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The Role of Public Visual Art in Urban Space Recognition

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1. Introduction

People in a modern city are like rats in a maze¹. They need a tool of space recognition to get acquainted with the environment they have been forced to live in. Historically towns owed their uniqueness to deep roots in local tradition. The central market square constituted the heart of the town. A magic circle of the ramparts and the moat determined a safe and familiar existence space, which the inhabitants could easily recognize and flawlessly identify with. It was the legible street network, connected by the nodes of squares, marking out formally important places, that facilitated the 'wayfinding' (Lynch, 1960) in urban maze. Compact, hierarchical sky-line of the town, dominated by domes of churches and a town-hall tower, constituted a characteristic visual code of urban space². Since the time of Industrial Revolution, cities used to give their inhabitants a sense of security and an opportunity of spatial orientation thanks to their small size and ordered grid layout within a limited area.

Along with spatial expansion of 19th- and 20th-century cities, consequent development of their suburbs and mixture of forms, functions and architectural styles, a **chaos** crept into cities, defined by S. Chermayeff and Ch. Alexander as "modern space salad". Modernism, introducing globally unified architectural patterns and inhuman scale urban structures, rejecting traditional harmony and hierarchy, contributed to the sense of disaffection and alienation in a big city. Simultaneously though, the same modern trends started off the revolution in visual arts. Artists' abandoning lounges for the sake of the streets, freedom of artistic voice and expression of form, inspired a number of research on the processes of artwork perception as well as its social and even political role in the public space (Kwon, 2002). The paper deals with the theories on urban space recognition and the role of public art in raising the 'imageability' of urban enclosures as well as their cultural quality and social attractiveness. The author presents the **methodology of visual art location in urban public places** on example of Poznan city.

¹ The E.C. Tolman's experiments on the behavior of rats in mazes, performed in the 1940s, proved that both man and animals create a tentative, mental map to recognize and learn environmental relationships.

² The best known historical spatial form records are the waterside panoramas of numerous cities found in the landscape paintings of the 18th century (e.g. the landscape of Venice, Verona, London and Warsaw painted by Bernardo Bellotto, Canaletto).

2. Urban space recognition

The ground-breaking Edward Chace Tolman's discovery of the process of constructing and accumulating spatial knowledge, casted a new light on the perception of urban space and laid a groundwork for mental maps construction as a tool of urban structure recognition. The mental mapping method also allowed to discover what kind of attention people paid to particular places and what role artworks played in recognition and identification of urban space.

2.1 Perception of physical space and urban structure recognition

Visual space perception is a psychological cognitive process consisting in mental copying objects and events of the outer world in relation to the processes which take place in human body. The process of perception was a subject of interest for researchers in a variety of fields: psychology (Gibson, 1950; Tomaszewski, 1986; Bańka, 1999), especially behavioural and environmental psychology represented by H.M. Proshansky, T. O'Hanlon, W.H. Ittelson, L.G. Rivlin. (1977) and others, who analysed the use of behavioural maps; anthropology and sociology (Hall, 1966; Sommer, 1967; Lawson, 2001) as well as geography (Wood, 1992), urban environment research and town planning, developed by K. Lynch (1960), O. Simonds (1961), G. Cullen (1961), D. Appleyard & J.R. Meyer (1964), Ch. Alexander (1977), A. Rapoport (1977), N.L. Prak (1977), Y.F. Tuan (1977), Ch. Norberg-Schulz (1971) and many others. Some of the fields of research interest were also the visual perception of art (Arnheim, 1954; Miles et al. 1989) and media in urban space (McLuhan, 1964; McCullough, 2004). The *Gestalt* theory³ has given rise to the **holistic perception** of the space concept which consists in perceiving visual components as organized patterns or wholes, instead of many different parts.

Mental identification is the link between space perception and constructing spatial knowledge. The main achievement has been the discovery of the **cognitive scheme** which controls the processes of perception, recognition and memorisation of physical space. As a result of these processes, a human mind creates an image of the space called a **cognitive map**, making it possible to transform and interpret the data. The selection and interpretation of the perceived information is performed by cultural and personal filters (Rapoport, 1977) and referred to established **cultural patterns** (Alexander et al, 1977).

Along with examining the perception processes, scientists analysed a **spatial code of the city** and **urban structure organisation** which determine orientation and identification of the space. Many of Polish urban and landscape planners, such as J. Bogdanowski, W. Czarnecki or K. Wejchert conducted research on urban space perception as well as townscape and landscape composition, however, their achievements went unnoticed due to the Iron Curtain. Already in 1950s **Władysław Czarnecki** analysed the factors influencing landscape composition, which were also seen from the point of an observer in motion e.g. optical illusion, colour, foreground and background, dominants, rhythm, contrast, frames of vantage points, leading lines, dividing and closing surfaces, nodal points, solids, etc. His observations seem to be similar to later Lynch's conclusions (Böhm, 2004, pp. 41).

Kevin Lynch in his famous book *The Image of the City*, published in 1960, introduced the **mental map** term into town planning as a method of **spatial code notation and recognition**.

³ The theory initiated by the Berlin School at the beginning of 20th c. (German: *Gestalt* - "form" or "whole") explaining that "The whole is greater than the sum of the parts".

Lynch proves that users perceive and organize spatial information in consistent and predictable ways, creating their own mental maps with five elements: **paths; edges, districts, nodes** and **landmarks**. The five elements determining urban space organisation, have made an important contribution to the development of theories and methods of composing elements of urban structure in the way which is compatible with human psyche needs. The elements also appear in works by numerous European researchers e.g. **M. Trieb**⁴ (1970), **J. Castex & P. Pannerai**⁵ (1971), **K. Wejchert**⁶ (1984) among others.

Paths and **landmarks** seem to be especially useful in the '**wayfinding**'⁷ for they serve as important direction lines and reference points in navigation through the city. Series of views, perceived by an observer in motion, create a **chain of mental images**. Cullen's notations of 'serial visions' and McLuhan's 'sequences of the visual space' led to the conclusion that **perception is a dynamic process**. This idea has been developed in *The View from the Road* by D. Appleyard, K. Lynch & J.R. Meyer (1964), who observed that the speed of receiving visual stimuli by an observer has a crucial influence on urban space perception and recognition⁸. K. Wejchert (1984) introduced a record of visual sequences in the form of a graph of the recipient's emotions, so called "curve of impressions".

In 1970s Michael Trieb proposed a **symbolic code of sequential notation** of urban plan including privileged location in space, closure, limitation of motion, spatial domination, narrowing as well as context continuation. He also emphasised the role of art and "street furniture" in spatial arrangement of public spaces. Trieb's sequential notation was developed in 1998 by E. Cichy-Pazder, who suggested an enriched typology of determiners of perceptive identification (nodes, axis, partitions and dominant signs).

2.3 Between the image of enclosure and the identity of the place

Enclosure, urban and landscape interior, "outdoor room" (Cullen) as well as "positive outdoor space" (Alexander) – all those terms, relating to the space perception, mean a limited landscape unit, built of walls, floor, ceiling (usually sky) and elements of landscape "furniture". Aleksander Böhm emphasises the meaning of the term *enclosure*, which gives space the status of a place. Without the *enclosure*, space loses its sense.⁹ The idea of *enclosure*, derived from landscape design (Hubbard & Kimball, 1917; Kepes, 1944) and developed by Gordon Cullen (1961) and Yoshinobu Ashihara (1962), seems to be fundamental for visual art perception in the context of a particular place. **Morphological image** of a city results

⁴ M. Trieb enumerated: roads, borders, central points and direction marks (*Stadtgestaltung, Theorie und Praxis*, 1970)

⁵ J. Castex & P. Pannerai singled out: roads/paths, barriers, nodes, zones and landmarks (*Notes sur la structure de l'espace urbain*, 1971).

⁶ K. Wejchert selected similar elements of urban composition: streets, regions, border strips, dominants, outstanding elements of landscape, nodal points and distinguishing marks (*Elements of Urban Composition*, 1984)

⁷ K. Lynch defined *wayfinding* as "a consistent use and organization of definite sensory cues from the external environment" (*The Image of the City*, 1960).

⁸ These discoveries have initiated landscape studies on transportation routes and the research on moving observers' perception. They also influenced the diversity of spatial arrangement of pedestrian zones and transportation corridors (Appleyard et al, 1981).

⁹ Goodall, B. (1987), *Dictionary of Human Geography*, Penguin Books, London, p. 152, cited in: Böhm, A. (2004). „Wnętrze” w kompozycji krajobrazu

from the relation between the **positive space** (P-space), of determined shape, and the **negative space** (N-space) - formless emptiness. The spatial relations between a form and its surroundings were simultaneously explored by Y. Ashihara (1962) and J. Żórawski (1962), and deepened by Engel & Jagals (1970/1071), J. Tanghe (1976), Ch. Alexander (1977), R. Trancik (1986), J.L. Motloch (1991), S. Bell (1993) and many others. P. Peters (1973) pointed out that a city structure is based on "cells", determining its space identity, and the perception of the space of streets and squares results from human kinaesthetic abilities. According to Yi-Fu Tuan (1977) 'being in a place' is connected with the need of identification, while experiencing the space requires movement from one place to another.

K. Wejchert has developed the theory of urban enclosures, as the basic structural units of the town. In the early 1950s, on the basis of small urban settlements analysis, he singled out 'multi-partial enclosures' (main and added), 'overlapping' and 'centripetal' as well as illustrated examples of using 'leading' and 'closing' lines and surfaces, emphasising observation angle, proportions of enclosures and openings. Many of the phrases included in the early works by K. Wejchert, coincide with much later schemes by Motloch (Böhm, 2004, p. 38).

John L. Motloch (1991) expanded on the theory of place and continued studies on examining **spatial relations of the form** (furniture, sculptures, buildings) and the **background** (landscape and urban walls). He claimed that a city development, from the space perception, point of view should lead to the **intensification of the place sense, its clarity and distinctiveness of form and meaning**.

J.O. Simonds (1961) remarked that the lack of the sense of interior causes discomfort. He paid attention to feelings (excitement, curiosity, limitation, concentration, relaxation etc.) as well as the possibility of controlling and sequencing the views of various landscape enclosures. (Simonds, 1998).

The studies by **K. Lynch** concentrated on the **identity and structure of city images**. He defined '**imageability**' as "that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is shape, colour, or arrangement which facilitate making of vividly identified, powerfully structured, highly useful mental images of the environment. It might also be called *legibility*, or perhaps *visibility* in a heightened sense." (Lynch, 1960, p.9).

The behaviouristic psychology research reveals that the attributes of space which are recognised by observers concerning **continuity, coherence and uniqueness** enable people to **identify a place** (Bosky et al., 1987). After obtaining comprehensive information about the place, it is not anonymous any longer to the observers (Bańka, 1999), which is not, however, identical with identifying with the place. According to Ch. Norbert-Schulz "being in a place" means something more than localisation but results from identification with the place by feeling its character, which can be "natural", "human", or "spiritual". The phenomenological experience of the character of environment, regarded as *genius loci*, combines **simultaneous perception of visual structure** of enclosure with **identification of its cultural and symbolic meaning**. "Every place which has special meaning is actually a centre" (Norbert-Schulz, 1999, pp. 224). Centre is a specific reference point of existence space. Centrality is then an indispensable feature of sacral space which emerges from surrounding chaos and creates a sense of innerness (Mamford, 1961). The meanings of space, place and site (Rendell, 2006) for a contemporary *flâneur*¹⁰, wandering around a maze of the metropolis, have been frequently studied in the context of new media development.

¹⁰ The figure of *flâneur* (city observer) created by Ch. Baudelaire, was adopted and analysed by Walter Benjamin in *Passagen-Werk* (1921-1940)

2.4 From mental maps to hypermedia maps

Mental maps, which are used in various fields of psychology, education and management, have also been applied in urban and landscape planning as well as architecture and visual arts. Lynch and Appleyars were pioneers in mental mapping studies. Comparing sketches, made by non-professionals, was initially aimed at research on how individuals perceive and navigate through the urban landscape. However, since 1970s this method has been frequently applied to **community collaboration in town planning**. “The idea that local inhabitants need to stir into the planning process the image they have of places – their *personal* images – has become standard practice in city planning. A well-known example involved Randy Hester and the town of Manteo, North Carolina. In 1980 [...] using a variety of imaging techniques, Hester uncovered a ‘sacred structure’ of the residents’ downtown and made a map of it as a guide for development.”¹¹

The growing influence of **cyberspace** on social, economic and cultural relations has been observed for the last ten years¹². Both exploring a city and social life of their inhabitants take place by means of digital technologies. New communication technologies change the perception of urban space as well as its use (McCullough, 2004), which causes the devaluation of urban public spaces significance as the areas of social integration. In an ironic, but unfortunately possible, vision of **generic city** – de-humanised, standard, identity-devoid one – Rem Koolhaas raises the question of the role of traditional public spaces in lives of local communities. Along with the disappearance of social functions, city space becomes devoid of basic diversification factors and, consequently, of its identity (Bonenberg, 2009). Common multimedia culture, dominating over using books or individual perception of objects and phenomena, leads to the situation that in order to interest or even make people come to a particular place, it needs to be advertised on the Internet beforehand (Siewczyński, 2009).

However, the potential of experimental IT supported programs gives also a chance of “reconstruction of identity” of public places as well as creation of new tools for their recognition and navigation. A popular idea based on space identification process is **collaborative mapping**. There are many types of collaborative maps (Google Maps, Wiki Maps etc.) which vary in their target use, subject matter and kinds of users. One of them is a popular **Open Street Map** (Wikipedia) working in collaboration with GPS system. Private users can enter new data items into the existing Internet maps concerning historical urban development and significant cultural events, famous ancient monuments, spectacular contemporary buildings and artworks, shopping centres etc, as well as traffic intensity indicators (Bonenberg, 2009). The recent results in the field of digital techniques enable us not only to describe but also visually model the urban space through hypermedia functions. One of the most difficult challenges is collecting and storing digital data in the place where they come into existence as well as creating an opportunity to use multimedia information on the city in the real space. It is possible thanks to **Dataspace**¹³ system formulated by Tomasz Imieliński, a pioneer in the field of *mobile data*, who described the concept as

¹¹ D. Wood: http://www.techkwondo.com/obj/pdpal_msg/PDPal_Denis_Wood.pdf

¹² Since 1988 Internet has been made available to the commercial use, however, just ten years ago, it became a popular communication tool.

¹³ The term coined by prof. T. Imielinski, Department of Computer Science Rutgers University, USA

“physical space supplemented with digital information”. Both virtual information accessibility in physical urban space and creating digital visualisations, based on real urban structure perception, contribute to better **identification of the city** as well as **identifying with the city**. Interactive virtual games taking place in the urban reality are an attempt to attract teenagers to learning about and co-creating the image of their city.

The urban space recognition and mental mapping based on **hypermedia** may be meant both for action (especially useful for travellers) and for knowledge, as they combine space and mental organisation by relating maps and projects to the images of urban areas, and documents on social history - to their cultural background (Gallet-Blanchard & Martinet, 2002). The information is available through interface elements such as windows, animations, texts referring to urban spaces as well as interchangeable pictures representing historical and contemporary maps or photos taken by users. The social participation in the creation of **hypermedia maps** is achieved by interactivity of form and contents in these media. **Hypermedia programs on urban history** like the CD-ROM *Georgian Cities* (Gallet-Blanchard & Martinet, 2002) or Kyoto Virtual Time-Space¹⁴ can be used both for information and educational purposes as well as city promotion. Such programs are being deployed also in Polish cities: Wrocław, Kraków and Poznań.

Contemporary **hypermedia** are a tool of **meta-perception**. The cyberspace itself, though, constitutes a new virtual maze which requires new tools of recognition.

3. Visual art in public space

3.1 The definition of public visual art in the 20th century

Visual art is an artwork that appeals primarily to the visual sense and typically exists in permanent form, such as traditional plastic art (drawing, painting, sculpture, printmaking) and modern visual art like photography, video, filmmaking, computer art etc.) as well as architecture, design and crafts. The term **public art** (Taborska, 1996; Goldstein, 2005; Finkelpearl, 2000) refers actually to works of art in any media that have been designed and performed with the specific intention of being sited or staged in **physical public domain**, usually external and accessible to all.¹⁵

Since the ancient times monuments and memorials have been present in public spaces, emphasising the centrality of important sacral and secular places. However, the public sculptures primarily served representative and propagating goals. The notion ‘**public art**’, as an alternative to elite gallery art, emerged in 1960s, and its aim was to revitalise urban space. Gradually, the most characteristic feature of public art became an opportunity to express current issues and to communicate with its exposition places (Miles, 1997; Kwon 2002; Rendell, 2006) and its recipients (Lacy, 1995). The example of the **Pompidou Centre** in Paris (designed by R. Piano, R. Rogers and P. Rice, and constructed from 1971 to 1977), which is a masterpiece itself, proves that both **permanent** and **temporary** artworks, like happenings, installations and even street theatres, contribute to the **place identity** creation. The **Street Art**, which arose from a need of free artistic expression on the public forum,

¹⁴ The research programme is conducted at the Ritsumeikan University by interdisciplinary team Kyoto Art Entertainment Innovation Research within the framework of the 21st Century COE (Center of Excellence) Research Program.

¹⁵ http://en.wikipedia.org/wiki/Public_art

although not everywhere socially accepted, is also a material of building the **image** of a place (Schwartzman, 1985). 'Street artists' attempt to have their work communicate with common people about socially relevant themes without being imprisoned by aesthetic values.

Determining the role of public art requires considering fashions and trends which have influenced it throughout various periods. In the 1970s and 1980s public art intersected with performance art, conceptual art, installation art, land art, process art, community-based art, and site-specific art. Thus, some art interpretations, sometimes quite remote from the Kantian idea of universally recognised beauty, have appeared, such as Suzane Lacey's '**new genre public art**'¹⁶, which emphasises its social engagement and collaboration. On the post-modern metropolitan urban scene, new elements constantly emerge, claiming the status of public art, like: urban furniture, lighting, multimedia, graffiti and even commercial art.

3.2 Architecture and art as spatial landmarks¹⁷

In the 20th century, the time of unification of mass building and cultural patterns, art in the public domain took on a very responsible role of creating the **important spatial tags** and building **identity of the place**. Art always stands in opposition to standardization¹⁸. The inimitable form of public art, situated in the context of unified architecture, constitutes a focal point. But isn't architecture a work of art as well? From the point of view of many artists, architecture forms only frames, background or pedestal for a unique works of art. However, in the city scale, the sculptural forms of architecture take a deserved top position in creating **dominant landmarks** in townscapes, sometimes even regardless of the urban context. Thus, the relevant reply to the above question depends on cultural meaning, aesthetical quality and uniqueness of the object.

The 20th and 21st centuries abound in spectacular examples of architectural icons which have become not only the reference points, but also the aim of cultural tourism (Pearson, 2006), such as artworks by Frank O. Gehry (e.g.: Guggenheim Museum, Bilbao), Daniel Libeskind (the Jewish Museum in Berlin), Peter Eisenman (e.g.: Memorial to the Murdered Jews in Europe, Berlin), Santiago Calatrava (e.g. The City of Art and Science, Valencia), Renzo Piano (e.g.: New Metropolis in Amsterdam, Cultural Centre in Noumea-New Caledonia), Bernard Tschumi (e.g. Park de la Villette, Paris), Enric Miralles (e.g. Igualada Cementary, Barcelona) and many others. Jane Rendell, in her recent book *Art and Architecture: a Space Between*, analyses significant works created by both artists and architects that seek to blur traditional boundaries between the fields.

Many artists claim that it is the **lack of function** which differs architecture from art. Rendell takes issue with that opinion, saying that "art is functional in providing certain kinds of tools for self-reflection, critical thinking and social change" (Rendell, 2006, pp.3-4). Moreover, there is also architecture without any utilitarian functions – Folly, which is only a

¹⁶ Lacy, S. (1995). *Mapping the Terrain: New Genre Public Art*. Bay Press, Seattle.

¹⁷ This and the following paragraphs are partially based on author's previous publication: Januchta-Szostak A. (2007). *Methodology of Visual Art Localization in Public Spaces on Example of Poznan City*

¹⁸ Prof. Włodzimierz Dreszer said that "art is anti-thesis of standard" in: Dreszer W. (2007) *Przestrzenie wyróżnione krajobrazu kulturowego*, (in:) *Sztuka projektowania krajobrazu*, pp. 15-19

decorative accent. Its contemporary example is the Park de la Villette, where Bernard Tschumi in 1982 constructed thirty-five architectural follies.

Since art has abandoned galleries, it may have gained a **range of influence and expression** which is comparable to architectural one. An open outdoor space gives the artists freedom of large works creation incorporating even natural environment (e.g. Richard Long, Robert Smithson, Anthony Gormley, Andy Goldsworthy et al.). Permanent works of art integrated with architecture and landscape design were sometimes included in urban development program like in the case of the new city of **Milton Keynes** in England, designated as a new town at the end of 1960s.

The process of shaping the townscape happens on every **level of perception**: from panorama, dominated by land forms or high-rise objects; through architectural and sculpture compositions organizing space of squares and streets; to human-size sculptures familiar to pedestrians or even urban details. Regardless of its size, the characteristic feature of any artwork is its **unique form which makes it stand out from the surroundings**. Some forms of visual art are dominant, others constitute only accents in urban enclosure, some carry historical or cultural message, others provoke or intrigue by modern form, raising admiration or consternation, nevertheless, they do **individualize** the urban space, becoming important **spatial tags** facilitating orientation and navigation as well as **anchor-points** on mental maps of the inhabitants and tourists.

3.3 Cultural meaning of art and mental anchor-points

Christian Norberg-Schultz (1999, p.223) remarks that **the purpose of a piece of art** is to retain and convey existential meanings while a human, through perception and understanding the symbol, exposes themselves to an act of identification which consequently gives some meaning to their individual existence. He also emphasizes that the meaning revealed by art in a particular place also determines the character of the place.

The **unique** works of famous architects and artists can now be found in every part of the global village. However, not all of them are able to experience *genius loci* and transform it into art language without losing historical **continuity** as well as cultural and spatial **coherence**. Some of spectacular objects, such as Richard Serra's *Tilted Arc*¹⁹, have never become 'anchor-points' for the local communities. In the Hague, municipal authorities made a great deal of effort to replace the pulled down churches with architectural and sculptural landmarks in order to construct a modern network of anchor-points. The difference between **visual landmark** and **collective anchor-point** lies in mental acceptance and social identification with the artwork. Sometimes inconspicuous sculptures and fountains become **city symbols**, e.g. Neptune in Gdansk, Poznan's famous goats symbol, Mermaid in Copenhagen and Warsaw, or Mannekin Pis in Brussels. This famous statue of a little boy is a perfect representative of the irreverent sense of humour and the unique Brussels' icon.

Unlike **permanent** artworks, **temporary** open air sculpture exhibitions and artistic happenings are transient phenomena, which do not seem to be regarded as permanent points of mental references. However, such short-time but repeatable and intensive events can contribute to building the cultural image and identity of their location places. For

¹⁹ Richard Serra's massive, wall-like steel sculpture was removed from Federal Plaza, New York, in 1989.

example, Pompidou Centre in Paris, or Malta Lake in Poznan are commonly associated with cultural events.

The significance of **commemorative art**, highlighted by many authors (Crinson, 2005), provides the urban space with the historical continuity and integrates local communities. Sculptural architecture of some monuments and memorials, such as the Jewish Museum by D. Libeskind and the Memorial to the Murdered Jews in Europe by P. Eisenman, both located in Berlin – once Nazism's capital, constitute a worldwide symbol of collective memory. Their expressive form and size is as total as Holocaust and shredded like its victims' individual tragedies. The spatial arrangement of the memorials allows gathering and alienation at the same time.

Collective participation in commemoration events builds the feeling of integration based on cultural membership, historical consciousness and social bonds resulting from common moral values. In the post-communist countries like Poland, though, an attitude towards commemorative monuments is ambivalent due to the political changes. The decisive historical transformation of ideology resulted in demonstrations and pulling down monuments, which was a kind of collective manifesto also integrating its participants.

The effect of **social integration** can be achieved via public art by different means: 1) collective participation in commemoration events; 2) spatial arrangement of interactive artworks, which encourages interpersonal relations; 3) social engagement and collaboration on cultural projects.

3.4 From 'site-specific' art to community engagement

The 'site-specific' art is one of many trends set in the second half of the 20th century, however, it has special significance for urban space recognition and spatial arrangement of public places as it deals with urban context. Most of contemporary architects, landscape architects and urban designers attach a lot of importance to architectural context mapping, while artists emphasise the individual expression, autonomy and universality of art.

The art of architecture is always 'site-specific', even though some creators, like Rem Koolhaas²⁰, preach the provocative commendation of individualism and independence of the artwork from its context. This way or another, context exists and - the basic questions constantly arise: has the intangible **spirit of art** profound implications for place-making or should the artists listen carefully to *genius loci*?

Miwon Kwon (2002) describes the unstable relationship between location and identity as well as controversies around 'site-specific' artworks created by John Ahearn, Richard Serra, and others. It is worth mentioning that in 1970s and 1980s site-specific approaches to public art were promoted and registered within the guidelines of national and state organizations in the United States²¹. The 'design team directive' in the US encouraged artists to share

²⁰ Referring to Rem Koolhaas' slogan: "Fuck the Context!", in: Koolhaas, R. & Mau, B. (1995) *S,M,L,XL*. Monacelli Press, pp. 495-516, New York

²¹ "[...] even though site-specific modes of artistic practice emerged in the late mid 1960s – roughly coinciding with the inception of the Art-in-Architecture Program of the General Services Administration (GSA) in 1963, the Art-in-Public Places Program of the National Endowment for the Arts (NEA) in 1967, and numerous local and state Percent for Art programs throughout the 1960s – it was not until 1974 that concern to promote site-specific approaches to public art" Kwon, M. (2002), pp. 56-63.

responsibilities with architects and urban planners in deciding about spatial arrangement of public spaces. Similar actions have been undertaken in Europe, particularly in the United Kingdom, aiming at creation of 'amenity planning guidance' as well as methodology and framework for cultural mapping and planning (Evans, 2008). During the 1980s local authorities and commercial companies in the UK began to appreciate the value of art in shopping and business development. At the beginning of 21st century landmark sculptures appeared to be also a tourist attraction (Pearson, 2006). Considering growing popularity of cultural tourism, it is quite conceivable that the next step in the evolution of 'site-specific' art will be 'tourist-specific' art.

An ecological trend within 'site-specific' art is also worth mentioning, though it is certainly a subject for a separate publication. Represented by a German artist, Herbert Dreiseitl, it involves creating sculpture and water compositions, introducing rainwater retention, infiltration and recirculation (e.g. Potsdamer Platz in Berlin; Tanner Springs Park in Portland, USA). The variety of water forms and their psychological interactions are also crucial for raising the quality of urban space both in aesthetic and symbolic aspects (Dreiseitl et al., 2001). In 1993 Suzanne Lacy initiated the program "Culture in Action: New Public Art in Chicago". The new approach, that broke with previous models of 'site-specificity', was described by Ch. Sperandio as 'community-specific', and by M.J. Jacob as both 'issue-specific' and 'audience-specific' art. It has changed the meaning of public art from the art-in-public-places into the real public-art focused on freedom of expression and active participation of citizens in the artworks creation. Many artists acting at the intersection of art and cultural activism, such as Helen and Newton Harrison, Suzanne Lacy, Stephen Willats, have been developing new forms of creative dialogue with diverse audiences. For the 'new genre public art', aesthetical form was only a **medium** of socially and politically relevant content.

3.5 Multimedia and new media in urban culture

The mutual relations between the perception of metropolis and the development of media have been frequently studied²², under the influence of philosophers such as Georg Simmel or Walter Benjamin (Gallet-Blanchard & Martinet, 2002). There are two main aspects emerging from this line of research: 1) significance and expression of multimedia and new media art in the physical urban space, and 2) perception and popularization of public works of art in the cyberspace.

In the light of 'new genre public art', mass and new media are a perfect tool of communication with the general public. However, some kinds of 'audience-specific' art were considered as the art of space unification. Large-size billboards and video installations were often deprived of the name of art as they conveyed the same contents regardless of their localization. Most of west European cities have already solved the problem with billboards located in historical downtowns. In Polish cities, though, there is still an ongoing campaign on exposition area between architecture and sculpture on the one hand and different forms of commercial, advertising art on the other.

Since the video art was born in 1970s it has been exploring alternative strategies of adopting existing urban forms as sites of **artistic intervention**. The artworks by pioneers of video installation, such as Nam June Paik, Gary Hill, Tony Oursler, Sam Taylor-Wood, seemed to be as controversial as Marcel Duchamp's provocative "Fountain", or Campbell's "Soup can".

²² The subject have been studied by such authors as: McLuhan, 1964; Jenks, 1995; Burgin, 1996; Gallet-Blanchard & Martinet, 2002; McCullough, 2004; Tribe & Jana, 2006 and many others.

However, a remarkable progress in digital technology allowed to create large-size, **interactive video sculptures**, like the Crown Fountain (design by Jaume Plensa, 2004) located in Millenium Park, in Chicago. The fountain is composed of two 15.2 m tall, cubicoid, towers covered with light-emitting-diodes (LEDs) and a black granite reflecting pool placed between them. From time to time the giant LED-screens display enlarged faces of anonymous citizens of Chicago. The Crown Fountain, however controversial in size, is an excellent example of 'community-specific' and socially integrating piece of art. It was praised for its entertainment and artistic features as well as highly accessible spatial arrangement of a common gathering place allowing physical interaction between the public, media and the water.

At the beginning of 21st century IT specialists and artists noticed an immense creative potential of digital technologies and computer- aided design programs (McCullough, 2004) as well as common accessibility of hyper media. **Internet** became a **new public space** for artworks creation, exposition and discussion. The spatial consequence of the approach to creation process and its results is breaking with the monopoly of museums and art galleries as the exclusive places of interacting with art. New Media Art (Tribe & Jana, 2006), as an artistic trend, suggests uniting computer graphics with animation, interactive technologies, computer robotics as well as biotechnology in order to gain new quality in art. The results of work of such artists as Wolf Vostell, John Maeda, Eduardo Kac, show directions of artistic development by means of **new media** (Bonenberg, 2009).

4. Methodology of locating visual art objects in public domain on example of Poznan city

The subject of research conveyed by the author in Poznan was the quality of public areas and possibilities of making them more attractive by introducing monuments and water elements. The activities of municipal authorities consist only in looking for a decent location for the piece of art. The lack of cultural planning guidance made the author search for the art-location methodology enabling not only to improve the visual quality of public places but also to raise the recognisability and 'imagebility' of the city.

One of the first research tasks was creating typology of objects and defining their role in functional and spatial structure of the city. The parallel task was connected with finding the main areas for city image creation. There are three questions frequently arising, which the research was supposed to answer:

1. Which public places are the most important and suitable ones for visual art location?
2. How to arrange those areas to raise the significance, aesthetic and functional values as well as social attractiveness of the public places?
3. What can be the role of visual art forms in different types of urban space?

The process of searching for optimal locations for various types of sculptures as well as spatial arrangement of "outdoor rooms", was divided into three stages, presented by the scheme (Fig.1)

5. The typology of sculpture and water elements as urban details

The typology of public art, from the perspective of artistic composition, is considerably wider than the one presented below. However, for the purpose of the research on the public

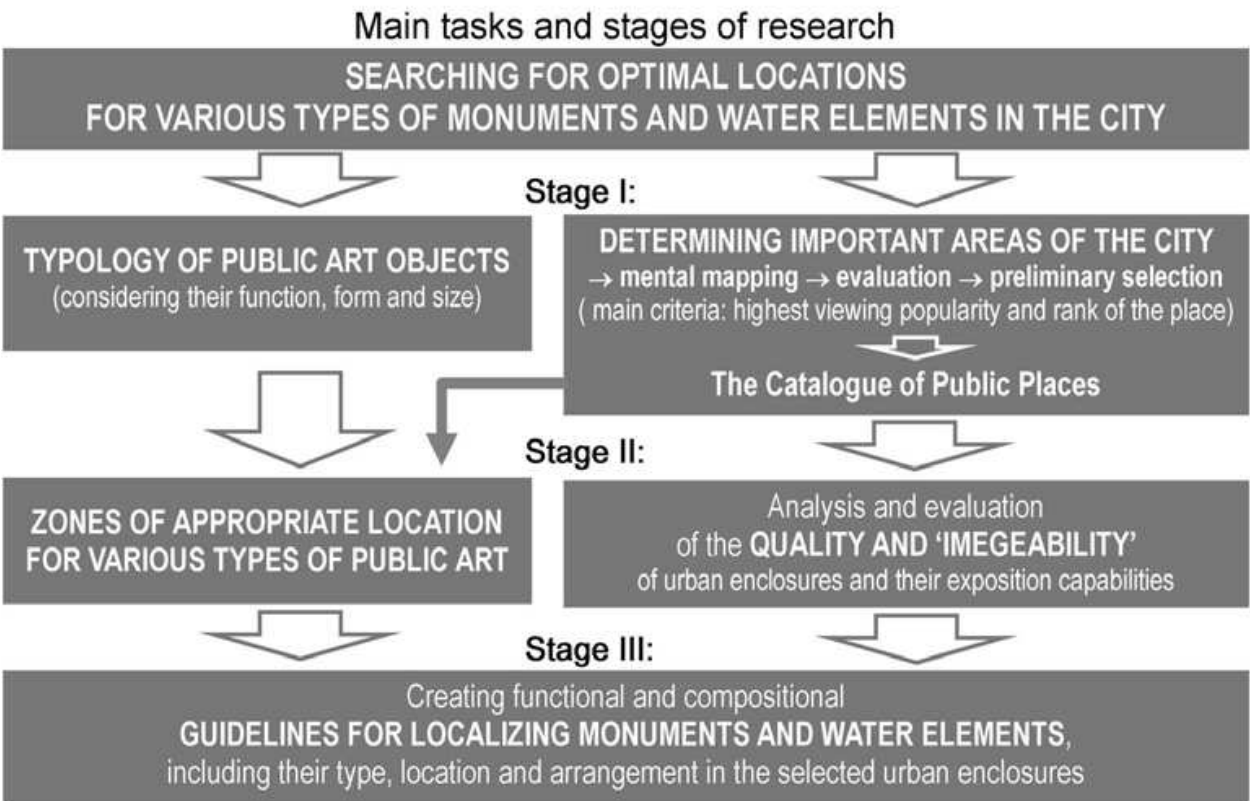


Fig. 1. The analysis of possibilities of visual art location in public domain of Poznan city – main tasks and stages of research

places quality improvement, conveyed by the author in Poznan, several different types of sculptures and water objects were singled out. They differ in manner of placing, compositional values, function, size and their social role. That typology is a kind of pigeonholing, which many of artists would rather avoid, but it seems to be important for creating the planning guidelines for cultural mapping.

6. The stages of the research

6.1 Stage I: the analysis and evaluation of functional and spatial structure of the city with respect to possibilities of locating monuments and water elements





As the public works of art engage in a dialogue with the community and the place, the two main criteria: ‘viewing popularity’ and ‘rank of the place’, appeared to be crucial for determining zones of their location. Initially, the entire area of the city was subjected to the analysis, in order to define the most important public places of the city. Because of high concentration of pedestrian zones and location of the main areas of city image creation, the analysis was subsequently narrowed to the downtown.

The ‘space recognition map’ was created on the basis of mental mapping method. Students of architecture and citizens of Poznan were asked to select the most frequently visited places as well as the most important ones (in their opinion). As a result, over 120 public places were indicated in the downtown area and subsequently subjected to preliminary selection. The evaluation of public places in accordance with the accepted criteria, was conducted with the use of graphic and statistic methods. The main and sub-criteria, prepared for Poznan city and listed in Table 3, reflect particular aspects of the analysis.

Table 1.		Determination of type of object							
A. Object placing	Direction: directed at one side, two sides, multi-side/in the round								
	Availability: available, unavailable, penetrative								
	Composition: culminating, leading, stopping, closing, framing, scattered								
	Arrangement: enabling gatherings or/and alienation								
	Combination: integrated with building, water element, greenery, urban floor								
	Duration: permanent or temporary exposition								
B. Form of sculpture and water element	one-object, multi-object								
	compact, diffused, transparent								
	vertical, horizontal, spherical								
	figurative, symbolic, abstract, realistic, transformed, graphical, textual								
	geometric, organic, combined,								
	static, dynamic, kinetic, interactive								
	site-specific, universal, audience-specific								
	sacral, secular								
C. Function of sculpture elements	culture building: commemorative, provocative, self-reflective, socially/politically engaged								
	compositional, decorative,								
	informative, educational								
	advertising								
	entertaining								
	integrating, disintegrating,								
D. Function of water elements	composition, decoration, used for foreground or background exposition								
	symbolic								
	serving active or passive entertainment,								
	integrating, disintegrating/ separating (moat)								
	water retention and infiltration								
	ecological								
	climatic								
	utilitarian (e.g. water source,)								
E. Size of the object	Estimated size of vertical dimension in comparison to human size			The ratio of height of the object to the height of urban walls		Estimated size of horizontal dimension			
	XL	over 6 m		VXL	1: 1 and over		HXL	over 50% of the floor size	
	L	4 ÷ 6 m		VL	1: 1,5 ÷ 1: 2		HL	31 ÷ 50%	
	M	2 ÷ 4 m		VM	1: 2 ÷ 1: 4		HM	11 ÷ 30%	
	S	1 ÷ 2 m		VS	1: 5 ÷ 1: 9		HS	1 ÷ 10%	
	XS	up to 1 m		VXS	less than 1: 10		HXS	less than 1%	

Table 1. Typology of sculpture and water elements

Table 2. The use of typology of sculpture an water elements on examples of existing objects

Selected examples of artworks	Description of the example and main features of the type	
	A. Object placing	multi-side, available, penetrative, permanent, enabling gatherings, architectural object
	B. Form	site-specific and audience-specific symbolic, geometric, multi-object, dynamic,
	C. Function	commemorative, self-reflective, compositional, informative, educational
	E. Size	XL / VXL/ HL
	Architecture as a sculpture. Fig. 2. The Jewish Museum, author: Daniel Libeskind, location: Linden Str., Berlin (phot. author)	
  	A. Object placing	multi-side, available, penetrative, permanent, enabling gatherings and alienation, integrated with urban floor
	B. Form	site-specific and audience-specific, symbolic, geometric, multi-object, diffused, horizontal
	C. Function	commemorative, self-reflective, informative, educational, compositional
	E. Size	M / VS/ HXL
	Fig. 3. “Memorial to the Murdered Jews in Europe”, (phot. author) author: arch. Peter Eisenman, location: Ebert Str., Berlin	


	A. Object placing	permanent, multi-side, integrated with urban floor, culminating, penetrative, enabling gatherings and alienation,
	B. Form	symbolic, geometric, multi-object, compact, dynamic,
	C. Function	commemorative, integrating, compositional
	E. Size	XL / VXL/ HS

Fig. 4. Poznan Army Monument, authors: artist Anna Rodzińska & architect Józef Iwański, location: Księcia Józefa Str., Poznan (phot. author)


	A. Object placing	temporary, multi-side, available, penetrative, leading, scattered
	B. Form	multi-object composition, diffused, static, transformed, symbolic, secular
	C. Function	integrating, self-reflective, commemorative, compositional
	E. Size	S / VS/ HS

Fig. 5. "Unrecognised", author: Magdalena Abakanowicz, location: Cytadel, Poznan (phot. R. Binek)


	A. Object placing	directed at one side, unavailable, closing permanent, integrated with water element
	B. Form	universal, combined: figurative and geometrical, multi-object, diffused
	C. Function	compositional, decorative, additional functions of water: reflecting, separating, retention, climatic
	E. Size	S / VS/ HS

Fig. 6. Temporary exhibition of Igor Mitoraj’s sculpture (phot. author), location: Hoover’s Square (the project of spatial arrangement: landscape architect Dorota Rudawa) in Warsaw



A. Object placing	directed at one side, available, permanent, stopping
B. Form	universal, figurative, one-object, compact, static, secular
C. Function	decorative,
E. Size	S / VS/ HXS

Fig. 7. "Eros bendato", author: Igor Mitoraj, location: Main Square, Krakow (phot. author)




A. Object placing	permanent, multi-sided / directed at one side, available, penetrative, stopping
B. Form	multi-object / one-object , compact, static, geometric and textual, symbolic, secular, interactive, audience-specific
C. Function	integrating, self-reflective, decorative, compositional
E. Size	S / VS/ HS

Sculptures inviting observers to co-create the artwork.




Fig. 8. "Facing Another"
Fig. 9. "Facing Oneself", author: Bucky Schwartz, location: 'Manufaktura' – shopping centre in Łódź (phot. author)




A. Object placing	permanent, multi-sided urban accent
B. Form	site-specific, static, figurative, symbolic, secular, familiar to pedestrians
C. Function	commemorative, decorative,
E. Size	S / VS/ HXS

Fig. 10. The statue of the “Old Marych” commemorating an old average Poznan citizen,
author: Robert Sobociński,
location: Półwiejska Str., Poznan
(phot. author)



A. Object placing	multi-side, available, leading, permanent,
B. Form	site-specific, figurative, multi-object, compact
C. Function	commemorative, self-reflective, compositional
E. Size	S / VS/ HXS

Fig. 11. Title of artwork: “Trains to Life. Trains to Death”
author: Frank Meisler,
location: Berlin Friedrichstrase railway station, (phot. author)



A. Object placing	permanent, multi-side, integrated with street-furniture
B. Form	site-specific, static, figurative, symbolic, secular, familiar to pedestrians
C. Function	commemorative, decorative,
E. Size	XS / VXS/ HXS

Fig. 12. The statue of “Filutek” commemorating Z. Lengren,
author: Zbigniew Mikielewicz,
location: Chełmińska Str./ Szewska Str., Toruń, (phot. author)

Basic criteria	Sub - criteria	Elements of functional-spatial structure of the city	Ratio of importance
Viewing popularity	Connection with main transportation routs	1.1. vehicles (transportation arteries, main and collective streets)	O1.1. = 1
		1.2. public transport - train, bus and tram stations	O1.2 = 1,2
		1.3. pedestrians (main streets, shopping routes)	O1.3 = 1,5
		1.4. important cycling paths	O1.4 = 1
		1.5. water ways	O1.5 = 0,7
	Connection with main tourist routes	2.1. The Royal-Imperial Track	O2.1 = 1
		2.2. Piastowski Route	O2.2 = 0.5
	Main areas of services concentration	3.1. the city center	O3.1 = 1
		3.2. centers of districts and main shopping streets	O3.2 = 1
		3.3. PIF, university campuses	O3.3 = 1
Rank of the place	The zone of historical development	1. the core of the city	R 1.1 = 2
		2. 19th century districts	R 1.2 = 1
		3. remaining areas (20 th century)	R 1.3 = 0,5
	Main areas of the city image creation	1. the axis of the city (The Royal-Imperial Track and its zone of influence)	R 2.1 = 1,5
		2. the city “gates” (Central Station-PIF, river harbor-historical center, Malta-sport center, airport)	R 2.2 = 1,2
		3. the city’s “lounge” – representative streets	R 2.3 = 1
	Quality of urban space	1. zones of historical structures under law protection	R 3.1 = 1
		2. high concentration of antique buildings	R 3.2 = 1
		3. areas of exceptional landscape values	R 3.3 = 1
	Neighborhood of public cultural and administration institutions	1 of international, national and regional importance	R 4.1 = 1,2
		2. of city importance	R 4.2 = 1
		3. of district importance	R 4.3 = 0,7

Table 3. Multi-criterion analysis for Poznan city

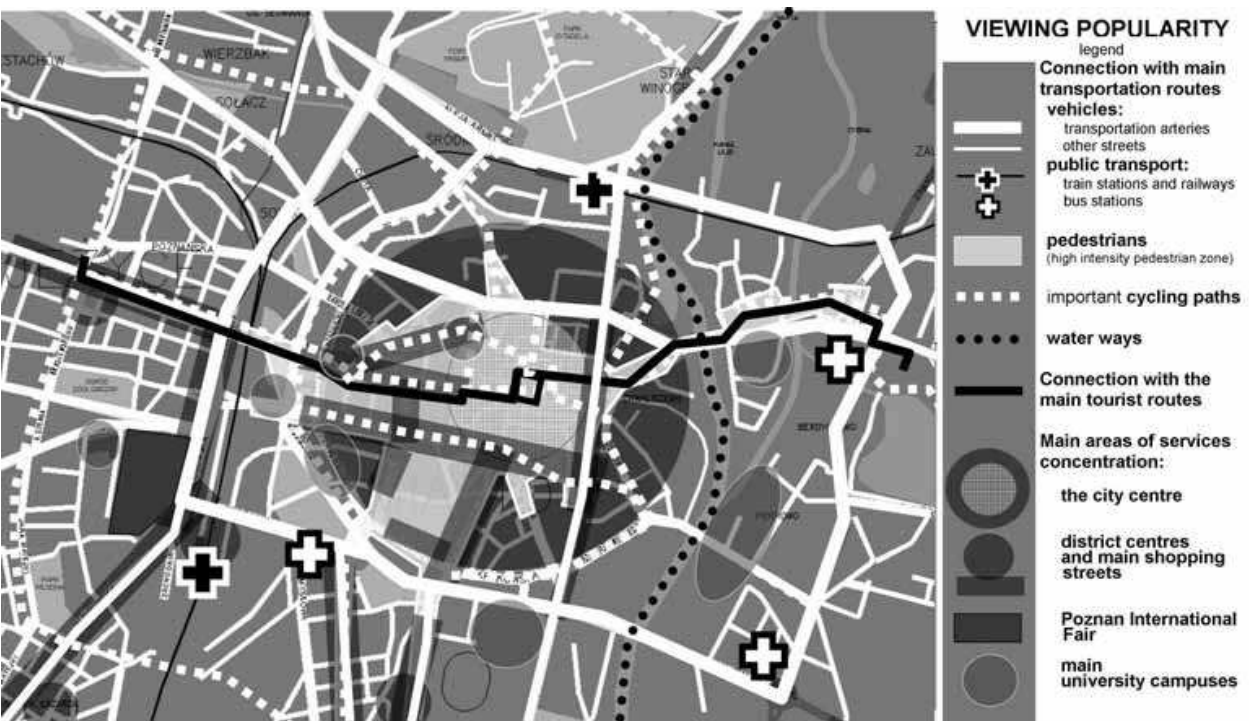


Fig. 13. Poznan - areas of the highest viewing popularity – synthesis

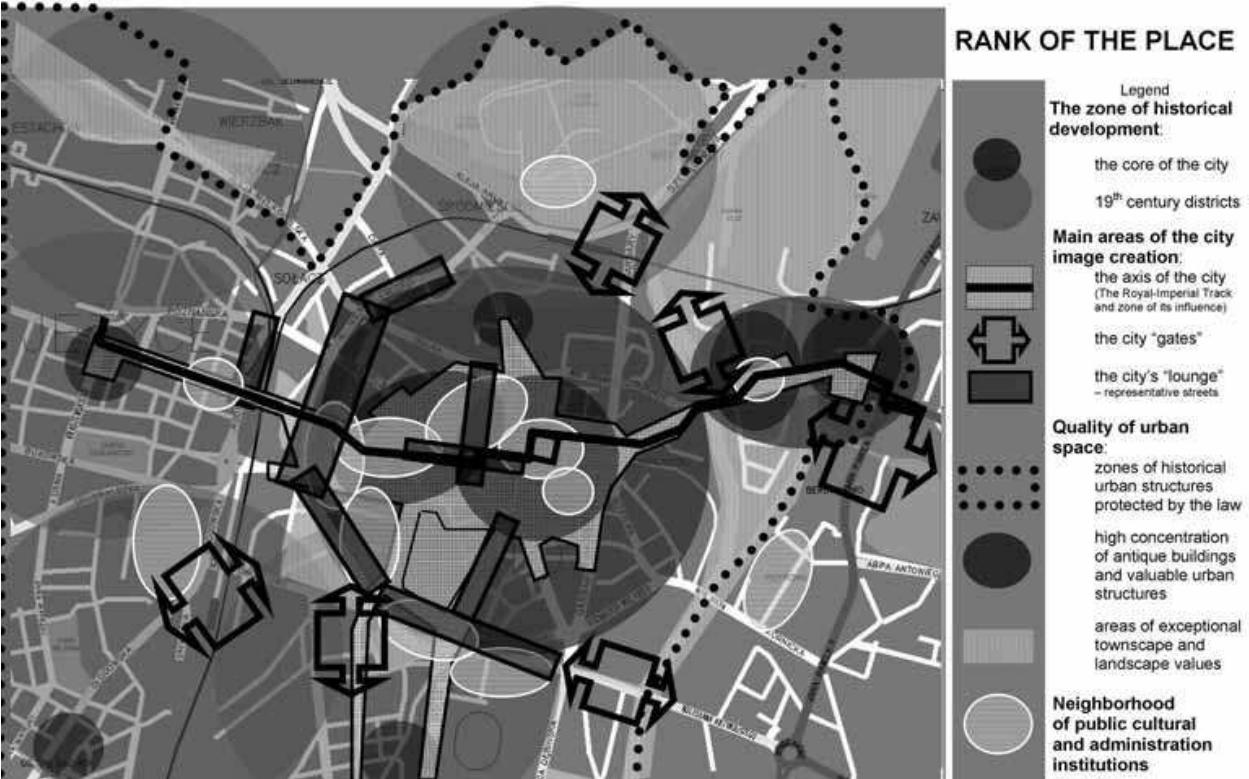


Fig. 14. Poznan - areas of the highest rank of the place – synthesis

After evaluation and preliminary selection, 60 public places (streets, squares, parks, river banks etc.), located in the zones of the highest importance, were described in “**The Catalogue of Public Places in Poznan**”. Information about all individual public places

included the description of their location, neighbourhood, spatial layout and function, short SWOT analysis as well as the preliminary estimation of their capabilities for locating monuments and water elements. All the public places were evaluated in accordance with the criteria multiplied by the ratio of importance to objectify the decision-taking process. Mental maps have shown formal and informal paths and nodes, which people value most. The comparison of the areas with the results of unbiased analysis of expositional potential of the downtown made it possible not only to determine the best location sites for artworks, but also for '**wounded spaces**' whose expositional potential has not been used due to the lack of decision concerning their final spatial shape. These areas of high importance, frequently situated in the very centre of the city, although constitute the key elements of urban structure as well as nodal points of the main tourist routes, have remained neglected and couldn't be taken into consideration because of low visual qualities. From the social point of view, it was interesting to compare the above schemes (Fig. 13 and Fig. 14) with a map of crisis facts occurrence (e.g. high rate of unemployment, poverty, delinquency, among others), which are commonly observed in the downtown area. The comparison showed that some of the areas which are not eagerly visited and socially degraded are still mentally important and constitute essential reference points in the city's structure. It is also significant that all the transportation arteries having the best spatial exposure were lined with advertising boards, which depreciate architectural values of the places not only by aggressive colours and unified contents but also by covering valuable views. It would be, therefore, advisable to substitute the advertising objects with sculptures in order to emphasize and individualize the entrances to the city, particularly in transportation nodal points. Considering perceptive capabilities of drivers and the scale of road infrastructure, large size works of art would be recommended.

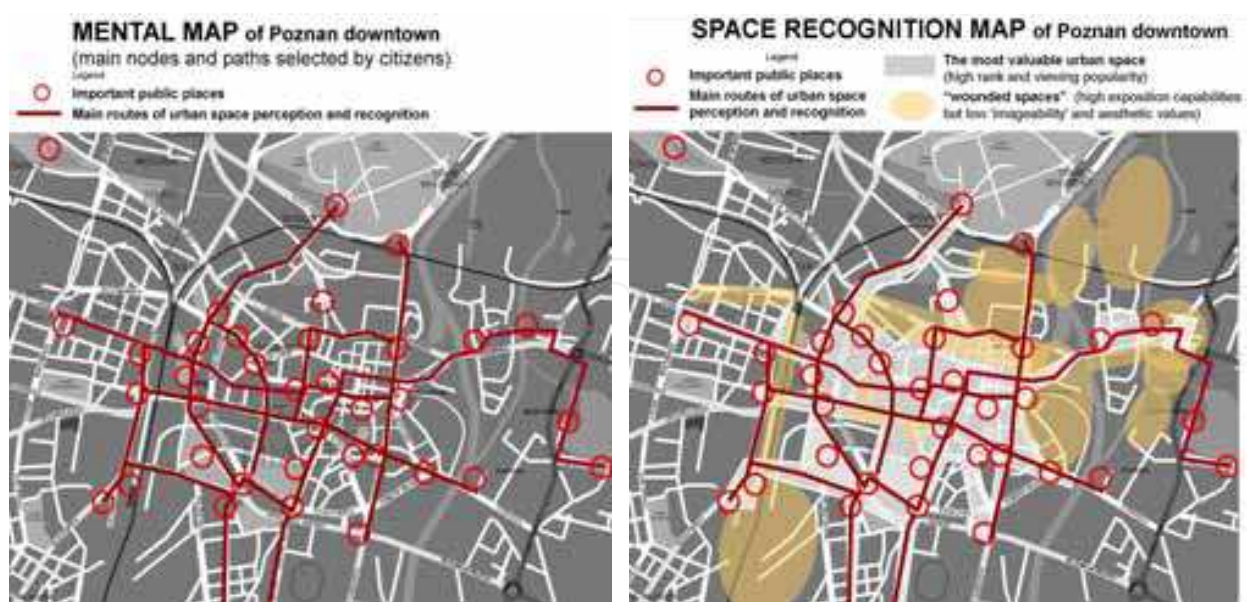


Fig. 15. The comparison of *mental map*, presenting the main nodes and paths selected by Poznan citizens, and *space recognition map*, describing spatial quality of the most important areas of Poznan City.

6.2 Stage II: the analysis and evaluation of the quality and ‘imageability’ of urban interiors as well as their exposition capabilities

Selected public places having the best expositional values were subjected to spatial and functional analysis in accordance with the detailed criteria described in Table 3. The analysis and evaluation of the quality and ‘imageability’ of urban enclosures covered a variety of aspects and values, namely, **historical, cultural, compositional, aesthetical, functional and social ones as well as the transportation and zoning system**. Special attention was paid to expositional and compositional values, complexity of spatial structures, the quality of architecture as well as historical and cultural meaning of each place and their social integrating capabilities.





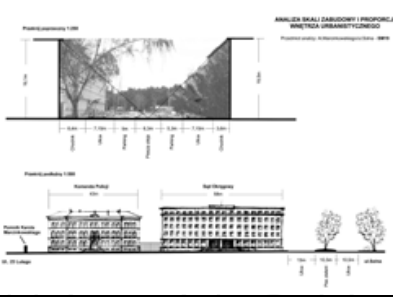



Type of analysis	Detailed criteria	Selected illustrations: the case study of K. Marcinkowski Alley in Poznań	
Historical and cultural values:	historical background: important events and people		
	previous image of a place		
	location of antique objects and their significance		
	cultural institutions and events		
	social integrating capabilities		
Functional and social values	Functional and transportation zones		
	communicational accessibility and inconvenience		
	social acceptance an problems		
	important public institutions		
	shopping streets and service centres		
Architectural and aesthetic values:	complexity of spatial structures		
	spatial layout enabling to localize elements of urban detail		
	quality of urban walls, floor and „furniture”		
	size and proportions		
	visual quality of the enclosure		
Exposition and compositional values:	visual sequences impression		
	the number of focal points and length of axis		
	potential places for locating visual accents		
	size of exposition field		
	quality of background exposition		
	differences in heights of fields		
	scale and proportions of an object		

Table 4. The criteria of the analysis and evaluation of the quality and ‘imegeability’ of urban interiors and expositional capabilities for particular public sites

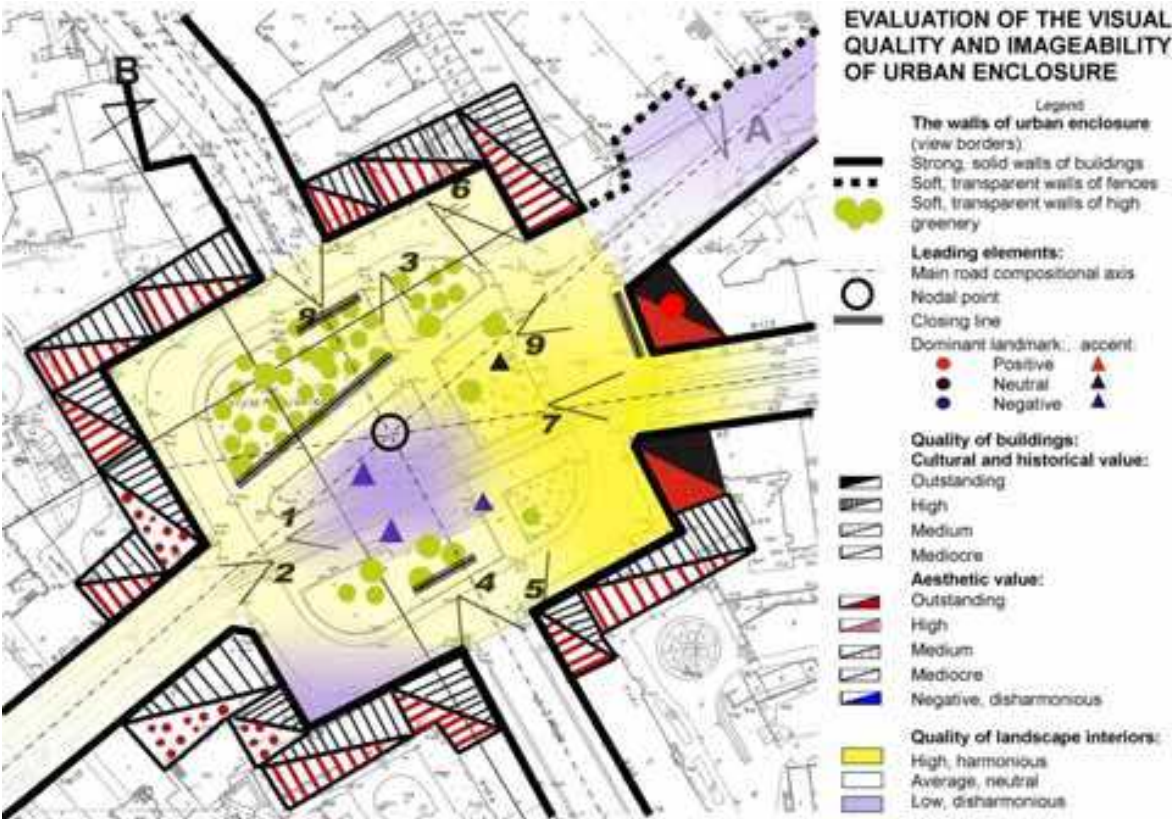


Fig. 16. The evaluation of the visual quality and ‘imageability’ of C. Ratajski Square in Poznan

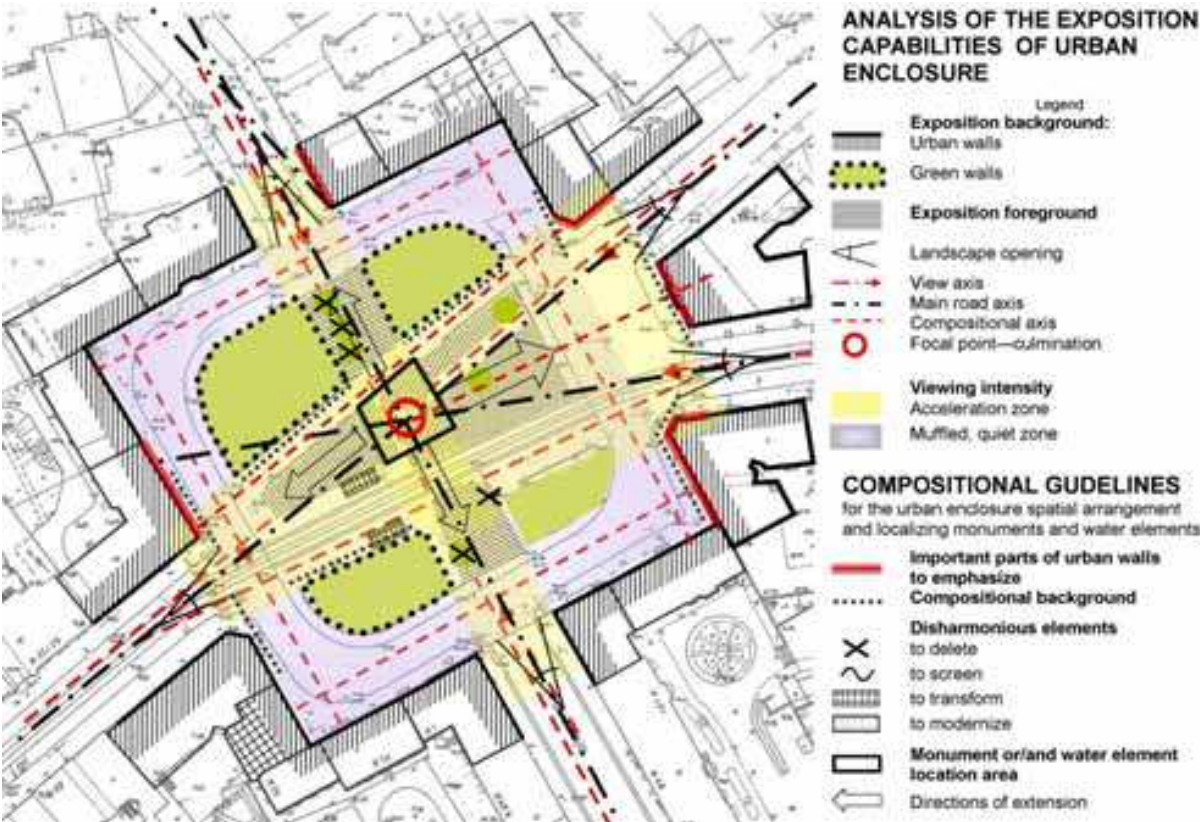


Fig. 17. The analysis of the exposition capabilities of C. Ratajski Square in Poznan

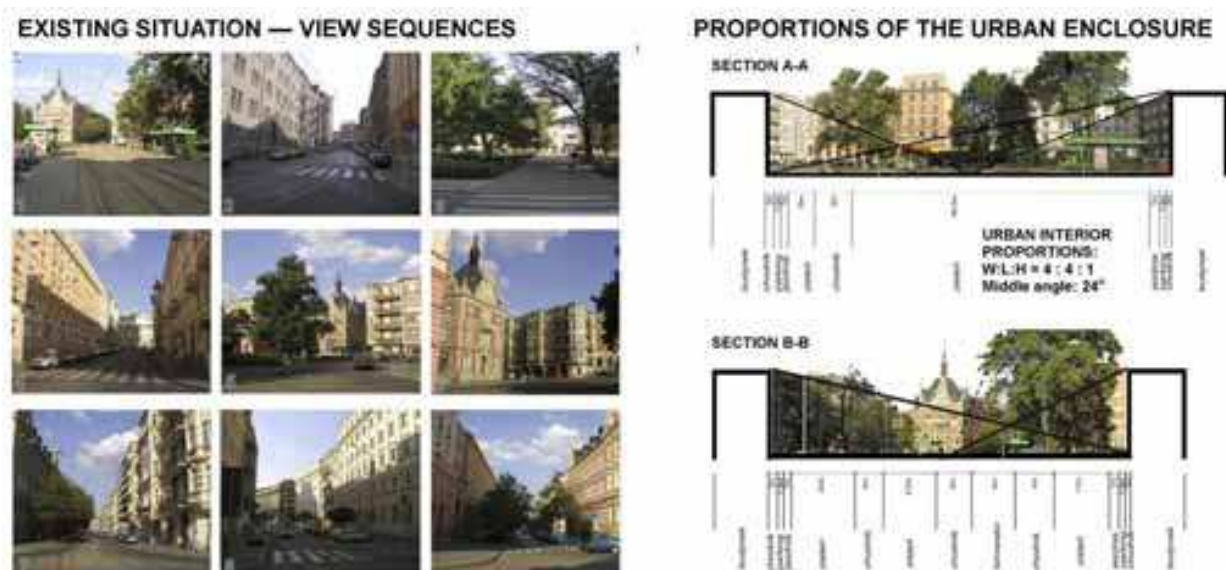


Fig. 18. The analysis of visual sequences impression and spatial proportions of C. Ratajski Square in Poznan

6.3 Stage III: creating functional and compositional guidelines for localizing sculpture and water elements

Majority of the selected urban interiors are situated in the downtown zone of Poznan and constitute the heritage conservation areas. The significance of the places for shaping the city's image made it necessary to determine specific guidelines for their arrangement, considering the lines of urban walls and building height as well as the material and colours of front elevations, the form of the urban floor, greenery and 'furniture', which would be synchronised with the artworks.

The authorities of Poznan were interested in defining the most suitable type of sculpture and water elements' composition for each place, which was necessary in order to establish the conditions for architectural or artistic contest for the spatial form of public art elements and to create guidelines for master plans. However, the research project was extended also by analyzing the role of public visual art in urban space recognition and searching for the most appropriate locations for the place-specific and audience-specific art. The comparison of the viewing popularity research results with some elements determining the rank of particular places and their historical significance was the indicator of the suitable locations for various types of artworks. For example, the communication nodes of the main transportation arteries, as the transit corridors, need landmarks in the form of large scale, 'site-specific' sculptures adjusted to the perception of moving observers. The city gates, like the airport, bus and railway stations constitute a proper location for the 'audience-specific' artworks highlighting the identity of the city. The size of the objects is always dependent on the distance of perception and proportions of particular urban enclosure. Permanent or temporary human-size sculptures, communicating with observers (provocative, entertaining or socially/politically engaged), accompanied by leading or culminating water forms could be located in commercial centres and along the main shopping streets. While the city 'lounges' as well as the squares of high historical significance seem to be suitable for commemorative monuments and memorials, which enable gatherings.

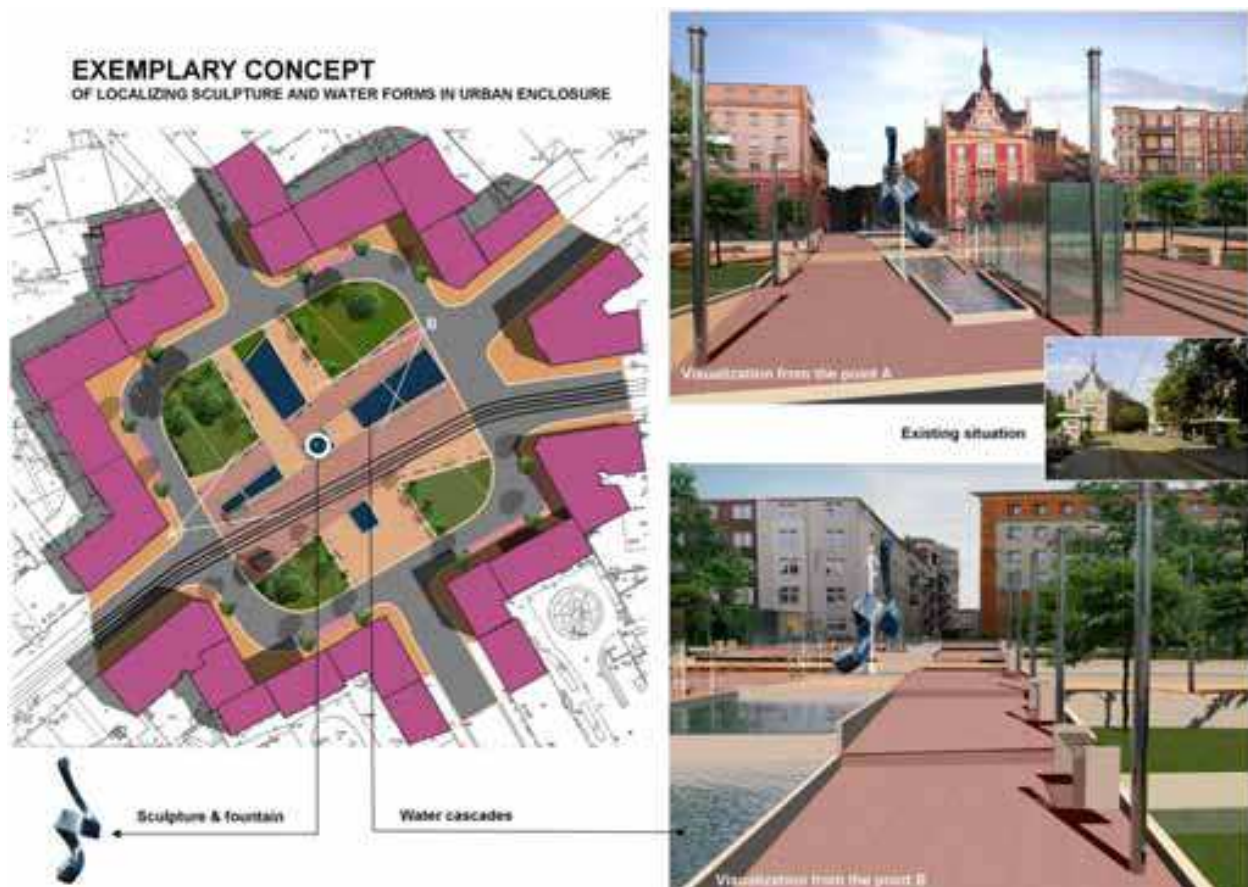


Fig. 19. Exemplary concept of localizing a sculpture accompanied by water forms in urban enclosure – C. Ratajski Square in Poznan

7. Conclusions

Localisation, form and function as well as transfer of contents of artworks play an important role in the process of raising the attractiveness of public spaces and making townscape more individual. It can be a crucial element of visual information system, local community integration factor and the way of building up the identity of public domain.

The presented analysis concentrates mostly on possibilities of artwork location in the most valuable public places. However, another important field of further research seems to be **‘wounded-spaces’ regeneration**. In the research on downtown structure only ‘visually-wounded-spaces’ were singled out. A number of ‘socially-wounded-spaces’ suffer from a phenomenon of identity crisis which shows in the lack of identification of their inhabitants with their place of living. According to the research by British and American specialists, public art can be a significant factor of social integration and activation consequently facilitating the way of perceiving urban space by its inhabitants as their own one, anchored on their mental maps.

The process of transferring public life to virtual reality indicates the need for another stage of research which should be creating a hyper-medial map of Poznan as a modern virtual reflection of multi-layer and multi-aspect processes of perception and recognition of the city space (meta-perception). Its interdisciplinary character would allow the insight both into individual layers of urban structure, districts as well as particular places, buildings and

significant artworks. Interactive *dataspace* (with different layers of the urban structure and network of links to information and images of public space in their historical, present and future shape) should make it possible to add and comment on the information by cyberspace users and use the information in real, physical space. Hyper-media map would allow to assess the recognisability of particular areas and their quality, according to residents and tourists, as well as verify their viewing popularity on the basis of page view numbers. It would also allow to evaluate the existing and appraise the designed artworks' locations in public places thanks to virtual visualisations.

8. References

- Alexander, Ch.; Ishikawa S. & Silverstein M. (1977). *A Pattern Language*, Oxford University Press, ISBN 74-22874, New York
- Appleyard, D; Lynch, K. & Meyer, J.R. (1964). *The View from the Road*, MIT Press, Cambridge MA
- Arnheim, R. (1954). *Art and Visual Perception*, California
- Bańka, A. (1999). *Architektura psychologicznej przestrzeni życia*, Gemini-Print, ISBN 83-901059-3-4, Poznań
- Bennett, S. & Butler, J. (eds.) (2000). *Advances in Art and Urban Futures Volume 1: Locality, Regeneration and Divers[c]ities*, Intellect Books, ISBN 9781841500461, Bristol
- Bonenberg, A. (2009). Cyberspace and spatial identity, *Scientific Journal of Poznan University of Technology "Urban Identity in the Times of Globalization"*, Vol. 18, No. 10/2009, Poznań, pp. 59- 66, ISSN 1507-6407
- Bosky, P.; Jarymowicz, M.; & Malewska-Peyre H. (1992). *Tożsamość a odmienność kulturowa*, Warszawa
- Böhm, A. (2004). *„Wnętrze” w kompozycji krajobrazu*, Wydawnictwo Politechniki Krakowskiej, ISBN 83-7242-303-2, Kraków
- Cichy-Pazder, E. (1998). *Humanistyczne podstawy kompozycji miast*, OKUPK, ISBN 83-911232-1-9, Kraków
- Crinson, M. (ed.), (2005). *Urban memory: history and amnesia in the modern city*, Routledge, Routledge, ISBN: 978-0-415-33406-8
- Cullen, G. (1971). *The Concise Townscape*, Architectural Press, ISBN 0-7506-2018-8, Oxford, first edition: Cullen, G. (1961) *Townscape*, Reinhold, New York
- Dreiseitl, H.; Grau, D. & Ludwig K.H.C. (2001). *Waterscapes*, Birkhäuser, ISBN 3-7643-6410-6, Basel
- Evans, G. (2008). Cultural mapping and sustainable communities: planning for the arts revisited, *Cultural Trends*, Volume 17, Issue 2, June 2008, pp. 65 - 96 DOI: 10.1080/09548960802090634
- Gallet-Blanchard, L. & Martinet, M.M. (17. October 2002). *Hypermedia and Urban Culture: a presentation on the CD-ROM Georgian Cities*, Centre Cultures Anglophones et Technologies de l'Information CATI, Université Paris-Sorbonne - Paris, Pdf.: <http://computerphilologie.lmu.de/jg02/gallet-martinet.html>
- Gibson, J.J. (1950). *The perception of the visual world*, Boston
- Hall, E.T. (1959) *The Silent Language*, Polish edition: (1987). *Bezgłośny język*, Wyd. PIW, ISBN 83-06-01325-5, Warszawa
- Hall, E.T. (1966). *The Hidden Dimension*, Anchor Books, ISBN 0-385-08476-5

- Januchta-Szostak A. (2007). Methodology of Visual Art Localization in Public Spaces on Example of Poznan City, *Town Planning and Architecture*, Vol. XXXI, No 1/2007, pp. 29-38, Leidykla Technika, Vilnius, ISSN 1392-1630
- Kwon, M. (2002). *One Place After Another: Site-Specific Art and Locational Identity*, MIT Press, ISBN: 0-262-11265-5, Cambridge MA.
- Lacy, S. (1995). *Mapping the Terrain: New Genre Public Art*, Bay Press, Seattle.
- Lynch, K. (1960). *The Image of the City*, MIT Press. ISBN-13: 9780262620017, ISBN 0262620014, Cambridge
- McCullough, M. (2004). *Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing*. MIT Press, ISBN: 0262134357
- McLuhan, M. (1964). *Understanding media: the extensions of man*, McGraw-Hill, New York; Gingko Press (2003), ISBN 1584230738, 9781584230731
- Miles, M. (1997). *Art, Space and the City: Public Art and Urban Futures*, Routledge, ISBN 0-203-97311-9, London - New York
- Motloch, J.L. (1991). *Introduction to Landscape Design*, Van Nostrand Reinhold, New York
- Norberg-Schultz, Ch. (1975). *Meaning in Western Architecture*, Polish edition (1999): Wydawnictwo Murator, ISBN 83-912841-0-7, Warszawa
- Patterson, Barry (2005). *The Art of Conversation with the Genius Loci*. Cappall Bann Books. ISBN 186163-1693
- Pearson, L.F. (2006). *Public Art Since 1950*, Osprey Publishing, ISBN 074780642X
- Proshansky, H.M. (1987). *The Field of Environmental Psychology: Securing its Future. Handbook of Environmental Psychology*, D. Stokols and I. Altman, John Wiley & Sons, New York
- Rendell, J. (2006). *Art and Architecture: a Space Between*. I. B.Tauris & Co Ltd., ISBN-13: 9781845112226, London
- Schwartzman, A. (1985), *Street Art*, The Dial Press, Doubleday & Co., ISBN 0-385-19950-3, New York
- Siewczyński, B. (2009). The virtual reconstruction of Poznań city as an instrument of architectural marketing, *Scientific Journal of Poznan University of Technology "Urban Identity in the Times of Globalization"*, Vol. 18, No. 10/2009, Poznan, pp. 67-74, ISSN 1507-6407
- Taborska, H. (1996). *Współczesna Sztuka Publiczna*, Wydawnictwo Wiedza i Życie, ISBN 83-86805-31-5, Warszawa
- Tolman, E.C. (1948). Cognitive Maps in Rats and Man. *Psychological Review*, 55, 4, (July 1948), pp. 189-2008, ISSN 0033-295X
- Tołwiński, T. (1948). *Town Planning*, Vol. I, *Development of the Town in the Past*, Polish third edition: Trzaska, Evert & Michalski, Warsaw
- Trieb, M. (1977). *Stadtgestaltung Theorie und Praxis*, Braunschweig: Vieweg
- Tribe, M. & Jana, R. (2006). *New Media Art*, Taschen, ISBN 3822830410
- Tuan, Y.F.; Mercure, T (2004). *Place, Art, and Self*, University of Virginia Press, Santa Fe, NM, in association with Columbia College, Chicago, IL. ISBN 1930066244,
- Wejchert K. (1984). *Elementy Kompozycji Urbanistycznej*, Arkady, ISBN 83-213-3151-3, Warsaw
- Wood, D.; Fels, J. (1992). *The Power of Maps*, Guilford Press, ISBN 0898624932. OCLC 26399801, New York



Cognitive Maps

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