



Research Article

Navigating between private and public: Understanding publicness of public open spaces in private developments in Hong Kong

Izzy Yi Jian^a, Kar Him Mo^b, Pengfei Chen^{c,d,*}, Wanchun Ye^e, Kin Wai Michael Siu^e, Edwin H.W. Chan^f

^a Department of Social Science and Policy Studies, The Education University of Hong Kong, Hong Kong

^b School of Architecture, The Chinese University of Hong Kong, Hong Kong

^c School of Geospatial Engineering and Science, Sun Yat-sen University, and Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai), Zhuhai, China

^d Key Laboratory of Comprehensive Observation of Polar Environment (Sun Yat-sen University), Ministry of Education, Zhuhai, China

^e School of Design, The Hong Kong Polytechnic University, Hong Kong

^f Department of Building and Real Estate, The Hong Kong Polytechnic University, Hong Kong

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ABSTRACT

Given that lands became increasingly expensive for governments to meet open space standards, there emerged a growing trend towards private sector involvement public open space provision. This collaboration has given rise to public open spaces in private developments (POSPD), characterised by varying levels of ‘publicness’ – the degree to which a space embodies public qualities and serves public interests. This research seeks to systematically understand the diverse manifestations of publicness in POSPDs using a proposed conceptual framework. Empirical examination of cases in Hong Kong yielded the statistical categorisation of POSPDs into five types, namely *Edge Zone*, *Hide-and-Seek*, *Pseudo-Public Park*, *Consumers’ Paradise* and *Public Plaza*. The results revealed a classist nature of POSPD publicness, with accessibility disproportionately favouring privileged groups. These findings contribute to a better understanding of POSPD publicness and highlights gaps in POS service and governance practice, provides valuable guidance for urban planners, policymakers, and developers in navigating the complexities of public space provision in increasingly privatized urban environments. The insights are relevant for creating more inclusive public spaces that cater to the needs of all community members, particularly in Asia’s high-density urban contexts.

1. Introduction

While the term ‘private’ often refers to the sphere unfettered by state power and to part of an individual’s life, ‘public’ is generally associated with collective goals (Mantey & Kępkowicz, 2018). A public open space (POS), in this research, is understood as a general descriptive term that refers to the physical terrain – open space – for public use (Carr et al., 1992). It is a medium and a catalyst with the potential of gathering different identities and groups, supporting spontaneous actions and/or ‘purposeful occupation’ (Hou, 2010), recognising and realising public interest (Li, Dang, & Song, 2022), as well as tolerating conflicts and contestation (Qian, 2020).

* Corresponding author. School of Geospatial Engineering and Science, Sun Yat-sen University, and Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai), Zhuhai, China.

E-mail address: chenpf9@mail.sysu.edu.cn (P. Chen).

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Publicness is produced and spatialised by these various actors during the course of using POSs (Karimnia & Haas, 2020).

POSs offer a multitude of economic, social, and environmental benefits (Lara-Valencia & Garcia-Perez, 2018; Li, Wang, & Chang, 2024; He, Wang, & Shen, 2024). However, as governments increasingly delegate urban development responsibilities to the private sectors, the mechanisms for POSs provision and management in contemporary cities have fundamentally shifted, resulting in a diverse array of open spaces with public functions that challenge traditional public-private categorisations. The formal designation of a space as ‘public’ no longer guarantees its public attributes; instead, urban spaces now exhibit liminal characteristics best understood through their varying degrees of publicness (Carmona, 2015; Luo, Jian, Yung, Chan, & Chen, 2024). This publicness is not static; rather, it evolves in response to changing social, economic, and urban conditions.

The concept of integrating public spaces within private developments emerged in the 1960s, with New York City pioneering the Privately Owned Public Space (POPS) programme as an innovative zoning strategy (Kayden, 2000). Recognising the potential to enhance urban environments while alleviating pressure on municipal resources, governments worldwide soon adopted similar policies (Schmidt et al., 2011; Wang, Ho, Lai, & Chau, 2023). These spaces, though referred to by various names—including ‘pseudo-public open space’, ‘quasi-public open space’, and in Hong Kong, ‘Public Open Space in Private Developments’ (POSPD)—all describe the same phenomenon: publicly accessible areas created and maintained by private entities, representing a global trend in the transformation of POS provision (Wang & Chen, 2018; Ho et al., 2020; Wang, Zheng, Tan, Han, & Chan, 2024). Hong Kong implemented its POSPD policy around 1962, allowing private developers to create public spaces on private land or adjoining public land. These POSPDs exemplify a hybrid space model, continually shaped by diverse sectors and interests.

Private sector involvement has proven effective in increasing urban POSs. Indeed, most of the POSPDs have some laudable merits, often excel in maintenance, safety, and aesthetic appeal compared to traditional public spaces (Kayden, 2000). However, the inherent tension between public and private interests in POSPDs presents significant challenges. Critics argue that these spaces are frequently over-controlled, exclusive, and environmentally privileged, raising spatial justice concerns (Jian et al., 2021; Lee, 2020; Németh, & Schmidt, 2007; Yoon and Srinivasan, 2015; Wang et al., 2023). Moreover, the commercialisation of POSPDs may erode the quality of the broader public realm (Carmona, 2010). These issues are particularly evident in Hong Kong’s POSPDs, where concerns about accessibility and inclusivity have been repeatedly raised (Jian, Chan, & Yao, 2021; Tang, 2017).

Central to this debate is the concept of publicness—the degree to which a space embodies public qualities and serves public interests (Carr, 1992). While much of the planning literature has tended to demonize privatisation, arguing that it diminishes the publicness of POSs (Leclercq et al., 2020), it is crucial to acknowledge that an idealised public space has never been fully realised in practice (Zhang, 2017), and the involvement of private entities in urban space production does not inherently compromise the publicness of these spaces (Lee & Scholten, 2024).

Given this complexity, this study posits that a more comprehensive understanding of the diverse expressions of publicness in POSPDs is necessary to better understand the complex effects of privatisation. However, there are surprisingly few published studies made efforts to understand publicness by category with a particular focus on POSPDs (Franck and Huang, 2020), especially in compact morphologies. To address this gap, this study explores the diversity of POSPDs pertaining to publicness by organising this diversity by category in a compact urban city, using Hong Kong as a case study. Three primary research questions are engaged in this research: 1) What are the key attributes that define publicness in POSPDs in compact development; 2) What are the typical characteristics of POSPDs in Hong Kong, and how do these attributes shape their publicness manifestation; and 3) Can a classification of POSPD be developed based on their publicness attributes, and what insights does this classification provide for urban design and management?

To address these questions, we first compiled a list of complex publicness measures based on previous studies. A *Publicness Survey Checklist* was designed to measure the spatial attributes of POSPDs in the case study. The proposed classification allows for more effective management of existing POSPDs and accurate recognition of the gaps in POSs service and governance practices. The study concludes with management and policy suggestions and directions for future research.

2. Public open spaces and publicness

2.1. Publicness: the core measures

‘Publicness’ is a concept related to context (De Magalhães, 2010). Its connotation is shaped by historical attributes and geo-historically varies a great deal (Li, Dang, & Song, 2022; Qian, 2020). An ideal POS with ‘full publicness’, as a fairly unanimous understanding, should be accessible, open and loose, inclusive and able to provide venues for diverse users with different demands (Carr, 1992). Such a space should be free from marginalisation and behavioural control, and allow for spontaneity and unscheduled activities (Young, 1990; Németh & Schmidt, 2011; Mantey, 2017).

Being described as the most fundamental public ‘character’ of POSs, it is publicness that makes a POS ‘public’ and causes people to have a wide range of expectations for public space (Chitrakar et al., 2022). The publicness of POSs necessities not only that the spaces to be accessible to all, that venues for encounters with differences to be created, but it must also offer the potential of the spaces to be enjoyed by all and be historically durable (Arendt, 2013). The concept of publicness is grounded in the notion that face-to-face interaction among individuals with diverse backgrounds is a valuable social activity. Consequently, the provision of POSs that enable or facilitate such interaction, or at least the co-presence of such diversity, is considered essential (Jackson, 2017). For some, publicness of POSs emerges from a series of intentional strategies and everyday spatial practices that embrace the multiplicity of spaces, actors/actions as well as the toleration of difference (Iris, 2000; Karimnia & Haas, 2020). Assuring publicness is hence the most essential precondition for approaching the ideal POSs (Li, Dang, & Song, 2022).

The increasing privatisation of public spaces has prompted researchers to explore a fundamental question: ‘What makes public spaces

‘public’?’ (Langstraat & Van Melik, 2013). This inquiry has led to a growing body of scholarship conceptualising publicness as a multi-dimensional characteristic (Li, Dang, & Song, 2022) and have developed various frameworks and models to assess publicness, each emphasising different aspects of POSs (Table 1). For example, Carmona’s (2010) examined the spectrum of publicness ‘from clearly public to clearly private’ through the lens of management, revealing how the delicate balance between under- and over-management can significantly impact a space’s public character. Poorly managed POSs risk becoming neglected, invaded, exclusive, or segregated, potentially accelerating the retreat from public life, while excessive management can result in over-controlled environments that limit public engagement and diversity of use (Carmona, 2010). This insight highlighted the delicate balance required in managing public spaces effectively. Németh (2009) narrowed the focus to privately owned public spaces, analysing behaviour management strategies and identifying specific design characteristics—such as filtered access and consumption-oriented layouts—that directly influence the degree of publicness. Among these, the OMAI model developed by Langstraat and Van Melik (2013) has emerged as a particularly important tool. By evaluating publicness across four key dimensions—ownership, management, accessibility, and inclusiveness—the model offers a structured approach to quantifying the elusive quality of ‘publicness’ (Langstraat & Van Melik, 2013).

2.2. Privatising publicness: the Publicness Survey Checklist

Instead of discussing the legal status and ownership, this study focuses on the design aspect of POSPDs – the physical settings that support and facilitate the manifestation of publicness (Varna & Tiesdell, 2010), and explores the conditions should be incorporated into the built environment to guarantee that publicness is (re)produced (Karimnia & Haas, 2020). The physical attributes that would characterise the benefits of open spaces as ‘public’ are investigated from the dimensions of accessibility, management/control, inclusiveness, rights of use, as well as design and image. This approach serves as a means to explore the multifaceted nature of publicness, which cannot be directly measured, and thereby illuminates the complex interplay between privatisation and the public qualities of these spaces.

To effectively examine the relevant built environment of the selected POSPDs, we designed and refined a *Publicness Survey Checklist* (hereafter referred to as ‘the Checklist’) as a framework to guide our study. *The Checklist* was designed based on previously tested indicators of publicness (Dovey & Pafka, 2020; Mantey, 2017; Németh, 2012; Németh & Schmidt, 2011; Varna & Tiesdell, 2010), which reflected Hong Kong’s specific demographic and morphological context. Selected variables of *The Checklist* were discussed and finalised according to a three-round group discussion among the research team. Then, four academic experts were interviewed concerning the contents of *The Checklist* to gauge comments and suggestions (Jian, Chan, & Yao, 2021). Revisions on selected assessment criteria were made based on their valuable contributions. Besides recording the period of field observation and general information about the POSPD surveyed, *The Checklist* scores the physical environment in the following four aspects with 19 variables:

‘**Amenities and Facilities**’ refers to the *presence* and *availability* of amenities and facilities that support diverse public use. How a space is designed inextricably reflects how the space is regulated. As Jian et al. (2021) suggested, an inclusive POS with a high state of publicness requires the space to be capable of accommodating varied users and behaviours as thus demands certain facilities and functions provided straightforwardly to objectively demonstrate the level of activity support. Users’ behaviour in the space is significantly influenced by facilities provision, besides primitive social norms. Contrary to the top-down perspective of the management dimension, this dimension supports a bottom-up assessment of the publicness embedded in actual physical settings and usage (Li, Dang, & Song, 2022). To be specific, ‘Amenities and Facilities’ looks at the provision of restrooms, shelters, diverse types of seating, lighting that encourages night-time use, plants or water features and artwork and fitness facilities that support free and diverse public use (Ekdi & Çıracı, 2015; Chen et al., 2016; Jian et al., 2020b).

‘**Safety and Control**’ refers to the presence of regulatory provisions and management techniques implemented in a POSPD (De Magalhães, 2010). The rules and codes of conduct posted in POSPDs indicate people’s rights of use, and enforcement mechanisms that regulate when and how individuals can access the space and enjoy its attributes (De Magalhães & Trigo, 2017; Huang, 2014). The presence of control is mandated with different intents by different stakeholders managing public spaces (Németh & Schmidt, 2011). It may manifest differently in different circumstances, including but not limited to the form of financial exclusion or constrained access

Table 1
Dimensions of Publicness in previous research.

References	Dimensions of Publicness
Benn and Gaus (1983)	access, agency, interest
Iris (2000)	accessibility, inclusion, tolerance of difference
Madanipour (2019)	access, agency, interest
Kohn (2004)	ownership, accessibility, intersubjectivity
Carmona (2010)	function, perception, ownership
De Magalhães (2010)	rights of access, rights of use, rights of control/ownership
Németh and Schmidt (2011)	ownership, management, use/users of space
Varna and Tiesdell (2010)	ownership, control, civility, physical configuration, animation.
Smith and Low (2013)	rules of access, rules of use, the source and nature of control over entry, individual and collective behaviour
De Magalhães and Trigo (2017)	rights of access, rights of use and control/ownership
Langstraat and Van Melik (2013), Li, Dang, & Song, 2022, Dunlop, Hübert, Aqel, Abdelilah, & Lee (2023)	ownership, accessibility, management, inclusiveness
Lesan (2024)	accessibility, management, inclusiveness

(e.g., making access less convenient) for particular user groups (Chitrakar et al., 2022; Németh, 2009). In this research, ‘Control’ is represented by restricted areas or limited hours of access, visible sets of rules, and subjective or judgement rules posted, while ‘Safety’ in *The Checklist* mainly evaluates the number of security cameras and security personnel - the management techniques applied to enhance perceived safety (Ekdi & Çıracı, 2015).

‘Maintenance and Information’ evaluates the display of signage and public status in the space since the information of the POSPD serves as a precondition for people to use the space and help them free from safety concerns when using the space (Jian et al., 2021); the presence of sponsors or advertising that indicates the degree of commercialisation of the space (De Magalhães & Trigo, 2017; Li, Dang, & Song, 2022). As the consequence of private sector engagement, POSPDs are now handled in more commercial ways in order to generate additional revenue or cut expenses. The corresponding regulatory regimes to control access are more likely to be established. At the same time, a clean and tidy POSPD with an inviting atmosphere usually receives a greater level of publicness (Rupprecht et al., 2015), while the obverse side of which might result in neglected environment with limited or no maintenance. Therefore, *The Checklist* evaluates the percentage of parks with litter, graffiti, freeway noise, and overgrown vegetables (Moran et al., 2014).

Last but not least, because of Hong Kong’s multilevel spatial system (Wang, 2020), *The Checklist* pays special attention to the dimension of ‘Accessibility’ and objectively records the physical configuration of the surveyed POSPD. Access to POS is gradually turning into a sharp line that determines ‘who are entitled to enter and who are excluded’ (Verheij, Ay, Gerber, & Nahrath, 2023). Notably, physical configuration is a design-oriented dimension that defines accessibility by considering a space’s relationship to its surroundings (Karimnia & Haas, 2020). As the study testifies, a POS with a higher level of publicness, in general, is considered to be well-connected to its surroundings, both physically and visually, and has no explicit access barriers, while a less public situation implies the opposite (Rigolon and Németh, 2020). Therefore, *The Checklist* considers three indicators: entrance accessibility, visibility and level of support for people with different abilities, to capture the accessibility level of a POSPD (De Magalhães & Trigo, 2017).

2.3. POSPDs in Hong Kong

Described as ‘land-hungry’, Hong Kong is a cramped verticality city with among the world’s smallest private living spaces on average (Tang, 2017). This urban morphology, coupled with significant demographic shifts including an ageing population and changing household structures, has intensified the need for diverse, accessible public spaces (Cheung and Tang, 2016; Jian et al., 2020). In response to these challenges, in 1962, the POSPD policy was launched in Hong Kong to ‘encourage developers to provide additional space for pedestrian circulation at ground level’ (Bureau, 2011). The POSPD policy is premised on the idea that privately developed public spaces can meet public needs and provide broader societal benefits. These spaces are managed and maintained by private developers according to land leases or deeds of dedication (Bureau D, 2011). As Hong Kong’s population evolves, POSPDs have the potential to play a crucial role in meeting diverse needs, including providing areas for social interaction and physical activity for the elderly, and offering communal spaces outside the home for residents of smaller households (Jian et al., 2021; Too, 2007; Rossini and Yiu., 2020).

While the POSPD policy has successfully increased the number of POSs, concerns have emerged about their quality and degree of publicness (Jian et al., 2021). This issue is particularly pertinent in Hong Kong, a society characterised by social control and surveillance, where the right of access to POS is ostensibly prioritised (Tang, 2017). However, this right has increasingly become a privilege and luxury for the wealthy and a symbol of class division (Jian et al., 2020). As access to POSPDs potentially declines for disadvantaged groups (Tang, 2017), there remains a dearth of research investigating the publicness of these spaces in Hong Kong.

Although not unique to Hong Kong, these challenges are amplified by the city’s extreme land use conditions, centralised compact urban form, and stark socioeconomic inequalities (Jackson, 2017). The city’s unique three-dimensional urban form allows for the study of POSPDs in various contexts, including podiums, sky gardens, and Hillside locations. These factors make Hong Kong an ideal case study for exploring issues related to publicness in POSPDs planning (Tang, 2017; Ho et al., 2020). Besides, there lacks an investigation of the essential qualities that give POSPDs their specificity by category to assess their publicness. An investigation of this extreme case can provide valuable insights applicable to similar urban contexts globally, contributing to the broader discourse on public space in densely populated, highly privatized urban environments.

3. Methodology

3.1. Data collection

Extensive field surveys were conducted in 2019 and 2020 to reflect the actual built environment of a specific POSPD using the standardised *Checklist*. The *Checklist* employed a scoring system (0, 1, or 2) for each variable, with the sum of scores creating a publicness index ranging from 0 to 38. This method allowed us to obtain qualitative data via direct observations and quantitative data by direct counting on site with the help of the *Checklist*. After addressing inconsistencies in the dataset, a final sample of 66 POSPDs was analysed. To ensure consistency and reduce subjectivity, one experienced researcher completed the *Checklist* for most POSPDs after initial calibration visits conducted by the research team. The detailed data collection process can be found in the Supplementary Materials. Similar approaches have been proven useful repeatedly in previous research, including on-site observations and the combination of different design characteristics of the spaces to define types (Dovey & Pafka, 2020; Huang & Franck, 2018; Németh & Schmidt, 2011).

3.2. Data analysis

The data analysis consisted of two stages. First, a correlation analysis was conducted to confirm the variables relevant to our research topic. Second, a cluster analysis was carried out to group the selected POSPDs into different typologies. At this stage, hierarchical clustering was used to first calculate the distance between each pair of POSPDs according to the variables of interest (i.e., variables in *The Checklist*), and then to group the POSPDs that were close in the categorisation (Kongphunphin and Srivanit, 2021). Visualisation tools such as dendrograms and heatmaps were used to provide adequate but not overloaded information relevant to the categorisation. In this research, we used Orange¹ to analyse our data. We used Ward's method for hierarchical aggregation and Euclidean distance as the similarity metric (Tang, 2017). The sampled 66 POSPDs in Hong Kong were classified into groups based on the criteria included in *The Checklist*. The detailed data analysis process can be found in the Supplementary Materials.

4. Results

4.1. Cluster analysis results

This section presents the results of our cluster analysis of POSPDs adopting quantitative profiling and semantic descriptions based on the collected qualitative data. We highlight the dominant or unique keywords to emphasise the particularities of each type of POSPD. The dendrogram in Fig. 1 illustrates our cluster analysis results, indicating the optimal number of clusters to group Hong Kong POSPD types by degree and representation of publicness. The dendrogram tree is divided into five clusters, as shown by the tree diagram on the left-hand side of the heatmap. Each cluster can be further understood as consisting of two parts (e.g., Type 1-1 and Type 1-2). Overall Checklist score, detailed information on each cluster and figures of representative cases are presented in the Results section of Supplementary Materials.

4.2. Understanding publicness in POSPD in Hong Kong: five types

In general, the primary use of a project to which a POSPD is attached has no direct influence on its degree of publicness. However, our field observations revealed certain characteristics of the resources devoted to the development of a given site. To a large extent, POSPDs attached to commercial buildings have more and better facilities and amenities, such as shelters and diverse types of seating. Restrooms are usually available in commercial buildings. These POSPDs are also decorated with elaborate lighting systems and artwork to encourage night-time use. In contrast, POSPDs that show no signs of commercialisation or cannot be classified as hidden 'private gardens' in large residential developments are more limited in terms of design and features. Overall, the five types of POSPD with different publicness levels suggested by the data all inhibit public use to some extent due to specific characteristics (Table 2).

4.2.1. Type 1: 'Edge Zone'

- Poor facility provision

Type 1 included 12 POSPDs. Cases of this type offer limited facilities and amenities. These spaces have only basic seating, usually fixed stone benches, and poorly designed artificial lights with no artwork or fitness facilities (Figs. S1 and S2 in the Supplementary Material). These features directly constrain the types of activities that can be carried out in these POSPDs.

Overall, the *Cosco Tower and Grand Millennium Plaza* (Case code no. 6) scored relatively highly on public facilities. This high score contributed to its overall performance and first place in Type 1 POSPDs in terms of overall score. The *Plaza* was once recognised as a good example of POSPD by the Hong Kong Public Space Initiative² when assessed from the perspectives of accessibility, environment and facilities, public use and sociability (Hong Kong Public Space Initiative, 2018). However, members of the Hong Kong Public Space Initiative also pointed out that this POSPD lacked support for activities and referred to this POSPD as 'a smoking area'. This dichotomy highlights the challenge of balancing different aspects of publicness. The absence of specific seating areas or shelters in this space, forcing people to sit on the jet fountain, which is usually dry due to lack of maintenance, demonstrates how poor maintenance can negate potentially positive design elements.

- Freedom of use

Freedom of use varies within Type 1, revealing different approaches to space management. For Type 1-1 POSPDs, no CCTV or security personnel monitoring can be observed by users, but the rules of usage are highly visible, suggesting a passive form of control. In contrast, for Type 1-2 POSPDs, neither surveillance nor rules are visible to limit people's freedom of use. The spaces are largely developed without commercialisation. No areas are restricted, with most cases open to the public 7 days a week, 24 h a day. This openness, while positive for accessibility, may also reflect a lack of active management or investment in the space.

¹ Orange (<https://orange.biolab.si/>) is an open-source data analysis and visualisation platform that includes components for conducting data mining, visualisation and machine learning tasks (Demšar et al., 2013).

² <http://www.hkpsi.org/>.

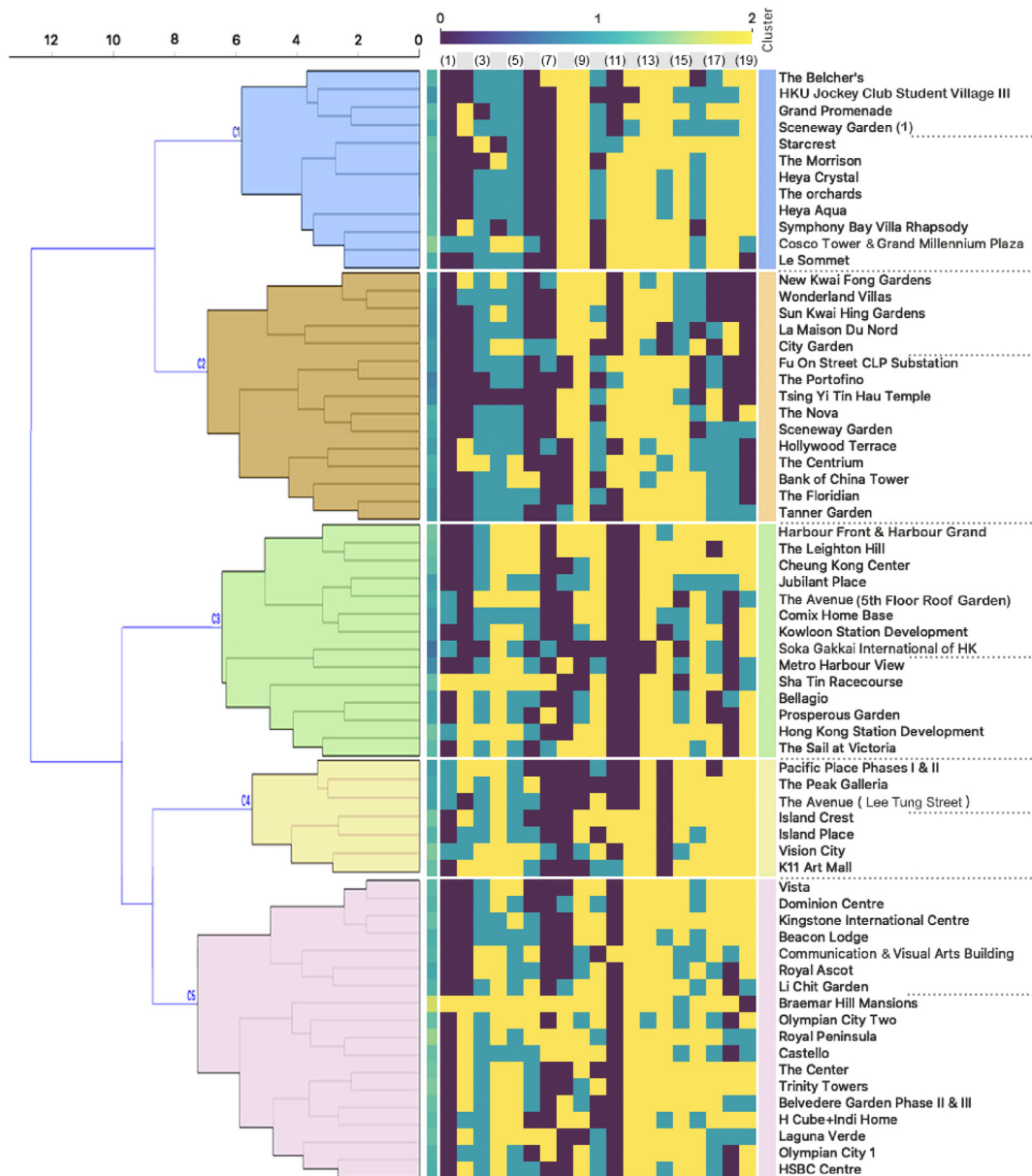


Fig. 1. POSPD Clustering analysis dendrogram and heatmap.

Table 2

Five types of POSPD in Hong Kong.

"Edge Zone"	"Hide-and-Seek"	"Pseudo-Public Park"	"Consumers' paradise"	"Public Plaza"
Poor facility provision	Poor facility provision	Clear public status	Commercialisation	Basic rules
Freedom of use	Invisible space	High space quality	Highly accessible	Round-the-clock
Average maintenance	Neglected corner	No commercialisation	Round-the-clock	No commercialisation
Good accessibility	–	Lengthy regulations	Guarded	Privileged accessibility

- Average maintenance

The performance of Type 1 POSPDs in this study was generally mediocre, often suffering from unsanitary conditions, overgrown vegetation, or excessive traffic noise. This mediocre upkeep could be a result of unclear responsibilities between public and private entities, or a lack of resources allocated to these spaces. It raises questions about the long-term sustainability of POSPDs and the need for

clearer maintenance agreements.

- Good accessibility

Despite the poor spatial quality of Type 1 POSPDs, this type of POSPD is characterised by high visual and spatial accessibility. *Heya Aqua* (Case code no.42) exemplifies this duality: while poorly designed with excessive hardcover and cramped flora, its small pocket space at ground level is directly visible and accessible from the street (Fig. 2). This suggests that even with limited resources, strategic placement can enhance a POSPD's integration into the urban fabric.

4.2.2. Type 2: 'Hide-and-Seek'

- Poor facility provision

Type 2 POSPDs generally scored lower in overall publicness compared to other categories, with most cases performing poorly in maintenance and sanitation. Similar to Type 1 POSPDs, Type 2 POSPDs are generally constrained by inadequate facility provision. Only *The Centrium* (Case code no.5) received good scores in terms of available shelters, diverse types of seating and the provision of both plants and water features. However, this POSPD's partial invisibility at night due to lack of artificial lighting (Fig. 3) underscores the complex interplay between design elements and actual usability, illustrating how even spaces with good amenities can be compromised by poor visibility or accessibility.

- Invisible space

A defining characteristic of the 15 Type 2 POSPDs is their poor visual and physical accessibility. Many are located on building rooftops without clear indications of their existence or availability (Fig. S3 in the Supplementary Material). This 'hidden' nature raises critical questions about the true public value of these spaces. While they contribute to the overall quantity of public space, their inaccessibility may significantly diminish their practical utility and social impact. This suggests a need for more holistic approaches to POSPD design that consider not just the space itself, but its integration into the broader urban fabric and its round-the-clock usability.

- Neglected corner

The Portofino is an extreme case of a Type 2 POSPD, standing out as a neglected space with its overall score of 14. *The Portofino* (Case code no.37) is an expensive gated community with many social celebrities living in mansions. This case presents a stark contrast between the well-maintained, exclusive residential community and its neglected public space component. The POSPD, a hiking trail, suffers from poor maintenance with uncut trees and uncleaned paths. Paradoxically, it's under 24-h surveillance (Fig. S5 in the Supplementary Materials), suggesting a focus on security over usability. This extreme case highlights a troubling disconnect between the quality of private spaces and their associated POSPDs, potentially reflecting deeper issues of social inequality and the prioritisation of private interests over public benefit.

4.2.3. Type 3: 'Pseudo-Public Park'

- Clear public status

Type 3 consisted of 14 POSPDs, generally well-advertised as public open spaces with clearly visible opening hours. This transparency in public status is commendable, potentially increasing public awareness and usage of these spaces.

- High spatial quality

Type 3 POSPDs may have a variety of characteristics, but all are of good spatial quality with meticulous design. For instance, *Cheung Kong Park* (Case code no.1), attached to Cheung Kong Centre, is an urban park set in concrete jungles that features a wide variety of trees



Fig. 2. Heya Aqua's maintenance and accessibility.



Fig. 3. The Centrium, with the signage in the right picture indicating “This area is open to public for 24 h at no cost.”

and canopies. It provides a green environment conducive to a rich and diverse flora and fauna. In contrast, *Kowloon Station Development* and *Hong Kong Station Development* (Case code no.64 and 4), two large complexes developed by MTR Corporation, were designed according to a more modernised concept with geometric artwork (Fig. S7 in the Supplementary Material). These two POSPDs offer different types of seating and commanding sea views of Victoria Harbour, demonstrating the potential for POSPDs to cater to varied aesthetic preferences and user needs.

- No commercialisation

Except for *Kowloon Station Development* mentioned above, the Type 3 POSPDs show no signs of commercialisation. The primary function of these POSPDs is residential buildings in most cases.

- Lengthy regulations

Contrary to the long-held presumption that public spaces are free to use, all of the Type 3 POSPDs in this study stand out for being particularly strict with respect to behaviour control. The spaces included lengthy, potentially daunting and subjective regulations. The rules differ per space, but all prohibit certain behaviour and uses, including disorder and offensive behaviours that may negatively affect others. For instance, in addition to basic rules such as ‘No littering’ or ‘No smoking’, *Cheung Kong Park* prohibits common activities like eating, drinking, and cycling, while also imposing strict behavioural rules such as requiring adult supervision for children and banning any disturbances, reflecting a highly controlled public space environment (Fig. 4). *The Avenue 5F Roof Garden* (Case code no.56) has 19 regulations laden with caveats. Games, kites, balloons and vehicles are not permitted in this POSPD. Other subjective prohibitions, including ‘No obscene language’ and ‘excessive use’, are also shown in the regulations (Jian et al., 2021).

As discussed before, excessive control of POS users can give them a false sense of safety or the impression that a space is not accessible to occasional users, further deteriorating the publicness of the space. This characteristic makes Type 3 POSPDs ‘pseudo-public spaces’.

4.2.4. Type 4: ‘consumers’ paradise’

- Commercialisation

In this study, Type 4 POSPDs accounted for the smallest number of POSPDs. For all seven Type 4 cases, ‘commercialisation’ was the dominant characteristic. These spaces seamlessly integrate shops, bars, and food vendors, often blurring the line between public and private realms. For instance, coffee shops extending their seating into the plaza exemplify this ambiguity. Regular themed events and

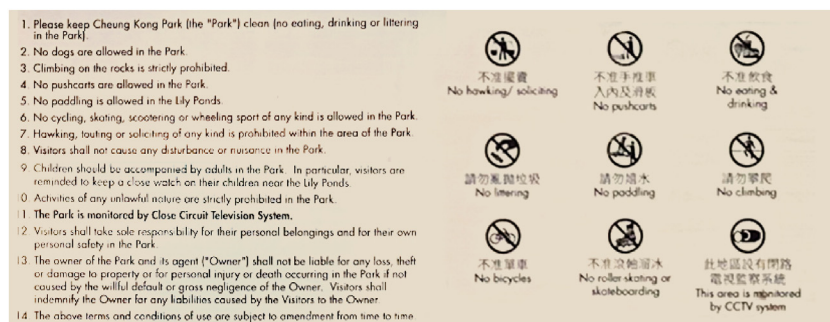


Fig. 4. Regulations of Cheung Kong Park.

programs aim to attract users beyond the immediate vicinity, expanding the space's reach. These POSPDs are typically characterised by the many advertisements on the walls of buildings, intended to turn POS users into consumers (Fig. 5). These POSPDs offer well-maintained features and recreational opportunities suitable for different age groups. However, their contribution to facilitating social interactions is limited because most POSPDs do not encourage activities other than shopping. Meanwhile, the commercial imperative appears to drive high standards of design and maintenance, benefiting users but potentially setting unrealistic expectations for non-commercial public spaces.

- Highly accessible

Type 4 POSPDs excel in accessibility, boasting highly visible and easily reachable locations. The POSPDs attached to shopping centres are well known and easily accessible, and their locations are usually clearly marked on a map to guide potential users. This high accessibility is a significant positive attribute, potentially increasing their usage and integration into the urban fabric.

- Round the clock

Except for *Vision City* (Case code no.50), which is open daily from 6:30 a.m. to 11:00 p.m., covering the time when most people prefer to enjoy POSs, all Type 4 POSPDs are open 24 h a day. This round-the-clock availability provides continuous recreational opportunities, potentially contributing to a more vibrant and active urban environment.

- Guarded

Type 4-1 POSPDs are generally protected by lengthy and subjective rules and regulations. In contrast, Type 4-2 POSPDs provide users with more freedom. However, these commercialized spaces are usually controlled by security cameras and private surveillance. Security personnel are clearly visible in these POSPDs (Fig. S8 in the Supplementary Material). Despite their attractive design, the presence of security cameras and private security to some extent shapes the overall performance of these POSPDs in terms of publicness and management. 'Good spatial design' and 'heavy surveillance' were other keywords used to describe Type 4 POSPDs in the study.

4.2.5. Type 5: 'Public Plaza'

- Basic rules

Type 5 was the largest cluster with 18 POSPDs. Although Type 5 POSPDs all have rules, they are basic, such as 'No smoking' and 'Do not pick flowers'. Subjective regulations that constrain the behaviour of individuals are generally absent (Fig. S9 in the Supplementary Material). The lack of on-site security personnel in most Type 5 POSPDs further contributes to a more relaxed atmosphere. The minimal regulations and lack of visible security make these spaces potentially more welcoming to diverse groups, notably, these spaces are often occupied by Filipino domestic helpers during public holidays, suggesting a level of inclusivity for marginalised groups.

- Round the clock

The majority of Type 5 POSPDs are open 24 h a day, seven days a week. The opening hours of other Type 5 POSPDs also cover normal POS use time. This round-the-clock availability enhances their potential for diverse use patterns and integration into daily urban life.

- No commercialisation

Compared with Type 4 POSPDs, there is no tangible evidence of commercialisation for Type 5 POSPDs. Some of these spaces are located next to industrial zones (e.g., *H Cube and Indi Home*, Case code no.49) or along busy transportation routes (e.g., *Trinity Towers*, Case code no.45). While this non-commercial nature preserves a more traditional 'public' feel, it may contribute to lower quality and



Fig. 5. Ubiquitous advertisements (left: *Vision City*; right: *K11 Art Mall*).

patronage rates compared to their more commercialized counterparts.

- Privileged accessibility

The overall patronage rates observed during the field survey suggested that some of the Type 5 POSPDs were created for specific populations instead of the general public. For example, none of the Type 5 POSPDs have provide access to a restroom for public use. However, as these projects typically focus on residential and commercial purposes, these POSPDs are designed to serve residents (workers) who live (work) nearby. As such, providing access to a restroom may be considered unnecessary. (Pearsall & Eller, 2020) highlighted a similar phenomenon in gentrified neighbourhoods.

Olympian Park (Case code no.61) is located in an expensive community in Yau Tsim Mong District. Compared with other POSPDs, the quality of decorations and details in *Olympian Park* is considered excellent. The space provides discrete areas for people of different ages to play and relax (Fig. 6). No-trespassing signs are only visible on the walls of private properties. However, *Olympian Park* is somewhat gated and located at the podium level. It is only accessible through MTR Olympic Station or by taking the elevator. These characteristics mislead the general public to view it as a private garden, inadvertently create barriers to broader public use. In addition, funds are allocated to amenities that do not serve the public equitably, thus creating privileged accessibility.

5. Discussions

The analysis of 66 POSPDs in Hong Kong reveals a diverse landscape of public spaces, ranging from artificial plazas with hard paving materials to more natural settings. In this study, our inspection of POSPDs by publicness status identified striking patterns in terms of public accessibility. The accessibility strategies common to the POSPDs identified in this study echo previous findings (Dunlop, Hübert, Aqel, Abdelilah, & Lee, 2023; Németh, 2009) and are as follows: unclear public status, limited opening hours, presence of security personnel and cameras and design features that suggest appropriate uses. These findings highlight the complex interplay between design, management, and publicness in POSPDs. While these spaces contribute to the overall quantity of public space in Hong Kong's dense urban environment, their quality and true 'publicness' vary significantly.

Our results on the current situation of POSPDs in Hong Kong reveal the classist nature of accessibility in general. First, compared with the pseudo-public spaces of Chinese megacities like Chongqing, which are normally found at ground-level and tightly intertwined with the local urban fabric (Wang & Chen, 2018), or New York City's POPs which are often seamlessly integrated into the streetscape (Kayden, 2000), some Hong Kong POSPDs tend to physically separate themselves from their surrounding urban areas. This might be due to Hong Kong's extreme density and limited land area have necessitated vertical development, with many POSPDs located on podium levels or within multi-level complexes even in the mountains. This vertical integration of public spaces is distinct from the ground-level integration seen in many other cities, and deemed to be prone to have accessibility issues, despite might offer advantage of providing refuge from street-level pollution, noise, and heat and more neat and detailed management.

Second, For POSPDs created in wealthy neighbourhoods, their availability and the facilities they offer are usually tailored to the desired users. This type of privileged accessibility leads to a double dilemma: potential users are priced out of the area due to rising property values resulting from green gentrification, while socially exclusive management practices further limit their access to these recreational spaces. This privileged accessibility risks creating 'gardens for no one', resulting in a yawning gap between vulnerable groups marginalised by the market and valuable urban land resources. As potential solutions, increasing public awareness through targeted advertising could encourage a broader segment of the population to explore and regularly use these POSPDs. More crucially, implementing comprehensive design guidelines that enhance both visual and physical accessibility while maintaining high quality is essential. These guidelines should be complemented by mechanisms for meaningful community involvement in the design and management processes of these spaces.

POSPDs attached to shopping centres represent the image of commercial spaces, the quality of which is an important indicator for attracting potential users. These spaces are responsible for capital recovery by creating a thick commercial atmosphere. Private developers are therefore more willing to provide more funding to improve these POSPDs. Our results showed that Type 3 POSPDs had lower scores than those in other clusters because of rules and surveillance. Similarly, scholars revealed that 65% of POSPDs in Hong Kong Island have CCTV cameras (Too, 2007). In our research, at least half of the POSPDs in the sample are monitored by more than one



Fig. 6. POSPD of *Olympian City*, Tai Kok Tsui, Yau Tsim Mong, Hong Kong.

camera. Nearly one third are patrolled by security guards. In addition, 50 of the 66 POSPDs examined in this research have clear rules about the types of activities prohibited when using the space. However, people in Hong Kong are used to its ‘culture of surveillance’. The installation of surveillance cameras and the establishment of regulations have become common yet controversial issues involving processes by which people are unknowingly disciplined.

In addition, the current development of POSPDs lacks a comprehensive, city-level, systematic approach, resulting in a fragmented landscape of public spaces with variable quality and management. This fragmentation hinders the efficient integration of these spaces into the broader urban fabric and may lead to POSPDs being created merely to fulfil regulatory requirements rather than meet genuine public needs. Therefore, we recommend implementing a city-wide masterplan for POSPD design and management, considering their cumulative impact on the urban environment. This plan should include legally enforced, detailed design guidelines prioritising accessibility, visibility, and inclusivity, addressing aspects such as entrance design, signage, and amenities catering to diverse user groups. Additionally, mandating community involvement in both initial design and ongoing management of POSPDs would ensure these spaces reflect local needs and foster a sense of ownership among users. Establishing a user-friendly feedback mechanism would further enable continuous improvement and adaptation to changing community needs. By implementing these measures, cities can create a more cohesive, responsive, and meaningful network of public spaces that contribute significantly to the urban public realm.

6. Conclusions

Classifications of cases of POSPDs referring to the publicness can help result in structured knowledge of the otherwise ambiguous commonalities or differences. The types identified are not discrete kinds of spaces, but rather combined features or characterisations of spaces. Although numerous studies have examined the types of POSs from different perspectives, the main objective of our research was to understand the diverse manifestation of publicness in the new form of POSPD in Hong Kong. Our empirical evidence revealed a classification with five types of POSPDs: (1) Edge Zone (12/66); (2) Hide-and-Seek (15/66); (3) Pseudo-Public Park (14/66); (4) Consumers’ Paradise (7/66); and (5) Public Plaza (18/66).

The result reveals a classification of POSPDs’ publicness characterised by design, distribution, or management. It captures the specificity of each type of POSPD and notes clear differences between each type. This research contributes to the identification of the pain points to advancing publicness through appropriate management strategies for both existing and future POSPDs. In the era of privatisation, our proposed framework and classification contribute to a wider discussion on the publicness of POSPDs in Hong Kong and worldwide. It draws attention to the potential for improving the performance of different types of POSPDs with respect to spatial justice by addressing the corresponding weaknesses and shortcomings. It can also act as a negotiation framework to help stakeholders understand the balance between management and publicness and recognise the values of meeting the increasingly diverse needs of the population.

This study challenges the notion that ownership inherently leads to exclusion and recognizes that inclusion and exclusion are not binary opposites in the (re)production of POSs. Mantey and Kepkiewicz (2018) identified civic control as the most desirable form of POS management, where citizens comply with general rules and actively participate in the control process. This approach aligns with our advocacy for maintaining comfortable public spaces while discouraging unwanted behaviours. This study therefore advocates designs that naturally promote appropriate use without relying heavily on explicit rules or surveillance. This can be achieved through design strategies such as flexible space design, social seating arrangements and culturally sensitive elements, fostering a self-regulating environment. While the public sphere remains an ideal concept, and no real-world public space can perfectly embody its criteria, we can strive towards this utopian vision by explicitly committing to enhancing the true publicness of these spaces. Rules and regulations should be tailored to curb inappropriate behaviour (e.g., hate speech, violence) and ensure that all people are comfortable and included. However, we suggest giving more freedom to POS users, especially in POSPDs in commercial projects, and placing greater trust in self-discipline. It is recommended that policymakers take steps to protect the diversity of social groups and impose more regulatory requirements on private developers to properly maintain POSPDs. People in the private sector, and their rights and obligations, need to be officially recognised to tilt the balance of power towards the general public, instead of exercising coercive power during management. This may resolve some of the disagreements and disputes between different stakeholders.

While this study provides valuable insights into POSPDs in Hong Kong, certain limitations warrant consideration. The specific classification and characteristics identified may not be directly generalizable to other urban contexts due to variations in socio-cultural, regulatory, and urban morphological factors across different cities and countries. A comparative analysis between POSPDs and publicly owned and managed spaces could offer a more comprehensive understanding of how POSPDs perform relative to established public expectations and standards. Furthermore, the temporal nature of our data collection (2019–2020) presents another limitation. Urban environments are dynamic, and recent global events may have altered the landscape of POSPDs in Hong Kong. We recommend that practitioners and researchers carefully adapt this framework to local conditions, considering context-specific regulations and cultural norms. Cross-cultural studies could test and adapt this framework in diverse urban environments, potentially developing a more globally applicable understanding of POSPD publicness. Additionally, longitudinal investigations tracking changes in POSPD characteristics and usage patterns over time would provide a more comprehensive understanding of how these spaces evolve in response to changing urban conditions and societal needs. Future research would benefit from incorporating users’ behaviours and feedback, providing a more comprehensive understanding of how the physical design of POSPDs interacts with user experiences and social dynamics to shape publicness. Such studies could significantly enhance our knowledge of how POSPDs function and adapt within the complex tapestry of urban environments globally.

CRediT authorship contribution statement

Izzy Yi Jian: Conceptualization, Formal analysis, Methodology, Visualization, Writing – original draft, Writing – review & editing. **Kar Him Mo:** Methodology, Resources, Supervision, Validation, Writing – review & editing. **Pengfei Chen:** Data curation, Investigation, Methodology, Validation. **Wanchun Ye:** Funding acquisition, Project administration, Resources, Supervision, Validation, Writing – review & editing. **Kin Wai Michael Siu:** Supervision. **Edwin H.W. Chan:** Supervision.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used ChatGPT to proofread the manuscript. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Declaration of competing interest

No potential conflict of interest was reported by the authors.

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Appendix A. Supplementary data

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