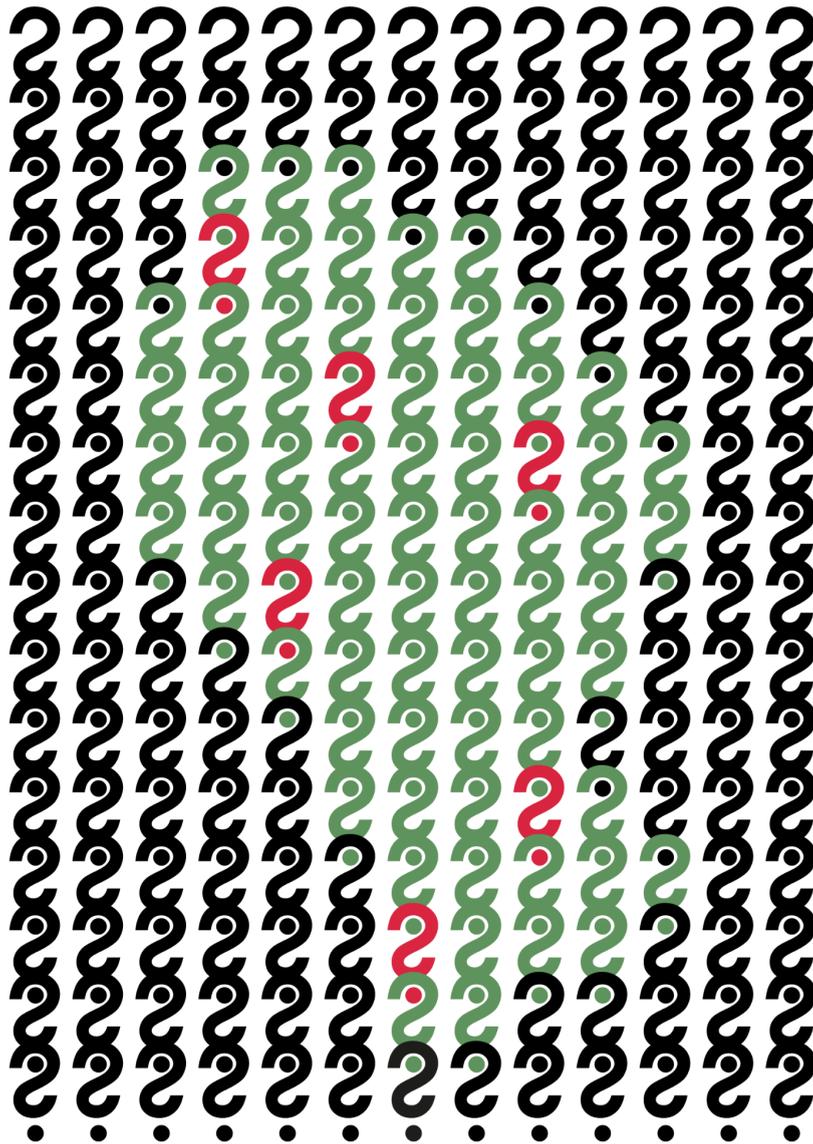


May I park here, or what is it we imagine a park to be?

Investigating the perception of urban parks among Polish local government officials



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Abstract

Urban parks have historically served as a means of mitigating and responding to social issues at a place and time. To this day, parks remain a tool used by local governments to deliver benefits to communities and improve citizens' quality of life. However, for local governments to continue providing and maintaining parks, their functionality and benefits must be positively viewed. Despite the importance of officials' perceptions of parks, few studies have investigated the issue. This thesis identifies this gap and explores the perceived physical characteristics (what renders a park a park) and conceptual characteristics of parks (their objectives, benefits and necessity) among local government officials in four Polish cities: Gdynia, Bydgoszcz, Katowice, and Szczecin. Both primary and secondary data were collected – primary data through semi-structured interviews with officials from municipal bodies tasked with planning, designing, or maintaining urban parks and secondary data in the form of municipal strategies and spatial studies. The former were analyzed through cognitive mapping and the latter through qualitative coding. The study finds that parks are viewed as a green space with a combination of tall and short greenery, amenities and infrastructure. Their area may vary greatly, but they are reported to have a primarily recreational function. Numerous park benefits are seen to follow from the objectives of their creation, while others are the result of the physical characteristics of the park. While largely complementary, parks may be partially replaced by nearby blue-green areas. Current perceptions largely mirrored the characteristics of the sustainable park model, concerned with human and ecological health, and integrating into larger green space systems. Newer solutions are emerging (networks of functionally diverse green areas and informal green spaces), but it will likely take time for their full implementation.

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1. Introduction

Background

Public urban parks arose in the 1830s in the industrial cities of England (Clark, 1973). The rapid development of cities meant overcrowding ran rife, leading to issues of health and hygiene in a society that was 'painfully slow in providing [...] people with sanitary facilities' (Bloom et al., 1958, p. 15). These issues would not go unnoticed; in 1833, the Select Committee published a report on the decrepit conditions in English towns. Shortly thereafter, the public park movement arose seeking to establish public parks in most cities which were believed would benefit the health and hygiene of citizens and cities (Clark, 1973).

Since the rise of the movement, the motivations guiding park provision have undergone changes along their journeys in space and time, moving from England to continental Europe and North America (Clark, 1973), and shifting over the past two centuries as historical circumstances have evolved (Loughran, 2020). At their destinations, parks have responded to the specific requirements of a location, meeting various predominantly social objectives (Cranz & Boland, 2004). The versatility of their use in addressing social issues drove Loughran (2020) to describe parks as a 'cultural fix' – a space used by local governments to mitigate social crises.

In the second half of the twentieth century, concerns over ecology increased and became intertwined with social issues, giving rise to a new park form (Cranz & Boland, 2004). A review by Cranz & Boland (2004) of 125 US parks created between 1982 and 2000 revealed that in 23 percent of the cases, maintaining and improving human and ecosystem health were the central objectives. Along with other defining characteristics, the objectives formed the basis for distinguishing the 'sustainable park' model.

Parks' utility can be viewed from multiple angles (van Leeuwen et al., 2010). At present, parks functionality includes, but is not limited to, delivering places for active and passive recreation (Hayward, 1989), opportunities for youth development (Walker, 2004), cultural offerings (Ellis & Schwartz, 2016), avenues for socialization (Jennings et al., 2016), environmental services (Chiesura, 2004), and increased property values (Haq, 2011). Once utilized or experienced, these various offerings, from social through economic to environmental, are commonly referred to as benefits in park literature. Benefits which ultimately enhance quality of life for residents (Gomes & Florentino, 2015).

Maintaining and enhancing quality of life for citizens is the primary responsibility of local governments (Baker & Palmer, 2006). In Poland, this duty is enshrined in the Municipal Government Act (1990), which stipulates that satisfying the needs of the community is a basic task of any municipality. As part of this task, they must provide and maintain recreational areas and greenery. In providing these services, the positive perception of parks and recreation by local government officials is pertinent; they must be seen as productive for their continued development and maintenance, as local officials are ultimately responsible for setting and implementing policy (Powers et al., 2019).

Relevance

Citizens quality of life is dictated not only by the individual lifestyle choices they make but also the planning and design of the urban environment (Syrbe et al., 2021). As pollution and congestion are increasing in cities (Blanco et al., 2009), the provision of urban parks and green spaces appears as a common tool for increasing quality of life (Livesley et al., 2016). Such spaces are suggested to act as a buffer for urban stressors, positively affecting physical and psychological health (Hartig & Kahn, 2016), and to provide various social, economic, and environmental benefits – improving cities' livability (Wolch et al., 2014). As local governments are tasked with park provision, it becomes relevant to consider the perceptions of parks among their officials as a means of understanding the choices around park provision and park outcomes. However, as Powers et al. (2019) indicate and call for, there is a lack of and need for better understanding of officials' perceptions. Their article had only found one previous work on this issue.

Furthermore, psychological research indicates that perceptions, the focus of this paper, form an important input in decision-making and action (McDonald, 2012; Plous, 1993). Thus, societally, the topic is relevant as it can inform community expectations on the nature of future park (re)development projects in the cities included in the study. Moreover, once made explicit, the perceptions could act as a means of establishing a dialogue with citizens in an attempt to harmonize them with actual community needs and desires.

Research problem

In light of the above, the primary aim of this research is to explore the current perception of parks, in terms of their physical and conceptual characteristics, among local government officials in four Polish cities: Gdynia, Bydgoszcz, Katowice, and Szczecin. Considering the ongoing evolution of parks, the study also attempts to position the current perceptions in the broader development of parks, investigating whether they are representative of contemporary trends in park planning and design. The main research question is:

What is the current perception of the physical and conceptual characteristics of urban parks among local government officials in Poland?

The complex question is further separated into three, more focused questions:

1. What are the physical characteristics of a park and what differentiates it from other forms or greenery in their view?
2. What are the officials' objectives in park provision and what benefits do they think parks deliver?
3. What are the perceived spatial and functional relations between parks and other forms of (un)managed greenery?

Thesis outline

This chapter has briefly introduced the background to the research and established the problem guiding the investigation. Chapter 2 provides a historical background on park development in Poland and abroad. Chapter 3 explores the concepts relevant to the study. Chapter 4 explains the methods used and ethical considerations. Chapter 5 presents the results of the study using the aforementioned methods. Chapter 6 contains a discussion of the results, presents the limitations, and suggests avenues for future research. The final chapter – chapter 7 – summarizes the most important findings and looks to the future of park planning and design in cities.

2. Historical background

To understand the historical development of urban parks, their functions and objectives for their creation, Bożętka (2008) suggests we must return to the nineteenth century. The green that existed beforehand, in the form of gardens, served primarily aesthetic functions and remained under the control of churches, royalty, or elites (Kimic, 2012). Such gardens, characteristic of industrial cities, increased the attractiveness of the property, formed a green enclave, and separated the building from transport routes (Łakomy, 2012). However, it was in 1830s England that the public park movement arose in response to the overcrowding of rapidly growing, newly industrialized cities. Parks which would appear soon after symbolized nature, class and health. There was a common belief that they were the answer to 'most ills of the time' (Clark, 1973: 31). While, at that time, no evidence existed for their positive effects, there appeared to be an inverse correlation between crime, drunkenness, and the provision of green spaces (Clark, 1973).

In the following decades, arboretums and botanical gardens were established in prominent cities, following the encouragement of self-improvement of the lower classes. Spaces where one could self-educate in botany and horticulture instead of indulging in liquor. Simultaneously, throughout the 1840s to 1860s, urban parks would appear across most major cities. They shared a nearly identical naturalistic and gardenesque style, drawing from the villa garden tradition. Geometric flower beds were hand sown biannually, contributing to the immense expenses of parks' creation and maintenance, which appealed largely to the upper class. A second popular form of park was the land speculation and development park whose objective was to raise surrounding land values, while portraying to the general public its ability to alleviate their ills. Birkenhead, an example of such a park, would inspire Frederick Law Olmsted who would later design parks across the USA, including Central Park in New York (Clark, 1973).

Parks were generally small, with larger establishments present in cities that reappropriated formerly privately owned property. They were a form of planned space, 'torn away [...] from nature' (Łupienko, 2019, p. 110, translation by author) and modified by man. Parks did not arise by themselves, rather they were the result of peoples' spatial conceptions; a mark of their (in)abilities in shaping the natural environment. They featured fencing that distinctly separated them from their surroundings and controlled access, resulting in a space one purposefully entered rather than walked through. Due to their high maintenance costs, park discourse concerned establishing the objective values and functions parks would provide (Łupienko, 2019).

In summary, nineteenth-century parks were a continuation of private garden traditions. Their predominant functions were social, aiming to cultivate sociability, integrate classes, and reduce divisions; and economic, whereby park creation would drive the development of nearby properties, with a gradually weakening importance of their aesthetic function (Łupienko, 2019).

During the rise of the park movement, Poland was annexed and divided among three empires: Prussia, Russia, and Austria (Britannica, 2021). This resulted in three unique trajectories of urban development in the partitions, as they would adopt the regulations of the respective empire. However, all the empires would develop some form of green spaces. Prussia was the most prolific, promptly establishing plans of urban expansion and regulation

in Pomerania and Greater Poland, including street-side tree plantings. On Austrian grounds, urban measures were very limited – only Kraków and Lviv saw the development of rebeautification plans (Kimic, 2012). Russia, occupying central and eastern Poland, demolished city fortifications providing space for city expansion and greening. Despite some efforts in the Austrian and Russian partitions, inadequate (city-owned) land and finances hindered the creation of parks. Opportunities arose when city-owned, monasterial grounds became disused. However, the parks would fall into disrepair due to insufficient maintenance funds (Łupienko, 2019).

The ideas and designs of England's park movement reached the partitions with considerable delay, their realization took several decades. In the Russian regions, the first purpose-built parks appeared around the 1900s under strong pressure from social activists. The driver of their creation was not social-integrative, as in Western Europe, but segregative – aiming to reduce traffic in palace gardens intended for affluent citizens. In practice, many parks became specialized, catering to populations which had good access to the area. Others introduced time slots for specific groups (Łupienko, 2019).

At the start of the 20th century, two somewhat opposing directions in architecture gained prominence – modernism: seeking logic, simplicity and functionality; and Art Nouveau: embracing asymmetry, curvilinear forms and references to natural motifs. Both found their way into the design of green spaces resulting in parks which drew from mixed traditions (Łakomy, 2012). Around the same time, architects would take inspiration from Ebenezer Howard's garden city. The first garden city project – the Salwator estate near Kraków – was completed in 1911. The movement remained relevant until 1945, predominantly concentrated in and around Warsaw (Kędzierski, 2018).

After Poland had regained independence in 1918, cities embarked on large-scale urban design projects. Planning considerations evolved to include zones, indicators and spatial conditions in the designation of residential, industrial and green areas. Cities also attempted to connect their fragmented parks and green spaces into larger systems, following ambitious plans set out after WWI (Małusecki, 2018).

After 1945, the change in Poland's political system and borders caused major alterations to city planning and management. Generally, cities began large-scale, unplanned (re)greening projects, unquestionably viewing the quantity of green as the crucial parameter. Concerns over quality or ecological value were practically non-existent. Simultaneously, years of conflict, heavy industrial activity, and disregard for nature drove the environment to the brink of collapse. Similarly, ongoing environmental pressures led to the degradation of the newly established green areas (Bożętka, 2008).

During the economic and political transformation after 1989, ecological values of green spaces were acknowledged. Additionally, the rising concept of 'sustainability' forced some concern over environmental affairs. In the 2000s, local governments noticed the economic potential of parks – how their presence could attract commercial investment. Thus cities began producing long-term development strategies with consideration for nature (Bożętka, 2008). Nevertheless, this has not prevented losses of parks and green spaces under commercial pressures. The city center of Gdynia is experiencing ongoing losses of green, while neighboring Gdańsk has lost 19 parks in the past 70 years (Zawadzka et al., 2017).

While by no means exhaustive, the paragraphs above provide a basic description on the trajectory of park evolution. Summarizing the past 130 years of park design in the United States, Cranz (1982) identifies four philosophies of design. In chronological order these are (1) the pleasure ground, (2) the reform park, (3) the recreation facility and (4) the open space

system. In a follow-up, Cranz & Boland (2004) suggest a most recent, fifth model – the sustainable park – predominantly concerned with human and ecological health. While park development in the US stems from European traditions (Clark, 1973), the Polish and Western trajectories diverge. Figure 1 below provides two timelines illustrating the general phases of park development in the Western World and Poland, along with relevant events.

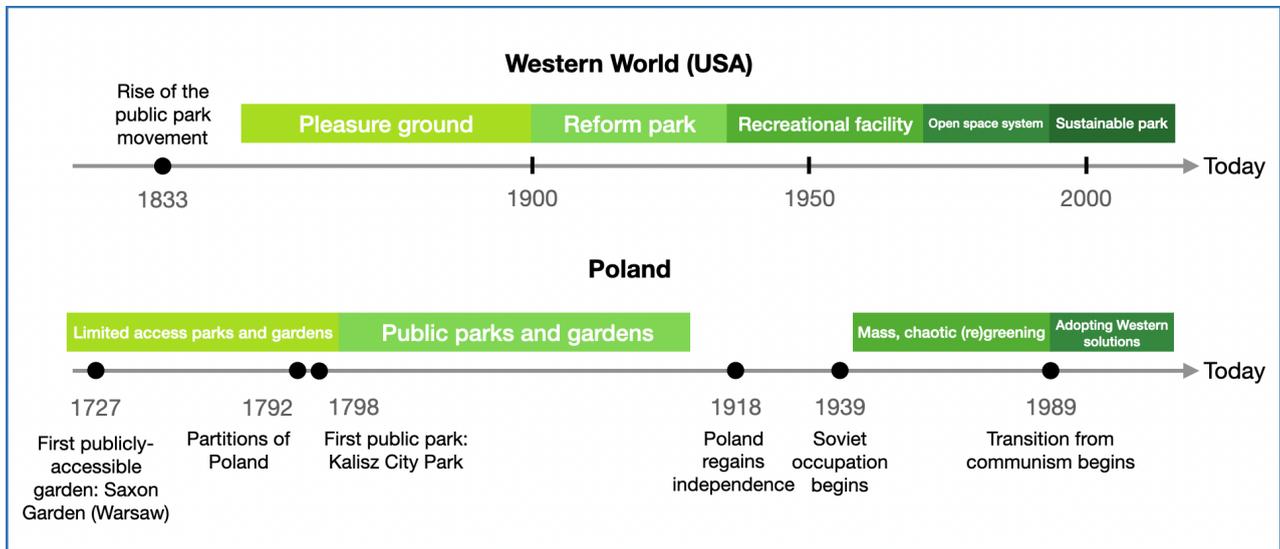


Figure 1. Dominant trends in park and green space development over time, based on Bożętka (2008), Cranz (1982), Cranz & Boland (2004) and Łupienko (2019).

3. Theoretical framework

Park discourse

The historical background has introduced some of the dominant ideas and trends that have guided park planning and provision over the past two centuries. Periods characterized by a specific trend and select park realizations themselves were accompanied by discourse on the issues faced by cities and parks' ability to alleviate them. Park discourse has evolved with the changing socio-economic and political circumstances (Loughran, 2020), and as influential voices became heard (Mullenbach, 2022).

Generally, discourse can be understood as a collection of thought patterns, perceptions, and behaviors shared across society (Scollon & Scollon, 2001). More specifically, in regard to parks, Mullenbach suggests that discourse is 'the way in which parks and green spaces are talked about, planned, and funded' (2022, p. 1). Discourse occurs at multiple levels of society (Mullenbach, 2022). It is shaped by society and individuals and, in turn, can influence their view on various topics (Hassen, 2015).

Discourse is relevant to consider in park provision as it can shape action by local officials by establishing best practices for planning, financing and building parks (Mullenbach, 2022). Therefore, understanding discourse is crucial to understanding the decisions around parks and their outcomes (Colomb, 2012).

Park

What then is a contemporary park? Formally, in Polish law, there exist at least three definitions which apply to parks: a part of urban greenery following the 2004 Nature Protection Act; a civil engineering object per the Classification on Buildings; or a leisure and recreation area under the Classification of Land and Buildings (Olbińska, 2018). A fourth definition used by Statistics Poland is most restrictive, seeing a park as a green space of minimum 2 hectares; featuring a combination of tall and short plants, and park infrastructure (benches, paths, playgrounds, etc.); meant for recreational purposes (n.d.).¹

This study does not attempt to define a park. Instead, it acknowledges that park provision and maintenance is entrusted to local government (Municipal Government Act, 1990) and allows the officials to voice their perception.

¹ See Appendix B for the full definition of a strolling-recreational park used for official statistical purposes. Despite the 'strolling-recreational' modifier, it is the only park form recognized by Statistics Poland outside of a national or landscape park.

Park perception

Perception is a complex term, scarcely defined in research despite its frequent use (McDonald, 2012). For a temporary, working definition, the three defining characteristics of perception suggested in McDonald's (2012) review are employed. 'Perception is: (1) the way an individual or group views a phenomenon, (2) involving some stimulus and (3) incorporating prior experience and memories in the process of understanding' (McDonald, 2012, p. 14). Plous (1993) expands upon the effects of experience and memories suggesting they form a context for perception, contributing towards personal biases and expectations which may alter the interpretation of the environment. Nevertheless, both McDonald (2012) and Plous (1993) explain that perception further informs individual decision-making and action.

Theories of perception may differ in their epistemological and ontological underpinning. Realist perspectives largely assume that objects in the world are independent of their perceived essence (Olaere & Adedokun, 2021). Conversely, idealist and phenomenalist approaches assert that objects are formed by a collection of constructs apprehended through perceptual processes. The idealist's world is largely mental and cannot exist without a subject's idea of perception on the objects (Lyons, 2017).

In spatial research, at least two approaches exist in the study of the perception of the world: the landscape perception and environmental perception approach, which nevertheless share some common characteristics. The former sees perception as the function of the interaction of humans and the landscape, an interaction that shapes both the human and the landscape. The human component encapsulates past experiences, knowledge, expectations and the socio-cultural context within which individuals and groups operate, while the landscape aspect is concerned with the individual elements of a landscape and groups thereof. Examples of this interaction include the landscape acting as a stimuli for humans or humans imposing their values and ideas on the landscape leading to tangible or intangible changes in its components (Zube et al., 1982).

The latter – environmental perception approach – views perception as a transaction between a person and the environment. Following the approach, the environment provides places for exploration, sensory experience, and opportunities for interaction. Reading the environment is sensitive to socio-spatial contexts, individual experiences and value orientations (Zube, 1999). Within this framework, urban perception is a case of environmental perception, where geographers have extended the notion of 'perception' to include cognition, affect, meaning, and valuation of the environment (Ittelson, 1978).

However, what these approaches to perception only partially touch upon is its social construction. Phenomenology – the branch of philosophy concerned with the appearance and experience of phenomena (Smith, 2018) – emphasizes that intersubjectivity is pertinent to understanding individual perception (Gallagher, 2008). Gallagher (2008) explains how previous experience in and of the world, e.g. watching a person use or refrain from using an object in a certain way, informs our perception of the world and the possibilities we see for action. We may be exposed to such learning on how to perceive directly (from acquaintances, family, etc.) or indirectly, through culture and norms. He summarizes the importance of intersubjectivity stating: 'my perception of things and instruments, but also of contexts and places, and the world as such, is significantly invested with meanings and values that derive from others' (2008, p. 176).

Nevertheless, despite this limitation, Zube (1999) suggests that society's environmental perceptions are useful in informing policy-makers, planners, and designers about public environmental concerns and values. Such has largely been the approach of scholars publishing on the topic of societal perception of parks. Their papers either explicitly or implicitly produce suggestions on which features contribute to positive park perceptions on various variables and aspects, and park use. Examples include: an article by Lapham et al. (2016) looking at the relationship between perceived park safety and use; a study by Viebranz & Fernandes-Jesus (2021) on the valuation of parks and citizens' wishes for parks; or Huang et al. (2022) investigating how online reviews of parks can further park management practices.²

However, the author argues, with support from Powers et al. (2019), that the inverse is also true – the perceptions of local planners, designers, and officials can be useful and important for society. In a scarce example, Powers et al. (2019) investigated local government officials' perceptions of the benefits delivered by parks, stating that parks must be seen as important contributors to society for their continued proliferation. Moreover, they explain that local government officials ultimately set and implement policy.

In this work, park perception is understood as a composite term formed by the combination of the physical and conceptual characteristics of parks as viewed by the officials. Physical characteristics refer to park size, facilities, and their infrastructure. Conceptual characteristics include the objectives for park creation, park benefits, and the necessity of park creation.

Conceptual model

Based on the concepts explored above, a conceptual model is presented in figure 2. Importantly, it assumes that the perception of the individual (official) is both subjective and intersubjective. While the formation of perception may start from experiencing an environmental stimulus, society and its members can precondition the perception of an individual. Moreover, individuals and groups thereof can add to and shape discourse which in turn may affect both their perceptions. Finally, the individual's perception is sensitive to personal and interpersonal factors.

Later, the perception may serve as one of the inputs in decision-making and action, leading to certain outcomes – in terms of the physical and conceptual characteristics of parks. The outcomes, by their interference into the urban fabric, shape local environments and circumstances.

² The articles referenced here, likewise, did not define the concept of 'perception' or explore its mechanisms.

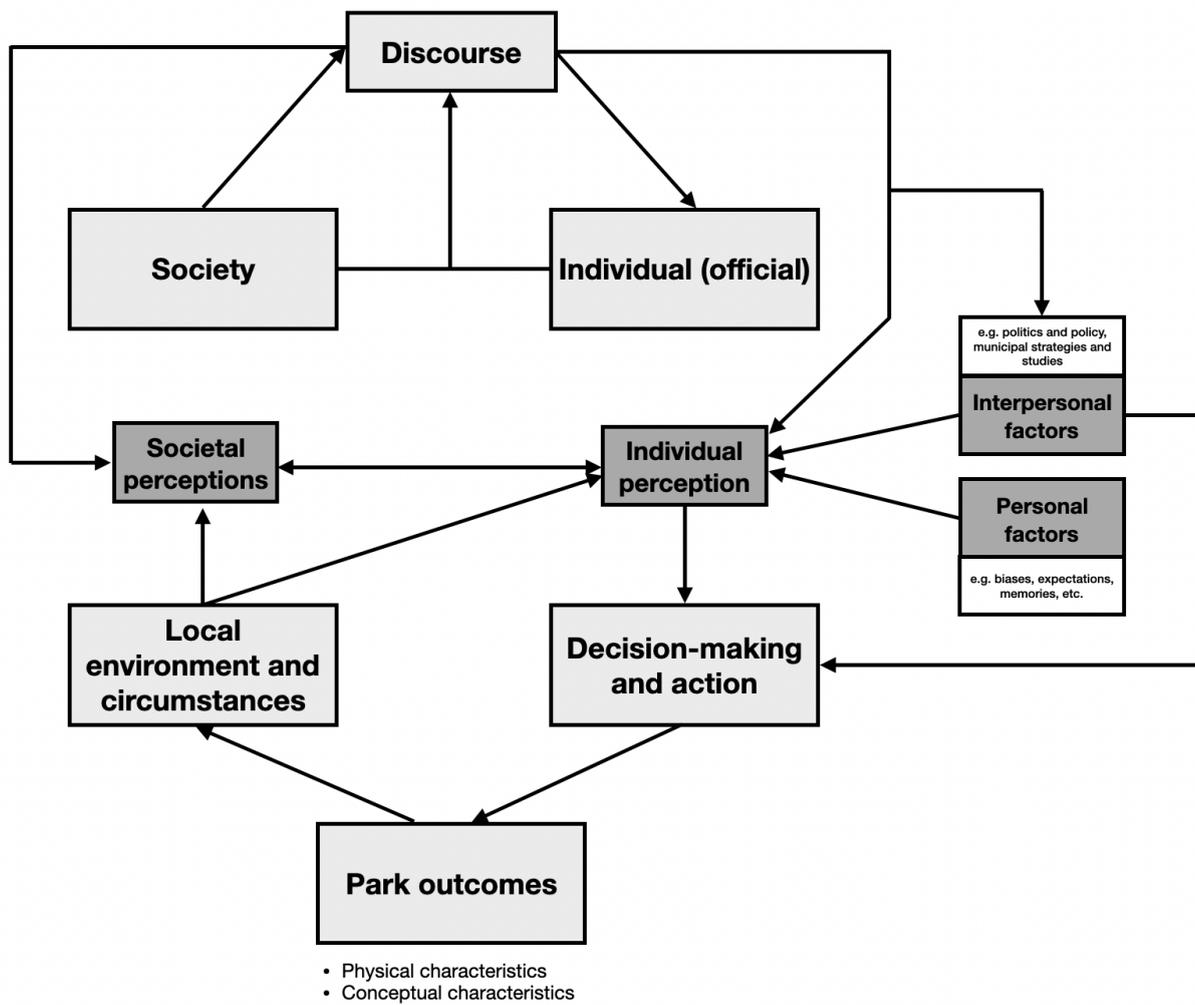


Figure 2. Conceptual model.

4. Methods

Case selection

Four cases were selected for analysis. The choice of Gdynia as the main case was primarily dictated by two reasons. First, it is a signatory of the EU Green City Accord, pledging to increase the size and quality of its green areas (Directorate-General for Environment, n.d.). Secondly, the City Hall features a specialized department – the Department of the City Gardener – holistically engaged in green areas. Its responsibilities begin with shaping the image of city greenery and include designing, managing, and issuing opinions on green areas (Halikowska, 2020). The Department includes the position of the City Gardener, which remains somewhat rare across Polish cities (Najwyższa Izba Kontroli, 2017) but is gaining popularity (Więclawska, 2019).

To ensure broader applicability of the conclusions, three additional cases were analyzed, chosen by seeking cities of similar population size representing a variety of geographical areas of Poland and spatial contexts. The final selection includes: Gdynia, Bydgoszcz, Katowice, and Szczecin.

Data collection

In seeking to answer the research question, both primary and secondary case data were collected. Primary data were gathered, whenever possible, in the form of semi-structured stakeholder interviews. Alternatively, officials were asked to provide written responses. The core of the exchanges revolved around the perception of the physical characteristics that constituted a park and the conceptual characteristics, in terms of the objectives for creation, benefits, and necessity of urban parks. A general interview guide had been created, later tailored to the specific interviewee.

Interviews were chosen as the main instrument of data collection as they allow for a detailed exploration of perceptual phenomena. The open-ended quality of the questions matched the objectives of the research involving exploring and describing the current perception of parks. Should a participant have mentioned an aspect not originally considered in the questions, the interview allowed the flexibility of probing those new ideas.

Organizations to be interviewed were identified from the Bulletin of Public Information, a unified system of public records per municipality, which maintains a registry of all bodies and their designated tasks. For a broad overview of the topic, officials from organizations representing multiple phases of parks' life-cycle were selected: the planning (incl. strategic planning), design, and maintenance of parks. After selection, written interview requests were sent out featuring an information sheet on the procedure of the study. Follow-up phone contact would be established to ensure either an interview or written response would occur. Before the interview, a consent form was sent or delivered in-person to the interviewee. In Gdynia, this resulted in exchanges with officials from four organizations. These are described in detail in the results section. For the auxiliary cases – Bydgoszcz, Katowice, and Szczecin – one exchange per each city was conducted. Initially, the objective was to interview a representative of the body creating the municipal strategy,

given the presumed broad outlook they had on the issue. However, requests would be redirected, resulting in a variety of participating bodies across the cities. Nevertheless, all bodies would have one of the four previously identified roles.

Additionally, for each city in the analysis, the municipal strategy and study of conditions and directions of spatial development (SCDSD) were collected, as a form of secondary data. The assumption was that because their creation, especially that of the strategy, required the collaboration with multiple parties and consideration of diverse aspects of municipal functioning, they would represent a comprehensive and varied view of parks.

Data analysis

Depending on the type of data, one of two methods was used in the analysis – one for the recorded interviews and written responses, another for the textual documents.

The recordings were transcribed in their original language. No additional action was required on the written responses as these resembled a transcript. The transcripts were used for creating cognitive maps, a method of graphically representing the elements of an issue (nodes) and their relations (links) as articulated by the interviewee. The process consisted of (at least) three readings of the entire conversation. First, to acquire a general understanding of the subject, later to distinguish nodes, and lastly to identify connections and add additional contextual information to the nodes. Examples of nodes included: 'Contact with nature', 'Primary ecological structure', and 'New recreational green areas'. This process was repeated for each transcript resulting in seven unique maps. As this was the author's first application of the method, the initial maps were later revised. In the process, general guidelines and suggestions by Northcott (1996) were used. Finally, results were reported by identifying dominant themes, appearing across interviews, while retaining elements which contributed to the specificity of an individual's perception.

This method of analysis was selected because cognitive mapping captures the understanding of particular phenomena at a particular moment, which should enable the research to harmonize into the historical development of parks. Moreover, it recognizes and capitalizes on the personal nature of perception by identifying nodes and links specific to the person (Pyrko & Dorfler, 2018).

A separate method was used for the strategy and spatial study documents since an explicit chain of reasoning for connecting nodes was scarcely available. These were read and relevant sections were identified. Within those sections, passages were assigned a label specifying their content. Based on the labels, the passages were organized into a thematic matrix. The results were reported from this matrix and, when relevant, passages were translated for use in text.

For an overview of the collection and analysis process, refer to figure 3 below.

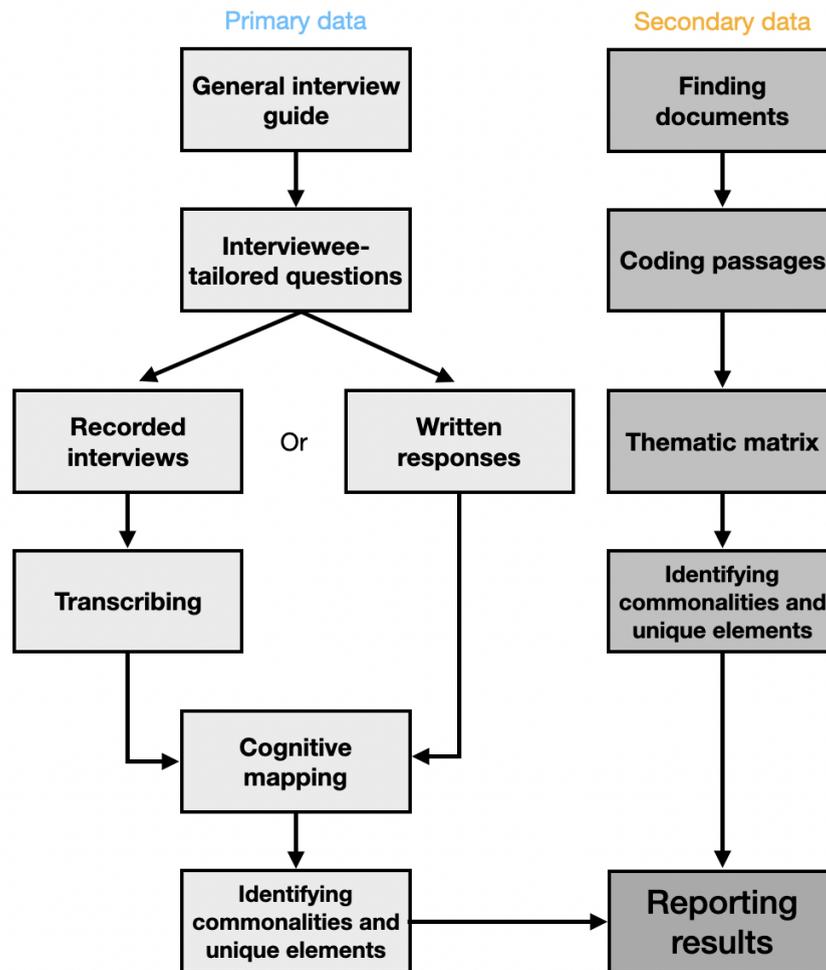


Figure 3. Diagram of the process of data collection and analysis.

Ethical considerations

Research participants were first provided with an information sheet on the procedure of the study and invited to raise concerns or questions. Later, a consent form was sent or directly presented to the persons involved. It established the rights of the participant and asked for permission to record the conversation. Moreover, it obligated the author to solely use the acquired data for non-commercial research purposes.

In conversation, the author did not inquire for personal identifiers outside of the position occupied by the participant. However, the public sector affiliation of the participants means that they may still be identified by the position they occupy. Full anonymity of the interviewees would have been possible, however, potentially relevant relationships between the position of an individual and their perception would be lost.

The interview recordings were only available to the author and they were deleted once transcripts had been produced.

Finally, the participants were informed that the results will be shared with them in the last week of June.

5. Results

The results originate from the study of four Polish cities whose locations appear in the figure below. First, the in-depth study of Gdynia is presented, consisting of a short introduction about the city and later the results. Afterwards, the results from the three auxiliary cases – Bydgoszcz, Katowice, and Szczecin – are presented.

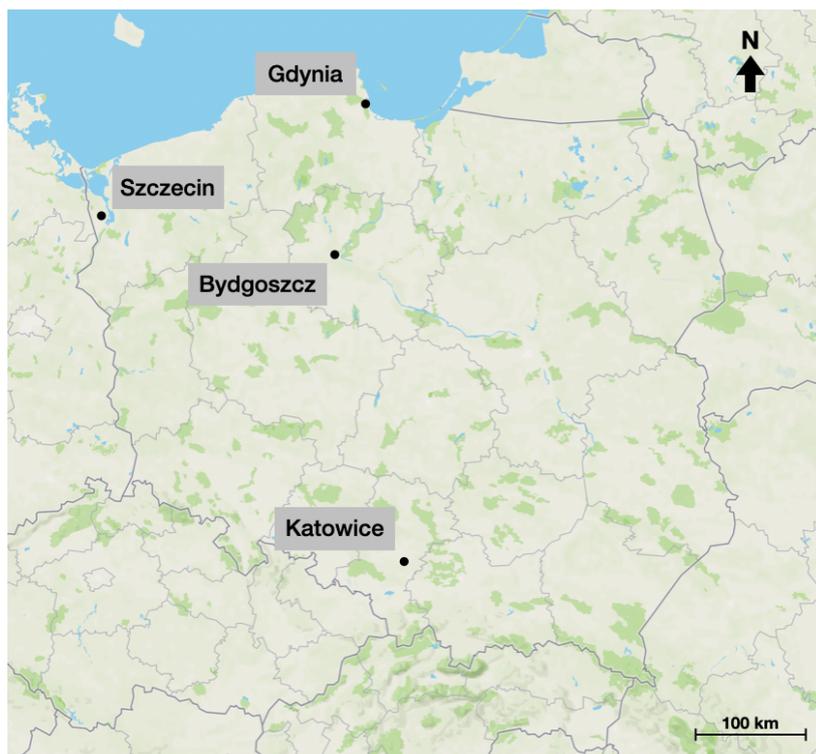


Figure 4. Location of cities under study. Basemap from Mapbox (2022) with additions by the author.

Gdynia

Gdynia was originally a small fishing village of around 1.000 inhabitants in 1920, serving as a summer resort destination (Karzyński, 2015). It was sandwiched between the Gdańsk Bay to the east, part of the Baltic sea, and hilly moraines to the west, mostly lying on flat alluvial valley floors (Pacuk et al., 2016). In 1922, Gdynia was ordained by the Polish government to become the site of a major Baltic seaport connecting Poland to the world. A year later, the first ship docked at the new pier, but it was in 1926 that Gdynia was granted city rights. By that time, the settlement had grown to 12.000 inhabitants. The rapid development of the port, requiring an influx of workers and living quarters, led to prompt city expansion. Plans had originally envisioned a city of 100.000. However, by 1939 it grew to 127.000 inhabitants (Karzyński, 2015).

Currently, the city has 245.000 inhabitants and forms part of a larger metropolitan region – the Tricity (Bojarska et al., 2021). It occupies an area of 391 km², the majority of

which is contained within the waters of the Gdańsk Bay (Kozłowski, 2022). Gdynia positions itself as a socially conscientious city, driven by the concept of sustainability, with a rich and unique natural landscape (Wydział Strategii, 2017).

Around 62 km² of Gdynia are occupied by forests, many of which fall under some form of legal protection, e.g. a landscape park, nature reserve, or ecological area (see Figure 4). In total, protected landscapes cover 43 km² (Bojarska et al., 2021). Regarding managed greenery, the most expansive form is street greenery covering an area of 146 hectares; followed by seven parks accounting for 39.4 hectares; and 80 lawns occupying 24.4 hectares (GUS, 2021).

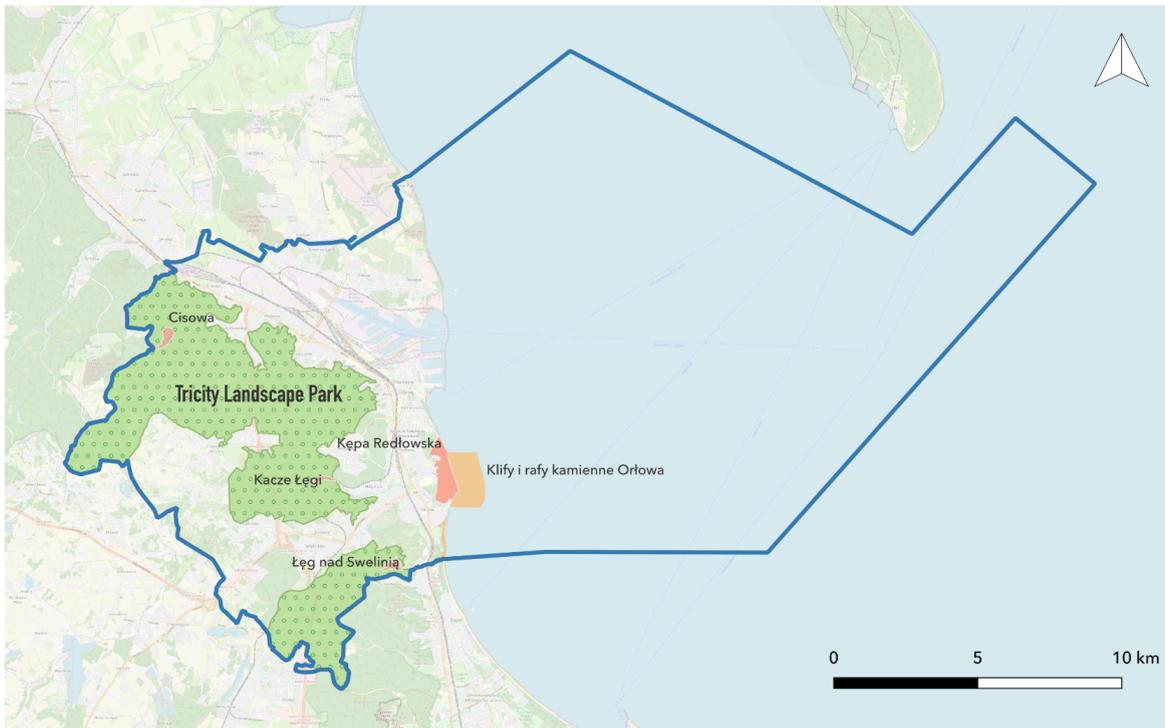


Figure 4. Protected nature areas in Gdynia (blue border): dotted green - landscape park, pink - nature reserves, orange - Natura 2000 area. Based on data from the GUGIK and GDOŚ, with an OpenStreetMap basemap.

The results from Gdynia are presented on the basis of three interviews, one written response, and the analysis of the municipal strategy and study of conditions and directions for spatial development (SCDSD). For a characterization of the participants, refer to table 1 below.

Table 1. Characterization of research participants from Gdynia.

Participant	Position	Organization	Core tasks of the organization	Participant appears in text as
Interviewee #1	Deputy Head	Department of the City Gardener of the City Hall of Gdynia	<ul style="list-style-type: none"> - design and early maintenance of green spaces - issuing formal opinions on green space plans - issuing decisions on tree removal - managing municipal forests - issuing opinions, designing or commissioning designs for Civic Budget (BO) projects 	CG
Interviewee #2	Head of Environmental Affairs	Spatial Planning Bureau of Gdynia	<ul style="list-style-type: none"> - creating the study of conditions and directions for spatial development - creating local zoning plans - carrying out ecophysiological studies and forecasting the environmental effects of developments 	SP
Interviewee #3	Head of the Department	Department of Strategy of the City Hall of Gdynia	<ul style="list-style-type: none"> - collecting and publishing municipal statistics - creating, implementing, and overseeing the municipal strategy - planning long-term (strategic) projects 	DS
Respondent #1	Spokesperson	Municipal Roads and Green Spaces Authority (ZDiZ)	<ul style="list-style-type: none"> - maintaining short and tall greenery - maintaining elements of small architecture and infrastructure (benches, playgrounds, gyms, etc.) - replenishing or replacing plantings - verifying and realizing Civic Budget (BO) projects 	RG

Regarding the physical nature of parks, participants were divided. Two defined parks directly quoting the formal definition used by Statistics Poland, while two displayed a looser perception of a space with no minimum size requirements, located close to residential areas, and serving as a place of nearest recreation. However, all participants proposed that a park is composed of a combination of green areas, infrastructure, and amenities. The adherence to Statistics Poland definition of parks by the SP and RG (see table 1) meant they saw trees as a prerequisite for parks. While the CG and DS did not view tall greenery (trees) as a requirement, both would indicate the perceived quality added by their presence.

The technical nature of the Planning Bureau's work meant their representative recognized the greatest number of distinct forms of green space. Nevertheless, three participants perceived a distinction between parks and other forms, such as forests, explaining their distinct functions and the quality of responding to different demographics. The reported greater accessibility of parks as opposed to forests was stated to explain parks' wider target and actual demographic, including senior citizens, disabled persons, and parents with strollers; and argue for the necessity of both forms of greenery. Referred to as 'universal design' by the CG, this accessibility for all was suggested as a crucial feature of parks by the CG and DS.

The objectives of park provision were largely similar across participants; the SP would claim 'Everyone strives for the same objectives', proceeding to mention the protection of biodiversity, water retention, and universal design. While generally accurate, additional objectives appeared sensitive to the tasks of the organization the participant was affiliated with. For example, the representative of the Roads and Green Spaces Authority would mention the provision of infrastructure for citizens as an objective and the SP named the creation of wildlife paths, given the environmental focus of his work. The most frequently cited objectives were ecological, including the protection of flora and fauna; environmental, striving for the retention of rainwater; and social – providing places of recreation and relaxation in the pursuit of quality of life. The DS claimed that after the city 'reduced infrastructure deficits, citizens began expecting something more'. This more would be quality of life which the DS viewed as partially deliverable through park provision. Generally, the

overarching objectives appeared to be improving quality of life and protecting the environment, while utilizing its assets for societal benefit.

The perceived benefits of parks predominantly followed from the previously reported objectives for park creation. The CG and RG voiced a nearly identical opinion that parks primarily deliver ecological and social benefits – the latter exemplified by the provision of places of recreation. The perception of the DS, while largely similar, placed greatest importance on social (recreational) benefits. Additional benefits proposed by the CG, RG, and DS was parks' capacity to educate, all of whom would explain it differently. The CG, drawing on recent work by the Department, provided the example of plant labels featured in pocket parks. The RG suggested this is through the observation of organisms' lifecycles; while the DS provided anecdotal evidence of park visits encouraging the study of tree species and plant identification. Social benefits, outside of recreation, did not appear relevant; none of the participants mentioned opportunities for meeting or socialization. Another group of recognized benefits were environmental, with a heavier focus on climate and weather conditions than ecological benefits. Three participants mentioned viewing parks as contributing to urban microclimate regulation and rainwater management. Finally, the participants thought parks increased aesthetics of the city, while the DS suggested they may introduce spatial order.

All participants viewed parks as a necessary element of the city, with all but the SP explicitly suggesting humans' need for contact with nature. Likewise, the SCDS recognizes green areas as necessary for maintaining appropriate living standards, improving health, and climate change adaptation. Confronted with Statistics Poland's data on park coverage across cities, placing Gdynia last among 26 Polish cities, the SP would state 'You cannot solely focus on cultivated green areas', continuing to explain that while necessary, parks exist alongside other forms of green space.

Regarding the surroundings of the city – its proximity to sea and forest – all interviewees showed some consideration of this context. The SP was most advanced in these considerations, explaining how the existing ecological structure was critical in the planning and zoning of new green areas; the 'primary ecological structure' framed and provided places which he viewed as logical for the continuation and preservation of green areas. Ideally, the SP would like to see green recreational areas located within 300 to 500 meters away from places of residence. However, he thought the location of parks is rather incidental – at the conceptual and geographical intersection of factors such as land ownership, land parceling, and the ecological structure. The DS explained how she viewed the natural environment as a potential and barrier of the city, and contributed to what she termed the 'Gdynia paradox' – despite a 45 % forest coverage, there remain areas of little green in the northern and north-western districts of the city. The CG, SP and DS shared a common view that adjacent forests modified the requirement for the area and character of parks necessary in the city. Where forests are closer and more accessible, they suggested less park area is required and the desired character shifts towards a space accessible to all (by virtue of its paths), and provides small architecture and infrastructure – elements which they typically did not associate with forests. At a larger scale, the CG explained the structure of a neighborhood, and its surroundings mediated her view of the necessity for parks. Areas dominated by multi-storey housing raised the perceived necessity of green spaces, while neighborhoods predominantly composed of single-family homes required less municipal green, given their private gardens. Finally, the CG pointed towards the relational aspect of the spatial context, indicating how the relatively proximate Central Park and Kamienna Góra Park were designed guided by the assumption of the complementarity of their functions. Put

differently, because of their proximity, the CG thought they should host different functions or enable diverse activities.

Auxiliary cases: Bydgoszcz, Katowice, and Szczecin

For each city in this group, one interview with a relevant official or group of officials was conducted and the municipal strategy and SCDS were analyzed. For an overview of the interviewees, refer to table 2 below.

Table 2. Characterization of interviewees across the auxiliary cases. Interviewees 4-6 appear in a single row, as this was a group interview.

Participant	Position	Organization	Core tasks of the organization	Participant appears in text as
Interviewee #4	Deputy Head	Department of Greenery and Municipal Services of the City Hall of Bydgoszcz	- maintaining sanitary and technical conditions of city infrastructure	DG
Interviewee #5	Head of the Office of Greenery		- handling matters related to greenery and graveyards	
Interviewee #6	Inspector at the Office of Nature Protection		- handling matters related to forestry and agriculture - undertaking nature protection - creating housing policy and managing communal housing resources	
Interviewee #7	Head City Gardener	Department of Environmental Protection of the City Hall of Szczecin	- protecting the environment and nature - protecting and developing greenery and tree plantings - issuing environmental decisions and permits - handling matters of forestry, agriculture, fishing, and hunting	DE
Interviewee #8	Deputy Head	Municipal Green Space Authority in Katowice (ZZM)	- maintaining greenery in parks, squares, playgrounds, etc. - maintaining elements of small infrastructure and architecture - replenishing and maintaining plantings - verifying and realizing Civic Budget (BO) projects	MG

Interviewees were in agreement of a park being a relatively large area of green space. Suggestions as to its minimum extent varied from 0.5 to 2 hectares. Parks were reported to be distinct from other forms of green space, where the primary difference was thought to be their spatial extent. Smaller establishments were seen as squares or lawns. The official from Katowice suggested that parks' larger area allowed for more diverse functionality, as opposed to squares or lawns. Szczecin's DE would additionally propose the presence of trees as parks' critical characteristic.

The predominant concern for the delivery of parks across interviewees was improving citizens' quality of life (QoL). Other than QoL, there was great variety in the responses. Interviewees from Bydgoszcz largely presented objectives that concerned improving the quality of the environment and peoples' awareness of the environment. These were to be achieved by introducing beehives, bird and bat boxes; allowing nature to take its course (leaving fallen trees and unmowed fragments); and educating people through signs and routes. In Katowice, citizen postulates were reported to signify the need for proximate greenery, driving park creation. Moreover, select parks were meant to remediate post-industrial sites. In Szczecin, multiple environmental objectives were mentioned, including: maintaining urban ventilation and reducing the heat island effect. Additional objectives were the provision of recreational space and the protection of nature as the byproduct of parks' somewhat natural character.

Regarding park benefits, the DE thought 'many are directly translated from the objectives', such as city ventilation or recreation. However, additional examples by the DE exceeded the scope of the objectives, e.g. raising nearby property values, attracting

students and investors to the city, and encouraging economic activity. Passive and active recreation were reported as major benefits across interviewees. Likewise, environmental benefits were mentioned in all interviews, but their nature was different in each case. Officials from Bydgoszcz thought parks preserved natural ventilation and limited the heat island effect; in Katowice, parks capacity for water management was suggested; while in Szczecin, parks were thought to contribute to city ventilation and lower transport emissions (demands). Ecological benefits did not appear crucial; only the DG mentioned them as a possible secondary effect of parks. The DG and MG also suggested aesthetic and emotive benefits associated with the appreciation of the space. Finally, the MG was the sole interviewee to perceive parks' potential for socialization.

Parks were viewed as a necessary element of the city by all, minimally, owing to the numerous benefits they thought parks provided. Additionally, the DE and MG pointed to the perceived necessity of human contact with nature, suggesting its lack is detrimental to our functioning. Perhaps the statement by the DE summarizes this perceived necessity best: 'Parks are necessary to make a city liveable [...] wlthout them, the quality of life would be terrible'.

Finally, in regard to other forms of greenery, the DE and MG viewed (semi-)natural and designed forms of green space as complimentary. Parks and forests were explained to enable different forms of activity and host varying degrees of infrastructure. Thus they viewed parks as, nevertheless, necessary, particularly in densely occupied neighborhoods. However, the MG suggested that in neighborhoods with nearby forests, a lack of parks is less strongly experienced, indicating a degree of substitution of the greenery in the MG's perception. Interviewees from Bydgoszcz vastly differed in their perception; the ecological structure was not viewed as a replacement for parks, explaining that: 'For the majority of civilized people, the park constitutes their wild nature'.

6. Discussion

Given the (inter)subjective nature of perception, perhaps it is not unusual that officials differed in their views. Nevertheless, the analysis of their perception of parks and the according municipal strategies and SCDSs revealed a recognition of most, if not all, possible benefits of parks, previously identified by scholars. However, when solely considering the interviews with officials, economic benefits and social benefits, outside of recreation, appeared considerably less often than, for example, environmental benefits. Bożętka (2008), writing on the development of green spaces in Polish cities, claimed that the 2000s saw rising awareness of parks' economic potential among local governments. Should this have been and continue to be accurate, it does not or no longer appears to transfer into the views of those planning, designing, and maintaining parks – one of nine participants mentioned any form of perceived economic benefits of parks. The investigation by Powers et al. (2019), though in the US, produced similar results, finding that officials do not fully recognize and utilize the economic benefits of parks.

The perception of parks across the cities appeared to largely follow (somewhat) contemporary approaches to green space provision. An example of this can be seen in relation to one of the critical characteristics of the sustainable park identified by Cranz & Boland (2004) – its consideration for forming corridors and integrating into a larger urban system. Mentions of the importance of a more generic, networked approach to green space were displayed by Gdynia's SP, Szczecin's DE, and all but one municipal SCDS. While the specific rationale for network approaches may be new(er), the design of elements intended to connect green areas is not. Green corridors and green belts have a much longer history dating back to, at least, sixteenth century boulevards and promenades, which later gave rise to greenways and parkways. These linear forms of green space connected and expanded upon existing green areas and open landscapes but were primarily planned for transportation purposes (Podbięłowska, 2018). More recent applications of system approaches to green space have shifted the focus from transportation to socio-ecological concerns. Urban corridors, connecting fragmented green spaces, are found to provide greater opportunities for wildlife movement, dispersion, and genetic diversity (Aziz & Rasidi, 2014). Urban green infrastructure champions indicate the greater potential contributions to climate adaptation, biodiversity conservation, and recreation that such interconnected networks of blue and green spaces can provide over traditional gray infrastructure (Pauleit et al., 2019). Finally, from a social perspective, park networks may deliver greater facility diversity to communities (Torabi et al., 2020). Gdynia's SP highlighted the ecological contributions that such a system could make and his day-to-day involvement in their planning. However, outside of this singular interview, the officials' view on creating green systems and their potentials was rather basic, if at all present apart from statements of their perceived importance. A unique perspective among the interviewees was offered by Gdynia's CG who suggested that the conscious design of proximate parks, to include distinct functions and amenities, may provide added benefits over the baseline functionality of individual parks.

The objectives of park provision reported by the interviewees largely followed the sustainable park's concern for human health. Interviewees suggested that parks may benefit citizens through delivering places for active recreation, and provided avenues for contact

with nature which they thought was necessary. Its lack was argued to be detrimental to psychological health. A review by Hurley & Walker supports this proposition, finding ‘a significant body of evidence of the human need for nature’ (2019, p. 14). Furthermore, the importance of this connection may exceed human health. Lev et al. (2020) find that urban parks with fragments of wilderness in them can build enduring human-nature connections and shape concerns for the environment.

Conversely, ecological health, a second core objective of the sustainable park, did not appear to be as highly prioritized by the interviewees. Some notable exceptions were mentioned; the DG noted enriching park environments by introducing bird and bat boxes; beehives and wildflower meadow; or leaving grassy patches unmowed. Nevertheless, these interventions were uncommon among the interviewees. In hindsight, participants thought parks delivered ecological benefits as a by-product of maintaining the semi-natural character of a park. However, these were not the result of explicit, predefined objectives.

Ultimately, perhaps Bożętka (2008) was correct in suggesting that post 1989, Polish local governments have been adapting solutions seen in other Western nations. However, her analysis did not specify the exact nature of these adapted solutions. Nevertheless, there appears to be considerable overlap in the results of this study and literature on the phases in park development; particularly, in regard to the sustainable park proposed by Cranz & Boland (2004). Examples of the sustainable park have been observed in the US as early as the 1980s. Since then, a considerable amount of time has elapsed – time for the development and implementation of newer solutions. However, as Bożętka (2008) writes, there has been substantial delay in the implementation of green space solutions in Poland due to the specifics of the war and post-war period of the twentieth century. This may explain why the observed perceptions of parks among officials today largely resemble the image of a sustainable park.

Limitations

First, due to time and resource constraints, only Gdynia was studied in an in-depth manner – through multiple interviews and document analysis. The remaining cases featured identical data sources, however, only one interview was conducted per case. Thus, while the two sets of results remain comparable given the identical methods used, a wider view of perceptions would have been possible given more participating parties.

Secondly, the focus was on one type of local government official – the appointed official. Elected officials were left out of the study. However, elected officials and their perceptions are nonetheless important, and have been shown to differ from those of appointed officials (Powers et al., 2019). As indicated by an interviewee, after the SCDS and local plans have been produced, elected officials must decide whether a park is desirable at a given location and feasible, considering budget constraints. Therefore, the emphasis on the elected official may reveal perceptions which remain more actionably relevant to the form and function of the park, rather than its perceived necessity.

Finally, while perception is suggested to be the input for decision-making and action, its importance remains only theoretically established. The author can make no claims on the degree to which they are translated into park projects.

Avenues for future research

Extending upon the last identified limitation, future research could consider to what extent the perceptions have an impact on park outcomes. Specific investigations could, for example, explore if officials propose innovative solutions or approaches to green space provision, and whether the institutional frameworks in place create opportunities for their implementation.

Furthermore, competing voices in contemporary park discourse indicate that parks, while offering services, may also produce disservices for communities, including gentrification and urban environmental injustices through the differential impacts of park (re)development (Mullenbach, 2022). While this work focused on the possible benefits of parks, it might prove prudent to investigate to what extent the disservices and mitigating strategies are considered in local park planning and design.

7. Conclusion

Currently, parks are viewed as green spaces, ideally with a mixture of trees and shrubs, of variable size with a primarily recreational function. Their critical defining characteristic appears to be their spatial extent – with suggestions of their minimum area ranging from several hundred to several thousand square meters. Through their nature, amenities and infrastructure, parks are thought to deliver a host of other environmental, ecological and social benefits. Parks are seen as largely complementary to other forms of green space, each responding to a different demographic and hosting different functions. However, when residential areas are located proximate to nature, parks may be seen as less necessary.

The officials' perceptions rarely strayed from benefits that have been previously established in academic discourse. The characteristics of parks perceived by the participants largely coincided with park typologies observed in the US as early as the 1980s. Examples of newer systems approaches to the planning and provision of green space do appear, but their consideration appears to be largely limited to the ecological benefits of such solutions and occurs predominantly among planners and planning departments responsible for producing spatial studies and zoning plans.

However, the search for modern alternatives to the cost-prohibitive, maintenance-heavy, designed parks continues and is delivering promising results on the performance of informal green spaces (IGS). A number of IGS in Warsaw, understood as disused, unmaintained sites where natural plant succession is allowed to occur, were shown to deliver a similar degree and range of services to society with little to no financial input. Thus, the intentional abandonment and protection of IGS may constitute a legitimate means of meeting the needs of society (Sikorski et al., 2021). While these may not be appropriate for all locations and demographics, their incorporation into local government considerations would provide an additional approach in the provision of urban green space and its associated benefits. In fact, we may already be seeing rising informality in the provision of green spaces. Select examples are available of officials assuming a more hands-off approach – leaving fallen trees and unmowed grass as a habitat for wildlife and a means of educating citizens on ecology. Ultimately, perhaps the resources spent on the provision and maintenance of parks may be better spent elsewhere in realizing the public tasks granted to the municipality.

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Appendix A: General interview guide

The general interview guide is presented in table 4 below. Note that before each interview the questions were tailored to the specific interviewee, considering the position they held and their responsibilities in the organization.

Table 3. General interview guide.

Construct	Core questions	Example probing questions
Physical (tangible) characteristics of parks	How do you understand the term 'park'? / What is a park?	Does a park have a minimum area?
	What, if anything, differentiates a park from other forms of managed green spaces?	Does a park have to feature certain types of vegetation?
Objectives of park creation	What are the objectives of park creation / provision?	So would you say a park is able to remediate the environment?
Benefits of parks	What are the benefits that a park delivers?	Could you tell me what you understand by the term 'recreation'?
Necessity of parks	Are parks necessary in the city?	For what reason?
Spatial and functional relations of parks and other blue-green areas	Does the presence of forests modify your perceived necessity for parks in the city?	Why or why not? In what way?
	Does the presence of bodies of water modify the perceived necessity of parks in the city?	Does this vary depending on the district or neighborhood you would consider?
	Does the presence of the aforementioned features alter the objectives that a park should meet?	Are parks and other forms of managed or unmanaged green complementary in terms of their function?
	Does the presence of the aforementioned features alter the benefits that a park should deliver?	

Appendix B: Definition of the strolling-recreational park

'Green area with high and low growing plants, at least 2 ha in size, maintained for the recreational needs of the population, featuring roads, walkways, benches, playgrounds etc. The area of park includes water areas (e.g. ponds) as well. The area of park includes water sports areas, open swimming areas, sports fields, playgrounds, etc., provided they are generally accessible.' (Statistics Poland, n.d.).

Appendix C: Park typologies

The table below offers additional details on the park typologies after Cranz (1982) and Cranz & Boland (2004) which have appeared in the historical background of this work.

Table 4. Chosen characteristics of the park typologies, after Cranz (1982) and Cranz & Boland (2004).

	Pleasure Ground	Reform Park	Recreation Facility	Open Space System	Sustainable park
Period	1850-1900	1900-1930	1930-1965	1965-1990	1990-?
Objectives	public health; social reform	social reform; playspace for children; social integration	recreation	city revitalization; citizen participation	human health; ecological health
Spatial extent	very large	small, within city blocks	small to medium	varied, often at irregular sites	varied, with concern for corridors
Elements	forest and meadow patches, ponds, curving paths, flower beds	straight paths, playgrounds, swimming pools, playfields	asphalt or grass playfields, straight paths,	short and tall greenery, curving and straight paths, water features, diverse play equipment	native plants, permeable surfaces, green infrastructure,
Promoters	health reformers, persons invested in real estate	social reformers, social and recreation workers	politicians, bureaucrats, planners	politicians, environmentalists, creatives	environmentalists, local communities, volunteer groups, landscape architects

Appendix D: Summary of the coded data

Table 4 below hosts the summary of the data from the municipal strategy and study of conditions and directions for spatial development of each city in the analysis. Only fragments of the documents directly relating to parks or green recreational areas were used in the creation of the table. The language and phrasing of the summary is not representative of the documents. They were unified across the documents and cases for ease of analysis.

Table 5. Summary of the coded data from the municipal strategies and SCDSs of the cities considered in the study.

	Gdynia	Katowice	Bydgoszcz	Szczecin
Objectives of park creation	<ul style="list-style-type: none"> improving quality of life providing pleasant public space in districts providing recreation for citizens and tourists encouraging the creation of local service centers securing a minimum share of green areas for residential developments climate adaptation 	<ul style="list-style-type: none"> improving quality of life creating lively meeting, recreation and event spaces creating and maintaining spatially continuous ecological systems increasing the coverage of green areas to 20-32 m²/inhabitant 	<ul style="list-style-type: none"> improving quality of life revitalizing city areas developing the population creating a safe environment creating a spatially continuous ecological system increasing the area of biologically active surfaces 	<ul style="list-style-type: none"> improving quality of life revitalizing and developing city areas raising city attractiveness for residents, tourists, creators, scientists and culture realizing "Szczecin Floating Garden" vision increasing city resilience sustainability / continuity (ensuring that nature is passed onto future generations)
Benefits* of parks	<ul style="list-style-type: none"> social^{d, e} economic^{a, b, c} environmental^l aesthetic recreational human healthⁱ 	<ul style="list-style-type: none"> environmental ecological^{j, k} aesthetic recreational human healthⁱ 	<ul style="list-style-type: none"> economic environmental^l ecological^{j, k} aesthetic recreational human healthⁱ 	<ul style="list-style-type: none"> social^b economic^{a, b, c} environmental^l ecological aesthetic spatial^g
Necessity of parks and park creation	<ul style="list-style-type: none"> necessary given citizen postulates and the need to provide appropriate living standards 	n/a (implied given the wealth of reported objectives and benefits)	n/a (implied given the wealth of reported objectives and benefits)	<ul style="list-style-type: none"> necessary to provide adequate quality living environments in residential neighborhoods
Spatio-functional relations between parks and blue-green areas	<ul style="list-style-type: none"> proximate sea and forests yields attractive areas for the development of recreation at the city-sea and city-forest border 	<ul style="list-style-type: none"> forests, waterways, and their surroundings yield opportunities for the creation of an ecological system (incl. parks) 	<ul style="list-style-type: none"> forests and bodies of water yield opportunities for the integration of an ecological system 	<ul style="list-style-type: none"> forests and bodies of water yield opportunities for the integration of an ecological system and the provision of attractive parks and gardens
*Nature of the benefits	developing tourism - a revitalizing and developing areas - b increasing competitive potential - c building place identity - d providing places for meeting and socializing - e promoting active and healthy lifestyles - f		introducing spatial order - g reducing transport demands - h mitigating climate change - i protecting and preserving nature - j increasing the area of biologically active surfaces - k managing water through blue-green infrastructure - l	