations between image content and scene categories.

3.1.2 Implementation Details

Based on the proposed framework, the implementation of the PlacesCNN model and CAM generation in our study follows a systematic approach using PyTorch:

- Model initialization: Load the model weights pre-trained on the Places365 dataset (Deena Divya Nayomi et al., 2023).
- Feature extraction: Define a hook function to obtain the final convolutional feature maps from the model.
- Image processing: Perform a forward pass on the input urban landscape image.
- CAM computation: Compute the CAM using the feature maps and classifier weights from the fully-connected layer corresponding to the scene category prediction.
- Visualisation: Visualise and save the CAM as an image overlay on the original input.

4. Results and Discussions

The results show a clear predominance of outdoor scenes, accounting for 7,638 images (75.0% of the dataset), while indoor environments are represented in 2,547 images (25.0%). Examples of the analysis results can be found in Figures 2, 3, and 4. This distribution suggests that urban wanderers on the platform have a strong preference for documenting external urban spaces, which aligns with the nature of city walks and urban exploration. To provide a more nuanced understanding of the urban landscapes captured, we further analysed the subcategories within these broad classifications.



Figure 2. Example of analysis results: alley

Figure Source: "CityWalk/Urban Street Wandering Project" topic on the Douban website (www.douban.com)



Figure 3. Example of analysis results: promenade

Figure Source: "CityWalk/Urban Street Wandering Project" topic on the Douban website (www.douban.com)



Figure 4. Example of analysis results: sky

Figure Source: "CityWalk / Urban Street Wandering Project" topic on the Douban website (www.douban.com)

4.1 Predominant Photographed Categories

Table 1 presents a comprehensive overview of the categories of urban elements captured in city walk photography. The data reveals that urban explorers sharing photos on social media during city walks demonstrate a clear preference for human-made structures and unique urban locations.

Table 1. Top 10 Photographed Urban Categories

Category	3 Example elements and counts	Count	Percentage	Rank
Artificial Outdoor Environment	Street (265)	2014	19.77%	1
	Parking garage/outdoor (218)			
	Crosswalk (214)			
Special/Other Places	Cell (167)	1441	14.15%	2
	Medina (116)			
	Loading dock (114)			
Transportation-related Places	Historic transportation hub (285)	1253	12.30%	3
	Highway (138)			
	Canal/urban (120)			
Cultural/Educational Places	Pagoda (174)	1145	11.24%	4
	Temple/asia (104)			
	Synagogue/outdoor (91)			
Commercial/Service Places	Beauty salon (182)	1140	11.19%	5
	Gas station (212)			
	Fastfood restaurant (90)			
Natural Environment	Sky (310)	1001	9.83%	6
	Forest/broadleaf (81)			
	Lagoon (76)			

Industrial/Production Places	Industrial area (135)	891	8.75%	7
	Skyscraper (129)			
	Hangar/outdoor (68)			
Indoor Public Spaces	Booth/indoor (110)	525	5.15%	8
	Elevator shaft (67)			
	Subway station/platform (54)			
Sports/Entertainment Places	Water park (82)	491	4.82%	9
	Ice skating rink/outdoor (46)			
	Amusement park (39)			
Private/Residential Spaces	Residential neighborhood (154)	284	2.79%	10
	Beach house (64)			
	Tree house (61)			

To elaborate, Artificial Outdoor Environment dominates the photographs, accounting for 19.77% of all images. This category includes common urban features such as streets, parking garages, and crosswalks. Special/Other Places rank second (14.15%), followed closely by Transportation-related Places (12.30%). This suggests that city walkers are particularly drawn to unique or unusual urban spaces, as well as the infrastructure that facilitates movement within the city. It's noteworthy that functional areas like Transportation-related Places and Industrial/Production Places feature more prominently than purely recreational areas such as Sports/Entertainment Places. This suggests that city walkers are particularly drawn to the infrastructure and daily operations of the city, rather than its leisure facilities. Cultural/Educational Places and Commercial/Service Places occupy the middle ranks, each accounting for about 11% of the photographs. This near-equal representation indicates a balanced interest in both the cultural aspects of a city and its commercial offerings, reflecting the diverse attractions of urban environments.

Interestingly, there's a marked inclination towards capturing built environments over natural ones. While Artificial Outdoor Environments top the list, Natural Environments rank sixth, comprising only 9.83% of the photos. This suggests that city walkers are more captivated by urban architecture and infrastructure than by parks or green spaces within the city. The data also highlights a significant preference for public spaces over private ones. Categories representing various public areas dominate the top of the list, while Private/Residential Spaces rank last at just 2.79%. This trend underscores the public nature of city walks and the focus on shared urban experiences.

4.2 Top 10 Recurring Visual Elements

Table 2 provides a more granular look at the specific urban elements most frequently captured in city walk photography. From natural environments to cultural spaces and encompassing both large-scale elements (like sky and streets) and localised features (such as alleys and beauty salons), the top 10 list demonstrates that urban explorers are drawn to a wide spectrum of urban characteristics. This diversity suggests an appreciation for both macro and micro aspects of city landscapes, extending beyond traditional tourist attractions. The list covers various urban functions including transportation, commerce, culture, and public spaces, providing a holistic representation of the urban fabric. Such a comprehensive engagement with different facets of the built environment offers valuable insights into how people perceive and interact with cities, highlighting the complex nature of urban appeal and the importance of considering diverse elements in urban planning and design.

Table 2. Top 10 Recurring Urban Elements

Class name	Category	count	Percentage	Rank
sky	Natural Environment	310	3.04%	1
historic transportation hub	Transportation-related Places	285	2.80%	2
street	Artificial Outdoor Environment	265	2.60%	3
parking garage/outdoor	Artificial Outdoor Environment	218	2.14%	4
crosswalk	Artificial Outdoor Environment	214	2.10%	5
gas station	Industrial/Production Places	212	2.08%	6
promenade	Artificial Outdoor Environment	200	1.96%	7
alley	Artificial Outdoor Environment	199	1.95%	8
beauty salon	Commercial/Service Places	182	1.79%	9
pagoda	Cultural/Educational Places	174	1.71%	10

Six out of the top ten elements (sky, street, parking garage/outdoor, crosswalk, promenade, and alley) are associated with outdoor environments, underscoring the importance of open-air spaces in the urban exploration experience. Interestingly, while Artificial Outdoor Environment dominates in the broader category analysis, the single most photographed element is the sky, a Natural Environment feature, with 310 occurrences, ranks as the most photographed element. Even in the heart of cities, people are drawn to open spaces and the visual relief provided by the expanse above the urban landscape. It's important to note that even the highest-ranked element (sky) only accounts for 3.04% of the total, indicating a high degree of variety in the dataset beyond these top elements.

On the other hand, the prominence of everyday urban elements in the dataset reveals the fundamental role of urban network infrastructure in shaping a city's character and the urban exploration experience. "Street," ranking third with 265 occurrences, alongside "crosswalk" (ranked 5th, 214 occurrences), "promenade" (ranked 6th), and "alley" (ranked 8th), each with approximately 200 occurrences, emphasises that city walkers find significant interest in the everyday urban spaces. These elements, serving as the arteries of urban life, capture the essence of city movement and design beyond monumental or extraordinary sites. For instance, promenades, normally designed for leisurely walks and social interaction, represent the more aesthetic and planned aspects of urban design. In contrast, alleys often embody the more intimate, less curated sides of urban environments. The near-equal representation of these contrasting elements in the dataset suggests a balanced interest among urban explorers in both the polished and grittier facets of city life.

The appearance of "parking garages/ outdoor" (ranked 4th), "gas station" (ranked 6th) and "beauty salon" (ranked 9th) in the list indicates that functional and service-oriented spaces also capture the attention of urban explorers, possibly due to their role in daily urban life or their aesthetic qualities. These functional spaces often feature distinctive architectural styles, signage, and lighting that contribute to the visual landscape of a city. Gas stations, for instance, may attract attention due to their often bold, modernist designs or retro aesthetics, while beauty salons might showcase vibrant storefronts or unique interior designs visible from the street. Parking garages, especially multi-story structures, offer unique vantage points of the city. They may attract urban explorers for their potential to provide elevated views of the urban landscape, adding a vertical dimension to the exploration experience. On the flip side, Parking garages and gas stations serve as transition points between modes of transportation, representing liminal spaces in the urban fabric. The frequent appearance of these spaces in the dataset may also simply reflect their ubiquity in urban environments, making them common subjects for urban photographers.

The inclusion of "pagoda" in the top 10, as a representative of Cultural/Educational Places, highlights urban explorers' interest in historical and cultural landmarks. These structures serve as both functional elements and

symbolic representations of a city's heritage and global connections. Their popularity among photographers reflects an appreciation for the blend of architectural grandeur and historical significance in urban landscapes. This focus also suggests a broader fascination with how cities evolve, inviting observers to contemplate the intersection of ancient traditions and modern urban life within the cityscape.

5. Conclusions

The analysis of City Walk imagery provides valuable insights into the everyday aesthetic preferences of urban residents, revealing a nuanced appreciation for urban landscapes that often diverges from mainstream or "wang-hong" representations. This analysis reveals that city walkers engage with a diverse range of urban elements, from grand vistas to intimate street-level details, and from historical landmarks to everyday functional spaces. Our study indicates that city walkers are particularly drawn to elements that embody the authentic character of their urban environment. These include historical architecture juxtaposed with modern structures, vibrant street life scenes, hidden alleyways, and pockets of urban nature. Notably, there is a marked preference for scenes that capture the interplay of light and shadow on urban surfaces, as well as moments of serendipity in daily urban life. Moreover, there is a clear appreciation for spaces that facilitate community engagement, such as public squares, parks, and street corners that serve as informal gathering spots. These insights underscore the importance of preserving and enhancing the diverse tapestry of urban environments, rather than pursuing homogenised urban aesthetics.

From an urban design perspective, these findings have significant implications. They suggest a need for urban planning strategies that prioritise the preservation of local character, the integration of historical elements with contemporary design, and the creation of spaces that encourage spontaneous social interactions, so as to facilitate walkability. Urban designers should consider incorporating elements that enhance the sensory experience of walking, such as varied textures, engaging streetscapes, and green corridors. Furthermore, the popularity of images capturing transitional spaces and thresholds between different urban zones highlights the importance of thoughtful design in areas of urban connectivity. By aligning urban design with the aesthetic preferences revealed through City Walk practices, cities can create more engaging, livable environments that resonate with residents' everyday experiences and foster a stronger sense of place and community.

Acknowledgements

We acknowledge the funding support from the Education University of Hong Kong (0400I, RG 60/2023-2024R, 0313L).

References

- Adams, P.C., 2009. Geographies of media and communication. John Wiley & Sons.
- Bayar, R., Yilmaz, M., 2023. Measuring age-friendliness based on the walkability indices of older people to urban facilities. *Urban Design International* 28, 35–51.
- Borucka, J., 2019. City walk: a didactic innovative experiment in architectural education. *World Transactions on Engineering and Technology Education* 17, 158–163.
- Boy, J.D., Uitermark, J., 2017. Reassembling the city through Instagram. *Trans Inst British Geog* 42, 612–624. <https://doi.org/10.1111/tran.12185>
- Cao, L., 2023. Consuming 'authenticity'? Reinterpreting the 'new middle class' in China through the lens of retailing changes. *Urban Studies* 60, 501–518. <https://doi.org/10.1177/00420980221107318>
- Deena Divya Nayomi, B., Sushmitha, Y., Yamini, A., Keerthi, G.S.N., Sri Varsha, K., 2023. Deep Learning based Models for identifying Healthy Aging People. Presented at the International Conference on Sustainable Computing and Smart Systems, ICSCSS 2023 - Proceedings, pp. 325–332.

- Forsyth, A., 2015. What is a walkable place? The walkability debate in urban design. *Urban Des Int* 20, 274–292. <https://doi.org/10.1057/udi.2015.22>
- Giddy, J.K., Hoogendoorn, G., 2018. Ethical concerns around inner city walking tours. *Urban geography* 39, 1293–1299.
- Jian, I.Y., Luo, J., Chan, E.H., 2020. Spatial justice in public open space planning: Accessibility and inclusivity. *Habitat International* 97, 102122.
- Jian, I.Y., Villani, C., Münster, M.B., Siu, K.W.M., 2022. “There are more Instagrammers than coffee beans”: Retracing wang-hong urbanism in Hong Kong. Presented at the 15th Conference of the International Forum on Urbanism-IFOU: INTERNATIONALIZING EDUCATION FOR THE ECOLOGICAL TRANSITION CHALLENGE:
- Kelley, M.J., 2013. The emergent urban imaginaries of geosocial media. *GeoJournal* 78, 181–203. <https://doi.org/10.1007/s10708-011-9439-1>
- Lehtinen, S., Viñaninijoki, V., 2020. Seeing new in the familiar: Intensifying aesthetic engagement with the city through new location-based technologies. *Behaviour & Information Technology* 39, 648–655.
- Li, J., Huang, Z., Zhu, Z., Ding, G., 2024. Coexistence Perspectives: Exploring the impact of landscape features on aesthetic and recreational values in urban parks. *Ecological Indicators* 162, 112043. <https://doi.org/10.1016/j.ecolind.2024.112043>
- McQuire, S., 2017. *Geomedia: Networked cities and the future of public space*. John Wiley & Sons.
- Middleton, J., 2018. The socialities of everyday urban walking and the ‘right to the city.’ *Urban Studies* 55, 296–315. <https://doi.org/10.1177/0042098016649325>
- Newman, D.B., Tay, L., Diener, E., 2014. Leisure and Subjective Well-Being: A Model of Psychological Mechanisms as Mediating Factors. *J Happiness Stud* 15, 555–578. <https://doi.org/10.1007/s10902-013-9435-x>
- Wan, Y.K.P., 2023. Casual walking in urban tourism destinations through the lens of stimulus–organism–response (S–O–R) and hierarchy of walking needs theories. *Leisure Studies* 1–17. <https://doi.org/10.1080/02614367.2023.2298951>
- Wang, H., Yang, Y., 2019. Neighbourhood walkability: A review and bibliometric analysis. *Cities* 93, 43–61. <https://doi.org/10.1016/j.cities.2019.04.015>
- Wu, D., 2023. City walk in a gap day: potential and opportunities for tourism and leisure. *TR*. <https://doi.org/10.1108/TR-09-2023-0614>
- Xiang, B., 2021. The nearby: A scope of seeing. *Journal of Contemporary Chinese Art* 8, 147–165.
- Zhang, H., Qiu, R.T.R., Wen, L., Song, H., Liu, C., 2023. Has COVID-19 changed tourist destination choice? *Annals of Tourism Research* 103, 103680. <https://doi.org/10.1016/j.annals.2023.103680>
- Zheng, Y., Wei, W., Zhang, L., Ying, T., 2024. Tourist Gaze at Chinese Classical Gardens: The Embodiment of Aesthetics (Yijing) in Tourism. *Journal of Hospitality & Tourism Research* 48, 353–379. <https://doi.org/10.1177/10963480221085958>
- Zhou, B., Lapedriza, A., Khosla, A., Oliva, A., Torralba, A., 2018. Places: A 10 Million Image Database for Scene Recognition. *IEEE Trans. Pattern Anal. Mach. Intell.* 40, 1452–1464. <https://doi.org/10.1109/TPAMI.2017.2723009>

Zook, M.A., Graham, M., 2007. Mapping DigiPlace: Geocoded Internet Data and the Representation of Place. *Environ Plann B Plann Des* 34, 466–482. <https://doi.org/10.1068/b3311>