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Fig. 1 Paley Park – Privately Owned Public Space, Midtown Manhattan, New York City

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Urban Planning Criteria for Defining *Privately Owned Public Spaces (POPS)*

LAND OWNERSHIP
PUBLIC-PRIVATE NEGOTIATIONS
PUBLIC SPACE
URBAN DESIGN
URBAN PLANNING

This research is based on the systematic literature review related to the definition of Privately Owned Public Spaces (POPS). POPS arise as a bonus of the urban planning concession resulting from negotiations between private investors and city administration. The question arises whether, during their formation, the urbanistic criteria that ensure public space quality are sufficiently represented, or the superior private interest results in critical urban quality aspects. By comparatively analyzing the definitions' key features, nine specific POPS aspects have been identified and classified into two categories according to basic criteria: impact on investors and on broader urban contexts. The results show that a group of spatial criteria (usage impact, user's perception, connectivity, urbanity and socialization) have been neglected or ignored in defining POPS. Current definitions do not consider the importance of POPS influence in a wider urban context and POPS is not, in any way, controlled or connected to the comprehensive process of urban planning, which can lead to a neglect of the fundamental roles and quality of public space. Further studies should focus on analyzing the impact of POPS in a broader urban context as well as defining mandatory urban planning criteria for insuring the quality of public space.

Introduction

Urban space can be described as "a complex sphere of spatio-temporal claims and overlaps, where interior/exterior and public/private intersect in different ways", and where only seldom can one observe clear border lines between the public and private (Kärrholm, 2019). In a general context, the definition of open public spaces is usually linked to publicly owned land. Public spaces are one of the basic features of the quality of urban life, reflecting urban culture, encouraging social interaction and creating city identity. They should reflect equity, diversity, and justice for all (Fainstein, 2000) and be a collectively consumed good (Webster, 2007). UN-Habitat's Global Public Space Program, launched in 2012, supports cities to take action for safe, inclusive, and accessible public space for all (Rivera et al., 2018). New Urban Agenda from 2016, adopted by all member states of the United Nations, affirms the importance of public space as a key to creating more socially, economically and environmentally successful and sustainable cities (Elmlund et al., 2018). On the other hand, accelerated urbanization processes lead to numerous urban transformations that manifest themselves in various threats to and challenges for public spaces (Madanipour, 2005). They can be identified in an alarming decline in the quantity and quality of public space in many cities around the world (Haas, Mehaffy, 2019), which is often a result of the ubiquitous private investors' pressure for maximum utilization of city land. New trends which prioritize privatization, privacy and private sector involvement have had an impact on frequently changing traditional roles and appearance of public spaces (De Magalhaes, 2010; Schmidt, Németh, 2010).

One of the dominant trends in public space research is the one dedicated to the development of new practices focusing on ways to produce and manage public spaces with growing public-private partnerships and the profusion of modes of restriction and enclosure of all kinds (Haas, Olsson, 2014; Schwartzmann, 2022). The increasing demand for a public-private partnership for the creation and management of public spaces also stems from the current global direction of municipal budget levels (Németh, 2009: 2480). The financial dependence of municipalities on income generated by private developers can lead to planning that is responsive to property market interests rather than the city's strategic needs or the public interest (Katayoun Karampour, 2021). In such cases, urban management of the creation of public spaces, exposed to the private and public sectors negotiations, can often result in private interest prevailing over the public one. Many new types of public space, such as quasi-public spaces or hybrid spaces, variations of privately owned public spaces, have emerged in order to preserve and improve the distribution and share of public spaces as one of the fundamental urban qualities (Leclercq, Pojani, 2020; Lichtenbaum, Rosen, 2018: 3; Nissen, 2008: 1132). Also, "Tactical Urbanism" as short-term intervention on public spaces, is widely applied in many cities during the situation of COVID-19, such as: Milan (Italy), Warsaw (Poland), Barcelona (Spain), etc. (Cariello et al., 2021: 12; Castillo et al., 2022: 6; Herman, Drozda: 2021)

This research is focused on the urban quality of a specific form of such spaces called Privately Owned Public Space, or with acronym POPS (Fig. 2). Since the creation of POPS is not controlled by a comprehensive process of urban planning, potentially it can have a negative impact on urban quality. This research examines whether the criteria of urbanism, which should ensure the quality of public space, are sufficiently represented in POPS formation or whether the superior private interest may lead to some critical implementation aspects.

1 "Incentive zoning" also known as "Bonus Zoning" has its place in the legislation of New York, Santiago de Chile, Thailand, Taiwan, Tokyo, Vancouver etc. (Dimmer, 2013; Rahi et al., 2012).

2 International Symposium supported by the Center of Sustainable Urban Regeneration of the University of Tokyo elaborates the creation of POPS in cities such as: New York, Santiago, Seattle, Aachen, Hong Kong, Bangkok, Melbourne, Taipei, Tokyo, Yokohama (Dimmer, 2013).

POPS has its origins in the 1960s New York, where the possibility of creating public space on private lands emerged for the first time. It grew from a compromise between private and public sectors, in which private developers cede a part of their land for public use and in turn get the right to build additional square meters on the upper floors (NY City Planning). A similar mechanism of creating public spaces is applied in many countries of the world. Although it represents a potentially powerful mechanism for improving the share and distribution of public spaces in the city, its significance from the urban planning point of view has not been investigated so far.

The research is based on a systematic literature review (SLR) related to the definition of POPS in order to determine the most important planning, implementation and maintenance aspects and to determine whether they imply the urban planning criteria.

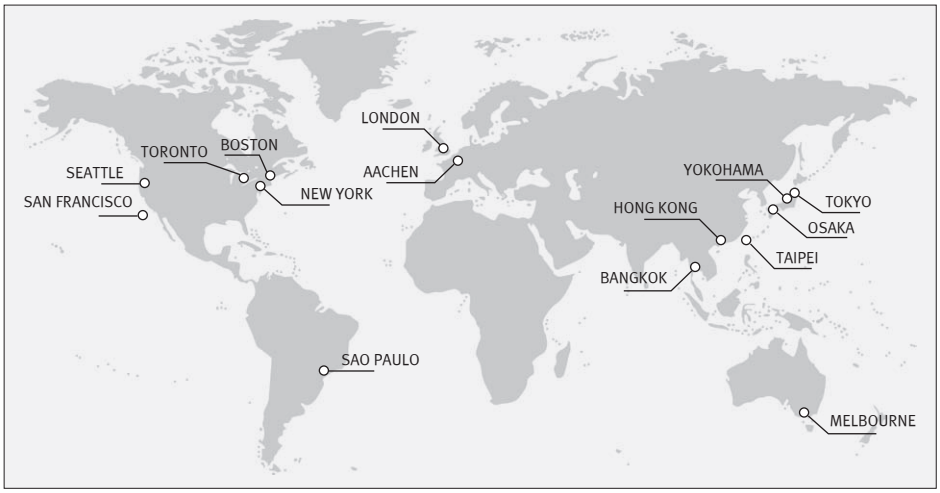
After many empirical studies of Privately Owned Public Spaces done by authors of different profiles, with the aim of systematizing the material, a research protocol has been created. First chapter explains data collection which drives from reliable sources such as: Springer, Science direct, Web of Science, Taylor & Francis, with a focus on the definitions given for POPS in different spheres. It continuous with the research process with the systematic division of inclusion and exclusion of the collected data. After inclusion, data analysis was done to extract the research results, continued with the quality of the evolution and the quality of the factors. Second chapter explaining the results of the findings, while the third chapter is the discussion ending with a conclusion.

By comparatively analyzing the definitions' key features, nine specific POPS aspects have been identified and classified into two categories according to basic criteria: their consequences and impact on investors and on broader urban contexts. Research objectives are divided in two parts. First, to determine the most common critical POPS definition aspects from the urban planning point of view. Second, to prove that POPS is primarily based on economic interests and is initiated by private interest on individual plots and not at the urban scale. The summary of included literature resulting from a systemic literature (SLR) has shown that there is still no common resolution that would determine a clear definition of what is meant by Privately Owned Public Spaces (POPS). The research attempting to define POPS has been mostly focused on the aspects of managing after the realization. The relation between urban planning and POPS so far remains an unexplored topic. Nowadays, definitions of POPS derive from two areas: from the public sector (city administration) and from scientists who study these spaces. The definitions gathered from these two areas have been analyzed with nine questions divided into two groups: those pertaining to matters of urban criteria (5 research questions) and those pertaining to the responsibilities of the private sector (4 research questions). It has been documented by this study that definitions do not take into account the importance of the impact of POPS in the wider urban context and they do not take into account the fact that POPS is not in any way controlled or linked to the comprehensive urban planning process, which represents an important area for future research.

Fig. 2 The possibility of urban design public spaces according to plot ownership

Fig. 3 Some of the cities that implement the process of creating public spaces in private lands

New York (USA)
San Francisco (USA)
Boston (USA)
Seattle (USA)
Aachen (Germany)
London (Great Britain)
Hong Kong (China)
Bangkok (Thailand)
Taipei (Taiwan)
Melbourne (Australia)
Toronto (Canada)
São Paulo (Brazil)
Tokyo (Japan)
Yokohama (Japan)
Osaka (Japan)



3 A characteristic of the Hong Kong model are POPS of a small surface area. Almost 70% of realized POPS are on the plot surface of 50 m² (Luk, 2009: 698).

4 The so-called 'Semba Building Line' (Dimmer, 2013).

5 *Greenspace Information for Greater London CIC* (GiGL) is the capital's environmental records Centre. They collate, manage and make available detailed information on London's wildlife, parks, nature reserves, gardens and other open spaces (https://data.london.gov.uk/publisher/gigl).

6 Based on Kayden's research the Advocates for Privately Owned Public Space (APOPS) partnership was founded aiming to monitor a little-known swatch of cherished public space such as the illegal privatization of originally formed POPS. Avaliable at: https://apops.mas.org/about/mission/ [Accessed: 30 July 2022].

7 The consultancy team, Rocco Design Architects Ltd., in collaboration with the School of Architecture, the Chinese University of Hong Kong, and Land Elite Surveyors Ltd., has been appointed by the Development Bureau of the HKSAR Government to undertake a consultancy study with the aim of drawing up a set of Design and Management Guidelines for public open space in private developments (POSPD) in Hong Kong.

Table I Scientific research selected for study after the systematization of the collected material

Nr.	Year Published	Author	Material type	Research area (city/state)	Scientific field of study	POPS aspects(s) researched
1	2000	Kayden, J.	Book	New York	Urban Planning	shape, accessibility, image, activities, sociability, comfort, ownership
2	2002	Irwin, E.	Article	Generally	Economy	economy value
3	2003	Madanipour, A.	Book	Generally	Urbanism	public and private spaces
4	2008	Smithsimon, G.	Article	New York	Urban Sociology	accessibility
5	2008	Németh, J.	Article	New York	Urban Planning	management
6	2008	Carmona, M. Magalhaes, C. Hammond, L.	Book	London	Urban Planning	management
7	2009	Luk, W.L.	Article	Hong Kong	Urbanism	policy and the spaces policy and the city
8	2011	Dimmer, Ch.	Article	New York, Hong Kong, Tokyo, Seattle, Bangkok, Taipei, Melbourne	Urban Planning	history, rules, management, usability
9	2011	Németh, J. Schmidt, S.	Article	New York	Regional Planning	ownership management
10	2011	Bates, L.J. Santerreb, E.S.	Article	Generally	Economy	economy value
11	2011	Miao, P.	Article	China	Urban Planning	gentrification
12	2011	Schmid, S. Németh, J. Botsford, E.	Article	New York	Regional Planning	control accessibility
13	2012	Dimmer, Ch.	Conference	Japan	Urban Planning	understanding of public space
14	2012	Rahi, G. Martynkiw, A. Hein, E.	Article	Vancouver	Geography	management
15	2012	Grobelšek, L.J.	Article	Slovenia	Urban Planning	public space connections
16	2013	Arvidson, A.R.	Article	Generally	Landscape	management
17	2013	Xing, N.	Ph.D. dissertation	Hong Kong	Urban Planning	history, rules, management, usability
18	2013	Yang, Y.	Ph.D. dissertation	Hong Kong	Urban Planning	policy
19	2014	Nasution, A.D. Zahrah, W.	Article	Generally	Sociology	quality of life – social
20	2014	Yoon, H. Srinivasan, S.	Article	New York	Urban Planning	planning
21	2014	Huang, T.S.	Ph.D. dissertation	New York	Urban Planning	design management
22	2015	Lin, H.Ch. Chao, T.Y.	Article	Taiwan	Urban Planning	rules, management
23	2015	Grobelšek, J.L.	Article	Slovenia	Urban Planning	management urban design guidelines
24	2015	Carmona, M.	Article	London	Urban Planning	shape, accessibility, image, activities, sociability, comfort, ownership
25	2017	Pratt, A.	Article	London	Economy	quasi-public spaces
26	2017	Oliveira, L. Pisani, M.A.J.	Article	New York	Urbanism	vertical impact
27	2017	Schindler, S.	Article	New York, San Francisco	Law	rules, value
28	2018	Carmona, M.	Article	London	Urban Planning	regeneration of public spaces, quality
29	2018	Rivera, C. et.al.	Article	Generally	Urban Planning	rules
30	2018	Lichtenbaum, S.L. Rosen, G.	Article	Israel	Geography	management
31	2018	Nissen, S.	Article	Generally	Sociology	hybrid character
32	2018	Huang, T.S. Franck, K.A.	Article	New York	Urban Planning	usability
33	2018	Yu, Y.	Article	Hong Kong	Law	urban policies
34	2020	Lee, D.	Article	Teheran-ro/Seoul	Management	usability
35	2020	Leclercq, E. Pojani, D.	Article	Liverpool	Urbanism	public safety
36	2020	Jian, I.Y. et al.	Article	Hong Kong	Real Estate	commodity, safety, information management, accessibility
37	2022	Lee, D.	Ph.D. dissertation	Seoul and Berlin	Urban Planning	generally

An Overview of the POPS Implementation in the World (1961-2021)

A considerable number of cities/countries implement the process of creating Public Spaces on Private Lands (Table I / Research area; Fig. 3). POPS take more specific forms when for the first time, in the year 1961, the city of New York introduced an innovative city management mechanism (model) of public spaces establishment by an inauguration of publicly used surfaces on private lands. The idea was initiated by the tendency to facilitate and advance the circulation of pedestrians in densely built ground level city areas and to raise the share of public space. This new type of areas, named "Privately Owned Public Space", abbreviated POPS (Kayden, 2000), was established by reducing the lot coverage (constructed area – total building percentages permitted for construction on the land), resulting from a compromise between city administration and the owner or developer of the plot. The private-public negotiations mechanism, based on legal regulations (Luk, 2009: 697), is the basic precondition of POPS formation, allowing the 'win-win' urban situation/conditions that both the city (its citizens) and private investors benefit from. It originates from the national planning/building legislation called "Incentive Zoning"[1] and enables an increase in the building's surface on upper floors (more so than allowed by current urban planning documents), focusing on the achievement of a specific goal/value in exchange, such as the creation of public space on the plot outside the building or in the interior (Fig. 4; Arvidson, 2013: 28; Smithsimon, 2008: 327; Oliveira, Pisani, 2017: 117; Schindler, 2017: 1117).

After introducing the POPS model in New York, many states/cities started to implement their own variation of a similar process.[2] This is clearly seen from the basic overview, such as the naming of these spaces. Not all countries use the same designation for these spaces. New York, London, Boston, Seattle, Toronto and Taiwan name them as Privately Owned Public Spaces, with the acronym POPS. In Hong Kong, we find these spaces with the name "Public Open Space in Private Development", with the acronym POSPD. In San Francisco, we find them with the term Privately Owned Public Open Space, with the acronym POPOS. In the city of Melbourne, unlike other cities, we find a designation Private Public Partnership, while in the city of Tokyo, we find these spaces with terms such as "Space Open to the Public", "Public Open Space" or "Open Space with Publicness", with the acronym POS. The terminology used to name it varies based on local urban planning policies and specificities, but the essence remains the same: the creation of public spaces on private land, under the management of the private sector (Dimmer, 2013).

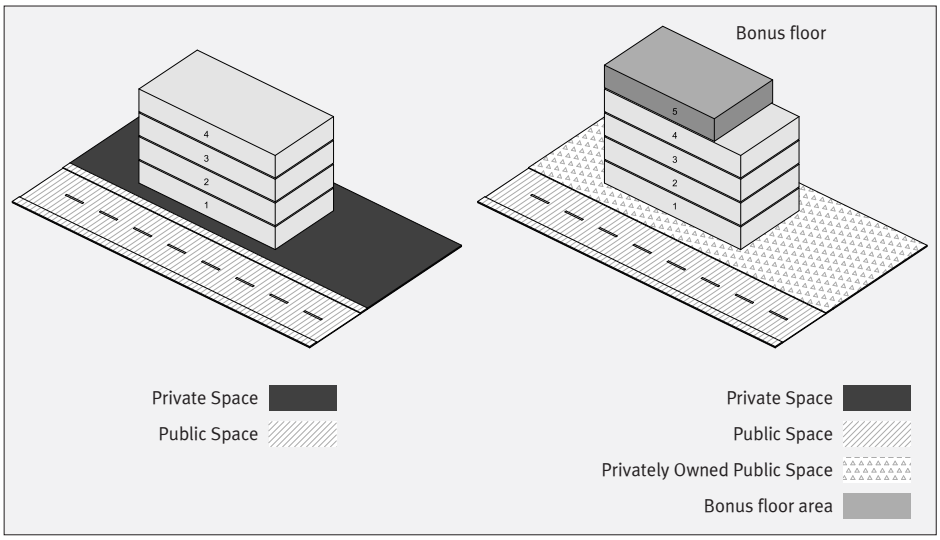


Fig. 4 A simulation scheme of the same building before and after the application of "Incentive Zoning"

The beginning of POPS implementation in Hong Kong in the 1960s (Yu, 2018: 3) was followed by an increase in its application in 1980s (Hong Kong Development Bureau, 2014: 5; Luk, 2009: 698) and was monitored by the city Development Bureau (Lands Department and the Buildings Department) responsible for compliance, land lease and other legal conditions, as well as POPS provision and maintenance (Hong Kong Development Bureau, 2014: 5).[3] Taipei implements public spaces on private land based on legal provisions of Comprehensive Design Systems (CDS) – a local variation of incentive zoning while Yokohama implements such areas through control instruments such as: the designation of the lowest possible Floor Area Ratio (FAR), citywide height control and Ur-

8 The provision of POSPD primarily seeks to achieve better quality design, optimization of land use, better site planning, and/or synchronization of the availability of open space and the community needs arising from developments. With proper design and management, POSPD could contribute towards the provision of quality leisure and recreational space and improve Hong Kong's living environment.

9 Responsible for maintaining the privately owned public spaces is the *Seattle Department of Construction and Inspections* (SDCI).

10 "The reason was this notion of almost a free lunch. Cities and their budgets are, and were, increasingly squeezed. And this would be a good way to get public space for free, without the city allocating any of its land, or any of its money: 'Let's have the private sector provide all of these wonderful spaces.' And also, they were smaller spaces, scattered about – an archipelago in a city, as opposed to Central Park. In New York City, for example, if you aggregated all of these privately owned public spaces together, they would cover 10 percent of Central Park, but they're scattered throughout the city." Available at: https://www.wbur.org/hereandnow/2017/05/11/privately-owned-public-space [Accessed: 31 July 2022].

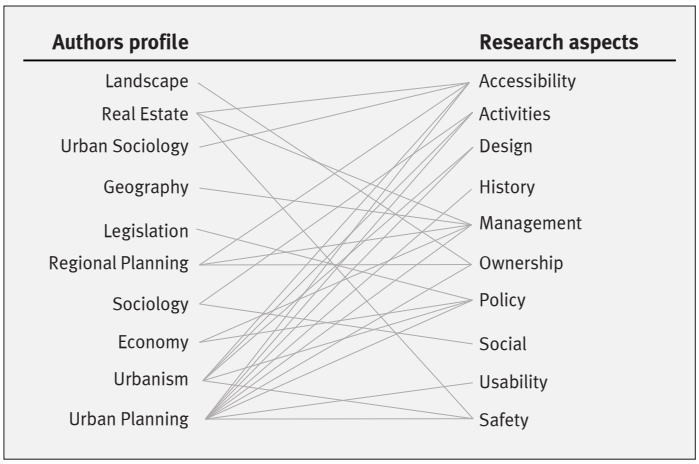


Fig. 5 POPS model: Liberty Plaza – Zuccotti Park, 1972, owned by Brookfield Financial Properties

Fig. 6 Authors profile and the research field focuses (research aspects) in POPS investigations

ban Environmental Design System. Osaka has implemented a process similar to creating POPS from as early as 1939, when landowners and the city government agreed to set a distance between the property line and the building. The space between the property line and the building line became one of the first privately owned public spaces in Japan, officially defined under Japanese law.[4] Melbourne uses different policy and legislation mechanisms and instruments for each public-private partnership tailored individually to meet the needs and requirements of the relative project (Dimmer, 2013).

Previous research indicates that the largest number of realized POPS is in NY's neighborhood Midtown Manhattan (Kayden, 2000, citied in: Schmidt et al, 2011: 272). So far there have been about 592 known POPS from which 389 were built in the period from 1961-2019 (New York Department of City Planning). From 1961 to 2000, we don't find many scientific studies on these spaces in New York. In Hong Kong, there are 336, and in London 58 known realized POPS (Hong Kong buildings department; GiGLE[5]). Most implemented POPS are located outside Europe. Apart from the example of London, such spaces are also mentioned in Israel, England (Liverpool), Germany (Aachen) (Dimmer, 2013, Carmona, 2015).

A Review of POPS Research

As this process of creating public spaces has been growing in different countries/cities, after the year 2000, many scholars from different scientific fields and countries have developed an interest for them, taking into account its various aspects and giving their contribution to the POPS definition (Lee, 2020: 3). This resulted in several cities being in the focus of case studies analyses, regardless of POPS research aspects. The most analyzed examples can be found in the cities with the largest number of realizations as led by city of NY with the largest number of research papers, followed by studies of the city of Hong Kong, Tokyo and of London. POPS are studied from the regional and urban planning, urbanism, environmental planning, landscape, design, economy, management, geography, sociology, security and legislation point of view (Table I, Fig. 6). Among all the research, the book by urban planner Jerold Kayden "Privately Owned Public Space – New York City Experience"[6] should be highlighted as one of the few comprehensive studies published in last two decades. His empirical summary of realized New York POPS encouraged, among others, a research of undesirable changes, monitoring, and promoting much needed reforms of POPS. Also, this book has inspired many authors of different profiles to study these spaces in their countries.

A comparative analysis of 37 relevant highly cited scientific sources published from 2000-2021, conducted for the purpose of this research, shows that the scientific profile of the authors does not always coincide with the field of study (research topic). POPS are studied more by urban planners / urbanists showing their interest in a broad range of topics from history of origins and design to urban policies and management, and covering 9/10 suggested research aspects (Fig. 6). Researchers from the Real Estate and Regional Planning fields are represented in POPS research on average (3/10), while scholars from the fields of Economy, Geography, Soci-

11 Advocates of Privately Owned Public Spaces (APOPS, organization founded by Professor Jerold Kayden) and The Municipal Art Society of New York (MASNYC), have joined forces and made APOPSIMAS to promote creative stewardship of the city's close to 600 privately owned public spaces (POPS).

12 The Tokyo POPS map is a visualization of 697 POPS in the Tokyo area based on official dana from the Tokyo Metropolitan Government. Concepted by: Dr. Christian Dimmer, University of Tokyo [accessed: 2 December 2022].

ology, Law, Urban Sociology, and Landscape design are least represented (Fig. 6).

From the urban planning point of view the interrelationship and influence of public and private space has always captured interest of researchers (Madanipour, 2003; Carmona et al., 2008). The roles of POPS were studied as the connection to other existing public spaces and as a pedestrian distance reduction that helps in balancing the distribution and connectivity of public spaces system of the whole city (Lin, Chao, 2015; Nasution, Zahrah, 2015: 151; Yoon, Srinivasan, 2015). They have been seen as an effective mechanism to engage different stakeholders in public space provision for cities undergoing radical change and facing high development pressures (Lee, 2022). POPS are also been recognized as a reflection of urban policies and a contribution to and influence on the diversity of urban culture (Xing, 2013; Yang, 2013; YU, 2018). In the context of urban planning, these spaces are also criticized (Carmona, 2010: 157). On the other hand, some planners emphasize the negative aspects of POPS, where these spaces are related to the results of political and legislative changes, focusing on the aspects of control and accessibility (Schmidt et al, 2011; Huang, 2014). Others have proposed a conceptual model that identifies the public as the interaction between the ownership, management and use and have evaluated the paradigms of spatial management in public and private ownership (Jian et al., 2020). From a sociological point of view, the focus is on whether such changes in the built environment of cities pose a threat to citizenship (Nissen, 2008) or they live up to expectations about the public space role and an adequate value it should provide to communities (Schindler, 2017). Economic research is preoccupied with questions of investment reconstruction, control of public space and its cultural uses in cities (Pratt, 2017), identifying effects of different types of open space on real estate prices (Irwin, 2002). POPS is criticized as an insufficient replacement for locally owned open public space (Bates, Santerre, 2001), which enables private developers to maximize profits at the cost of public life in the urban environment (Miao, 2011).

Materials and Methods

The research is based on the systematic literature review (SLR), a comparative analysis and classification method of selected relevant sources

Research Question

The collected data will be examined with specific research questions:

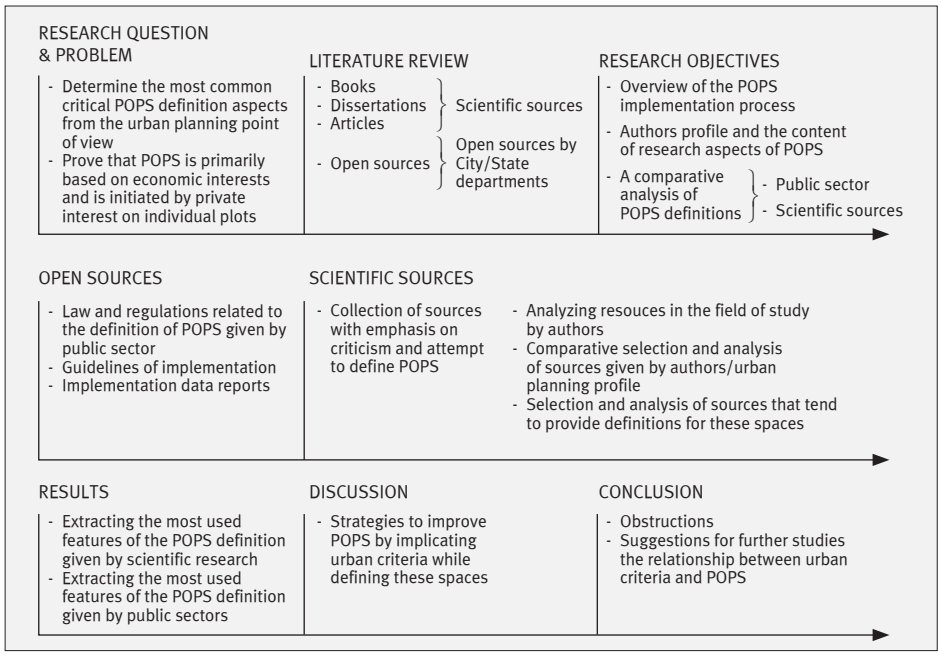


Fig. 7 Research framework

RSQ1 – Which scientific field and topics have been represented in POPS research so far?

RSQ2 – Which authors have tried to establish a clear definition of POPS?

RSQ3 – What are the most important/most common aspects of POPS definition?

RSQ4 – What are the most frequently mentioned critical aspects in the implementation and usage of POPS?

RSQ5 – Are urban planning criteria represented in defining POPS and how important are they?

By defining five research questions, a research framework has been created where the research objectives are divided into three phases. Founded results will be discussed around the research question and the protocol will end with conclusion (Fig. 7).

Research Process

The data search process is done manually with the collection of documents that are relevant to the topic. As relevant sources for the collection of documents, the following were chosen: Web of Science, Science Direct, Scimago and Taylor&Francis, known for empirical studies of the topic. The general search was done by selecting the material published from the year 2000-2022, and the research was done in the titles with the key word "Privately Owned Public Space" and the abbreviation POPS, as well as the research in the abstract with the same sentence and abbreviation (Fig. 8).

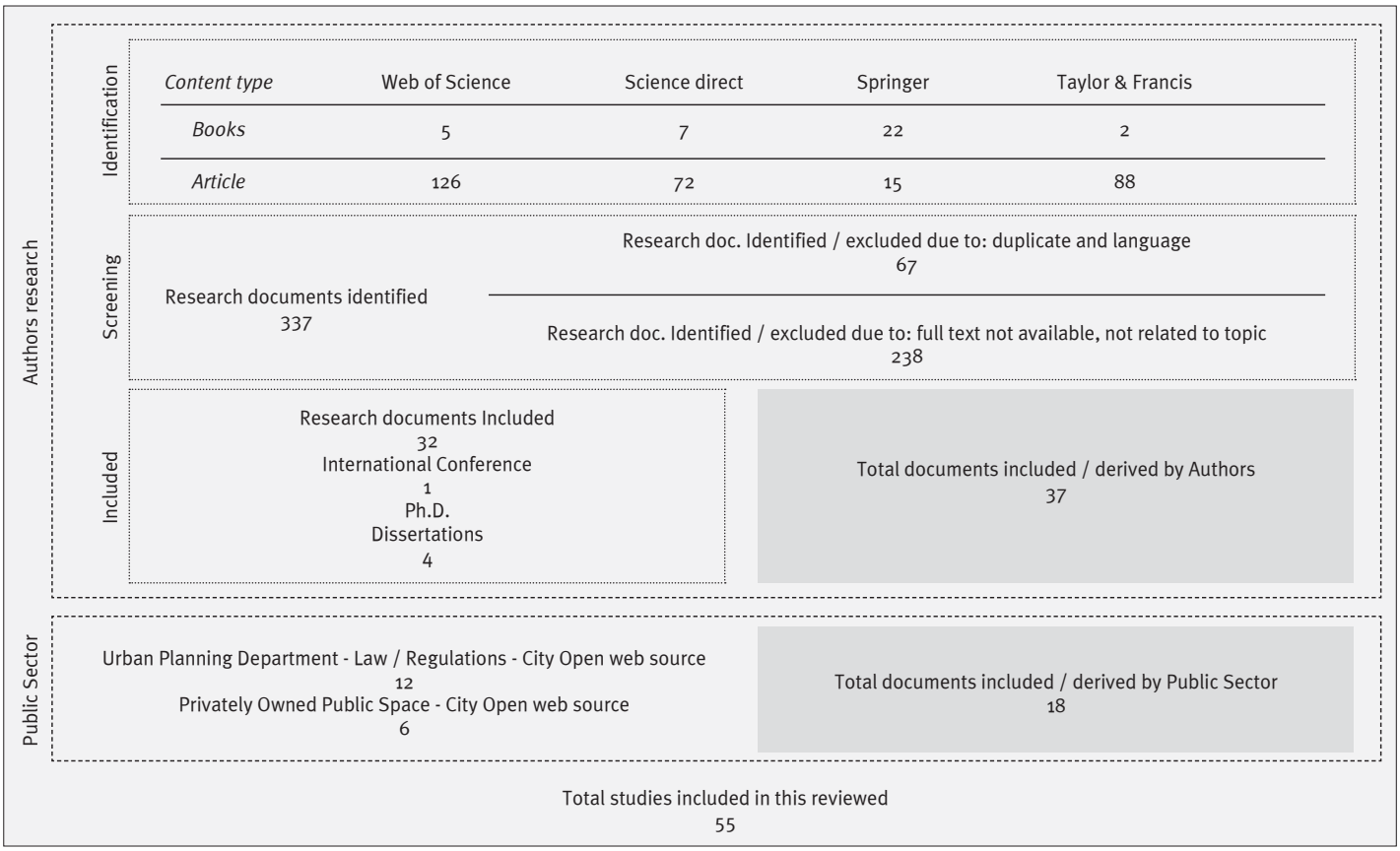


Fig. 8 Method of review

Data Collection

The collected documents are systematized by applying detailed criteria with exclude and include. In the first phase of exclusion, priority was given to documents in the English language. In the second phase of exclusion, documents that are not relevant to the research topic were excluded. Studies done in: International Conferences, Ph.D. Dissertations have been added to the remaining material. All the collected material has been resystematized by including the documents that refer to the issues of POPS definition and urban planning. The documents framed by the authors (scientists) have been combined with the material provided by the public sector (Cities urban planning departments).

In total 37 selected scientific sources consisting of 3 books, 29 scientific articles, 1 conference proceeding and 4 Ph.D. dissertations published from the year 2000-2022 (Table I). Since the year 2000 a lot of POPS research was stimulated by the publication of the book of all of New York's POPS statistical data (Kayden, 2000). High priority for research is given to the sources that study POPS from the urban planning point of view, as well as those revealing critical aspects of POPS implementation. The selection of professional urban planning sources consists of three cities' open spatial databases from countries that provide concrete results through open platforms. The collected material includes: *statistical data* (number of POPS) of the implemented POPS, *legislation and regulations*, as well as *official instructions* for the implementation of POPS.

The main research (data analysis) is focused on having *A comparative analysis of the definitions,* established from various research and realization perspectives, demonstrates the most important aspects of POPS and investigates the representation/proportion of urban planning characteristics. The original part of the research, the comparative analyses of POPS definition aspects, was carried out based on two types of sources selected according to the following criteria:

a.) *The public sector* definitions are derived from open spatial databases of five selected cities from different continents, characterized by a significant share of POPS realizations (New York, Seattle, Hong Kong, London and Waterloo), and

b) *Scientific* sources, books, articles, conferences and Ph.D. dissertations, which directly refer to the POPS *definition,* were selected for the comparison.

By researching and comparatively analyzing the key words of eleven selected POPS definitions, the most common POPS (definition) aspects were identified and classified according to the impact and consequences on investors and the city (citizens).

Key Aspects of POPS – A Comparative Analysis of Definitions

From the conclusion that the POPS process is implemented in many cities/states and studied by authors of different profiles, the research continues with the analysis of the definitions given for these spaces. Variations in defining POPS can be observed from two perspectives:

1. Definitions derived from the public sector (city/state government urban policies).
2. Definitions established by scientific research.

These two definition scopes have been compared in order to investigate the extent to which urban characteristics are important in city management and/or in POPS formation and usage.

Definitions Derived from the City/State Government Urban Policies (Public Sector)

Valuable POPS research information derives from the open databases established by the cities developing and implementing POPS policies. Such bases provide concrete spatial data relevant to the topic and suggest locally adapted definition of POPS. Open databases are valuable research sources providing information such as: the historical background of creation and development, legal framework, procedural steps of an agreement between private and public sectors, application guidelines for plot owners or investors, obligatory features of a plot, the responsibilities and rights of private and public sectors after POPS realization. According to The Department of Urban Planning of New York, responsible for reviewing requests and managing POPS, they are defined as *spaces dedicated to public use and enjoyment, owned and maintained by private land owners in exchange for bonus floor area or waivers* (NY City Planning). The Development Bureau (DEVB) of Hong Kong, in the report on consultancy study on POPS from 2008[7], *defines these spaces as open space on private land within a private development and/or on government land adjoining a private development where the general public is entitled to access, use and enjoy such spaces under private management*[8] (Department of Building of Hong Kong, 2008: 2-3). London's environmental records Centre (GiGLE) gives a definition for POPS as *publicly accessible spaces which are provided and maintained by private developers, offices or residential building owners. They include city squares, atriums and small parks. The spaces provide several functional amenities for the public. They are free to enter and may be open 24 hours or have restricted access arrangements. Whilst the spaces look public, there are often constraints to use (GiGLE)*. The city of Waterloo in Canada considers POPS as *spaces which are accessible to the public while being privately owned and managed. They are typically negotiated with developers as part of the development application review process and are meant to complement, extend or integrate with public parks and plazas, not replace them. POPS can take many forms, including forecourts and front yards, courtyards, enhanced walk-ways, plazas and gardens* (City of Waterloo, 2019: 1). Seattle's Department of Construction and Inspections (SDCI[9]) in the USA defines POPS as *spaces created as a public benefit as part of a private development project, usually in exchange for certain project advantages allowed by City code* (Seattle Government).

Definitions Provided by Scholars

Definitions provided by scholars from different scientific fields impose questions of benefits for the city and the private sector, but more often they establish a critical attitude towards POPS implementation. Professor and urban planner Jerold Kayden defines them as *outdoor and indoor spaces where developers are allowed to build bigger buildings and, in return, to provide these privately owned public spaces. In such a process, cities are benefiting public spaces without allocating any of its land or money.* Because of this, the expansion of the implementation of this type of public spaces is always added value (Wbur, 2017).[10] Other urban planners define POPS as *one type of publicly accessible space which itself encompasses a wide range of sites, and it can be created under the original agreement with the local city government* (Németh, 2009: 2464; Huang, Franck, 2022: 2) or as *private spaces but open to users* (Grobelšek, 2012: 113). Silke Nissen offers his criticism and defines POPS, from the social point of view, as *public space created as a result of the laws of the areas where sometimes public spaces either change their character or are replaced by private spaces, where accessibility and usability are privately controlled* (Nissen, 2008: 1132). A critical view is also provided by Mathew Carmona, whereby he emphasizes: *In reality the very term 'privatization of public space' is itself hugely confusing because it assumes that once public spaces are becoming private in a sort of new*

Table II Quality evaluation of SLRs (Bold – included publication that meets the expected conditions ›2.5/3 for the further study of key aspects of POPS; Regular – excluded publication that doesn't meet the expected conditions ‹2.5/3)

Nr.	Year Published	Author	Material type	Addresses the definition of POPS	POPS – urban planning	Criticizes POPS
1	2000	Kayden, J.	Book	+	+	+/-
2	2002	Irwin, E.	Article	-	+/-	+
3	2003	Madanipour, A.	Book	-	+/-	-
4	2008	Smithsimon, G.	Article	-	+	-
5	**2008**	**Németh, J.**	**Article**	**+**	**+**	**+/-**
6	2008	Carmona, M. et al.	Book	-	+/-	+/-
7	2009	Luk, W.L.	Article	-	+/-	-
8	2011	Dimmer, Ch.	Article	+/-	-	+
9	2011	Németh, J.; Schmidt, S.	Article	-	+/-	+/-
10	2011	Bates, L.J..; Santerre, R.E.	Article	-	+/-	-
11	2011	Miao, Pu	Article	-	+	+/-
12	2011	Schmidt, S. et al.	Article	+/-	+/-	+/-
13	2012	Dimmer, Ch.	Conference	+/-	+/-	+/-
14	2012	Schmid, S. Németh, J. Botsford, E.	Article	-	+	-
15	2012	Grobelšek, L.J.	Article	-	+	+
16	2013	Arvidson, A.R.	Article	-	+/-	-
17	2013	Xing, N.	Ph.D. dissert.	-	+/-	-
18	2013	Yang, Y.	Ph.D. dissert.	+/-	+/-	-
19	2014	Nasution, A.D.; Zahrah, W.	Article	+/-	-	-
20	2014	Yoon, H.; Srinivasan, S.	Article	+/-	-	+
21	2014	Huang, T.S.	Ph.D. dissert.	+/-	+/-	+/-
22	2015	Lin, H.Ch.; Chao, T.Y.	Article	+/-	+/-	+/-
23	**2015**	**Grobelšek, L.J.**	**Article**	**+**	**+**	**+/-**
24	**2015**	**Carmona, M.**	**Article**	**+**	**+**	**+/-**
25	2017	Pratt, A.	Article	+/-	-	+
26	2017	Oliveira, L.; Pisani, M.A.J.	Article	+/-	+/-	+/-
27	**2017**	**Schindler, S.**	**Article**	**+**	**+/-**	**+**
28	2018	Carmona, M.	Article	-	+	-
29	2018	Rivera, C. et al.	Article	-	+/-	+/-
30	2018	Lichtenbaum, S.L.; Rosen, G.	Article	-	+	-
31	**2018**	**Nissen, S.**	**Article**	**+**	**+/-**	**+**
32	2018	Huang, T.S.; Franck, K.A.	Article	-	+/-	+/-
33	2018	Yu, Y.	Article	+/-	-	+
34	2020	Lee, D.	Article	+/-	+/-	+/-
35	2020	Leclercq, E.; Pojani, D.	Article	+/-	+	+/-
36	2020	Jian, I.Y. et al.	Article	-	+/-	+/-
37	2022	Lee, D.	Ph.D. dissert.	+/-	+/-	+/-

wave of enclosures, this time urban (Carmona, 2017). The critical view of POPS is shared by Christian Dimmer who while studding Japan, emphasizes that this notion is misleading as public assets are given to private hands, thus diminishing the public realm (Dimmer, 2012: 84). Sarah Schindler, known for her studies in the field of legislation, in her research on the fulfilment of the expectations of San Francisco's POPS, defines them, somewhat with skepticism, as *spaces that are – at least in theory – open and accessible to the public, but they are owned and operated by private entities*. She is stressing the importance to recognize that the developer is getting something of value (construction permit) in exchange for the provision of public space (Schindler, 2017).

Results

In order to give concrete results, 3 sub-chapters have been given, which include: the results of the search, the evaluation of the quality of SLR and quality factors.

Table III Key aspects of POPS in definition by the public sector

City	Definition source	Definition criteria								
		Urbanistic / spatial characteristics					Private sector / Responsibilities and rights			
		Public Function/Usage	Form/Type/Scale	Spatial character (Open space)	Accessibility	Wider urban impact	Private ownership or development	Private land ownership	Private management	Bonus for investors
New York	The Depart. of UP	+					+		+	+
Hong Kong	DB	+		+	+			+/-	+	
London	GiGLE	+/-	+		+/-				+	
Waterloo	City of Waterloo	+	+		+				+	+
Seattle	DCI	+								+

Table IV Key aspects of POPS in scholarly definition

Scientific research field	Authors	Definition criteria								
		Urbanistic / spatial characteristics					Private sector / Responsibilities and rights			
		Public Function/Usage	Form/Type/Scale	Spatial Character (Open Space)	Accessibility	Wider Urban Impact	Private Ownership or Development	Private Land Ownership	Private Management	Bonus for Investors
Urban planning	Kayden, J.	+	+				+		+	+
	Carmona, M.	+				+	+			
	Németh, J.; Huang, T.S.; Franck, K.A.	+	+							+/-
	Grobelšek, L.J.				+/-			+		
Sociology	Nissen, S.	+		+/-	+				+	
Law	Schindler, S.	+				+	+			+

Search Results

Looking at the systematic literature review (SLR) we see that, although urban planners are the most represented among researchers (22 of 37 selected sources; Fig. 6), only a small number of authors have studied the relationship between urban planning and POPS. That is all the more surprising as this aspect, as author Liljana Grobelšek points out in her study on POPS in Slovenia, should become a mandatory component of the land subdivision plan when drafting implementation plans such as town-planning schemes (Grobelšek, 2015: 31). Generally speaking, scientific research of POPS focuses mostly on the aspects of managing them after realization. Somewhat less, it focuses on accessibility, and then on usability and policy, while the aspect of the shape/spatial proportion/scale of the space or aspects of the wider urban impact, are poorly represented.

Quality Evaluation of SLRs

The study of the documents provided by the authors has been evaluated for quality using the following criteria: content bias (referred to studies that provide direct definitions for POPS and urban planning criteria), citation bias (referred to studies that have a high number of citations), location bias (referred to location of their study) and language bias (choosing the English language). The elimination of the risk for a detailed study of the definition of POPS spaces is done by focusing on: the definition given for these spaces, the publications that try to present the problem of the connection of POPS with urban planning and the documents that criticize these spaces. (Table II).

By comparative analyzing the key features POPS definitions (Subchapter 2.4.1. and 2.4.2.) provided both by public (city) sector and scholars from the field of urban planning legislation and sociology, eleven different aspects of POPS have been selected for research (Tables III and IV). They can be divided into two basic groups according to the impact and consequences on investors and the city (citizens). The POPS features relating to the private sector responsibilities and rights do not necessarily have physical repercussions on the formed public city surfaces. They relate to the categories of ownership, management and investors benefits. From the urban planning point of view, more intriguing are its spatial characteristics that have an impact on the way of use and users' perception of space. These are the features that can have implications for the wider city space in the context of physical connectivity (accessibility and communication), as well as the creation of recognizable urbanity of strengthened socialization.

Quality Factors

Comparing the POPS definitions in use by the public sector (Table III), it can be observed that there is a similarity in the highlighted POPS features/aspects where the focus falls on:

– public function and enjoyment (4,5/5)
– private management (4/5)
– mostly unlimited accessibility (3/5) and
– bonuses for the private sector (plot owners or developers) (3/5)

At the same time, the formal (design) characteristics of spaces, as well as their impact on the wider urban context, are neglected or ignored. POPS are perceived more from the as-

pect of ownership and economic benefits with an emphasis on the public-private agreement to increase public surfaces in the city in quantitative terms.

Although unexpectedly, comparing definitions by scholars (Table IV), considering that most of them are researchers from the field of urban planning, formal characteristics of spaces, as well as their impact on the wider urban context (functional structure of the city which implies urban planning), are the least researched topics in the spatial/urbanistic category. In scholarly definitions the focus falls on the following aspects:

– public function (5/6)
– mostly private ownership (3/6)
– bonus for investors (plot owners or developers) (2.5/6)
– form/type/scale and wider urban impact (2/6)

Discussion

This paper is aimed at determining the relationship between Privately Owned Public Spaces (POPS) and urban planning, with main focus analyzing the definitions proposed for these spaces by both the public sector (city management) and the scientists. The review, summary and comparative analyses of previous research from authors of different profiles shows that there is still no consensus which would determine a clear POPS definition. POPS are initially designed to increase the number and share of new urban public spaces, but while studding POPS in Slovenia, author Liljana Grobelšek emphasis that there are several situations in towns and cities where public spaces and POPS are not adequately organized (Grobelšek, 2015: 29) which can have negative impact on wider urban context.

Activity Developed since 2000 to 2022

With this study, we found that since 2000 there is a considerable number of researches on POPS, but in the requested field we found only 32 sources from authors who at least try to give definitions for these spaces and their connection with urban planning. Although both analyzed definition viewpoints emphasize the importance of public use/usage in the first place, it's surprising that city management (public sector) does not consider the importance of POPS influence in the wider urban context and that POPS is not, in any way, controlled or connected to the comprehensive process of urban planning. Critics mostly refer to space management, limited access, the economic aspect of the benefits from the private sector, security, etc. but we rarely find criticism of these spaces in terms of urban influence. Critical assessments of examples of POPS case study in the world show that the consequences of such a perception (definition) are fragmentary and that individual urban spaces are often open and accessible to the public only in theory, while they are mostly controlled and potentially neglected in maintenance by private entities (Schindler, 2017: 1097). The pandemic situation Covid-19 had an impact on proper use of POPS. An example are POPS in New York, where the Mayor Office of New York City created special protocol for POPS, changing the rules of: accessibility, usability etc. (NYC Planning: DCP Compliance Protocol).

What Research Topics are being Addressed?

Public spaces on private land (POPS) are a result of the compromise between the public and private sector, and that is why the starting points/incentives for their creation must be analyzed in two ways and at the same time: through benefits for the city (urbanistic point of view) and through benefits for the private sector (investor's point of view). For now, the above-mentioned benefits are seen primarily from the economic perspective. Public sector benefits free public space without involving financial means instead of investing in the high value of the property for expropriation to create public spaces. The private sector benefits from an additional surface area in construction (in upper floors). At the same time, the urban management mechanism of the public – private negotiation is regulated exclusively by law, yet not by urban planning documents.

Who is Leading the Research?

Regarding the requested topic, the largest number of definitions of POPS under the prism of the urban planner can be found in the United States of America, followed by Hong Kong and Japan. Perhaps not coincidentally, the largest number of POPS studies corresponds to the largest number of POPS conducted in one city, namely New York. From this success of the realization of POPS, more research questions have been resolved in many different spheres by different authors, but also by the public sector itself, changing their legislation and regulations for these spaces from time to time, such as the city of New York, which changed its legislation in 1968-1975 by including new type of spaces (New York Department of City Planning). Examples of specific open databases of POPS of the city of New York and Hong Kong, provide precise data such as: period of

realization, exact location on map, geometry of POPS, area, type of POPS, etc. These precise data results give wide possibilities of analyzing these spaces in different diabase. As a result of SLRs for study, we find that these spaces are being studied by authors profiles such as: urban planning, sociologists, geographers, lawyers, economists, management and real estate.

What are the Limitations of the Research?

Although some cities contain open sources with specific details about POPS, some issues still remain the challenge of further studies due to lack of data. The fact that some cities like London do not have an open source with graphic data for these spaces remains extremely surprising, even though there are 58 completed POPS. Likewise, the city of London does not provide data for each POPS in which year it was completed or a specific map of where the cadastral plot is located. Since this study is related to the definition of these spaces and their connection with urban planning, the presence of high-quality maps is essential. In addition to the city of New York, which contains a specific map of all POPS realized from 1961 until today, other cities contain maps that endanger the accuracy of the research. From the analysis of the studies done by the authors, authors such as Jerold Kayden (study for the city of New York by Advocates of Privately owned Public Spaces /APOPS/ and The Municipal Art Society of New York /MASNYC/) and Christian Dimmer (study for the city of Tokyo), have realized the collection of all POPS realized in these two cities and have created open databases (APOPS&MASNYC[11], Tokyo POPS map[12]).

Conclusions

Unlike previous research, this research puts the urbanistic criteria for the definition of Privately Owned Public Spaces (POPS) in the foreground. From the studied sources, we notice that there is a gap between POPS and Urban Planning. Both from the public sector sources and the scientific ones, we do not find specific urban planning criteria for defining/implementing POPS. The sources of materials for studies by the authors are the data from the websites of the cities, or different measurements for these spaces.

POPS have been studied by urban planners (urbanists) who emphasize the importance of the connection/interrelation of POPS with broader public space system. The field of their research interest has been more informed by studying the management, social and economic benefits and their design and not by comprehensive urban planning.

A similar deficiency was observed in the public sector dealing primarily with the POPS management. Cities do not provide concrete data which data can be used by scientists and their results contribute to increasing the quality of POPS in terms of urban planning. The statistics provided by the city do not imply results which would refer to the impact of these spaces on urban structure or quality. While defining these spaces, we find a small number of urban planning terms.

Therefore, the analysis of POPS in the context of their impact on urban structure and the definition of the urban criteria of POPS, remains an unexplored field, offering potential for further studies.

[Translated by Zejnulla Rexhepi]

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Tables I-IV	Authors

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