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THE ROLE OF ARTIFICIAL LANDSCAPE IN RECREATIONAL PARKS — SELECTED EXAMPLES

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Summary

Artificial landscapes are the product of human thought and arise as a result of human activities, in contrast to the landscapes which arose naturally. Architectural landscapes for whom the archetype was nature were built in different historical periods over the centuries and in different cultures.

The leading role in building landscapes was played by China. For thousands of years, artificial landscapes were the expression of a particular Chinese conception of the universe. The fashion for Chinese gardens came to England with English sailors and quickly spread over the country. In the eighteenth century, the English created artificial landscapes, usually in devastated areas, as a counterproposal to the existing French style. Copied and modified, the English landscape garden style has become well known around the world and a permanent English contribution to the art world.

In the eighteenth and nineteenth centuries, English landscape garden style has spread across Europe and the United States. American landscape architect, Frederick Law Olmsted built Central Park and twenty years later Prospect Park in New York City. Both are the city's most recognizable English landscape garden style parks in the United States. In the twentieth first century, the idea formed by Frederick Law Olmsted is further developed by Michael Van Valkenburgh, the author of three of New York City's parks with numerous references to the English landscape garden style.

Keywords

English landscape garden • artificial landscape • recreational parks

1. Introduction

The subject of the article is the role of artificial landscape in recreational parks inspired by an English landscape garden, known in Europe and the United States from the eighteenth to twentieth century. In the twenty-first century the current English Garden is represented in a modified form in the work of landscape architect Michael Van Valkenburgh. He is the author of three recreational parks laid out between 2000 and 2015 in New York and New Jersey. These parks have been created on an artificial surface with entirely man-made landscapes.

The architectural objects, the archetype for which was nature, were created in various historical eras and cultures. These works, the results of joint efforts of architects, engineers and gardeners, are situated in a niche between architecture, land-scape architecture and gardening. The artificial landscape, in the context of land-scape parks has not been the object of scientific research. There are many studies on English parks but the question of artificial landscape is ignored. Historians of architecture are not always aware how "artificial" are the origins of naturally looking slope or river. "Even today some historians are reluctant to regard English style architectural objects as works of art of a specific type. Persistence of such attitudes stems from the fact that on the surface these objects look more like works of nature than the work of man" [Mitkowska 2013].

Artificial landscape was an important element of English landscape gardens and the style found its continuation, in the nineteenth century urban recreational parks. In unattractive and/ or degraded locations (like Central Park or Sofiyivsky Park), these parks were created as a designer's vision transferred to the terrain. This is the case of, already mentioned, parks by Michael Van Valkenburgh, designed as landscape creations, entirely composed by man. The examples below show how the role of artificial landscape in landscape parks changes, depending on a place and time.

The author has been studying the subject of artificial landscape in English land-scape gardens since 1988. That year, while managing a project of restoration of architectural objects in Catherine Park in Tsarskoye Selo, she came across a landscape object called the Grand Caprice [Wilczkiewicz 2012]. Specific artificial landscape of English parks was the subject of her research as carried out also in the United States, on the example of Central Park and Prospect Park [Wilczkiewicz 2007, 2013, 2014]. The English style is continued in modern American recreational parks designed by Michael Van Valkenburgh [Wilczkiewicz and Wilczkiewicz-Janas 2014].

2. Artificial landscape in the culture of China and Japan

China has played a key role in the domain of building artificial landscapes. "Relative insignificance of plants is the most distinctive difference between garden art of China and that of the Western world. A Chinese garden is not too green and it is rather built than planted. Stones and water, of great symbolic meaning, are its most important components" [Hobhouse 2002]. For thousands of years, artificial landscape have been en expression of a special, Chinese vision of the world. The Chinese, wanting to become immortal, built landscape in the likeness of gods. The less well-off built artificial mountains and rivers to imitate nature in their gardens. First a drawing or

¹ "The Chinese cherished nature and while making their parks and gardens were copying it. Since time immemorial the Chinese were moved by stories about paradise on a mountain, which was situated on an island and inhabited by mysterious 'Immortals' – charming beings gifted with eternal youth. The legend inspired consecutive emperors to create landscape with islands and lakes in the hope of luring the immortal guests' [Hobhouse 2002].

a model was made which served as the plan for the artificial landscape. Then the site was planted, bridges and garden houses were added. In the seventeenth century English ships arrived in China and thanks to the sailors, artificial landscape became popular in Europe.

The art of building landscape is also present in the Japanese gardening tradition, where "artificial" Zen gardens imitate nature by means of inorganic matter (sand, stones, water) and have few plants. The Japanese philosophy of *wabi-sabi* ("nothing is permanent", "nothing is completed", "nothing is perfect") reflects nature in constant motion. Landscapes changing under the influence of elements (floods, earthquakes, tsunamis) in the face of which man stands helpless. The only thing that can be done is to preserve the existing landscape – on drawings, models or by creating it in gardens. And due to the space limitations for Japan (is not a particularly large country) they miniaturized nature. The fragments of nature were composed on small areas. The ground was covered with sand, the stones were laid out, and small trees were planted (*bonsai*). To make the garden look bigger the principle of *shakkei* or borrowed scenery was applied [Hobhouse 2005]. It consisted of incorporating background landscape into the composition of a garden.

3. Landscape creations in English gardens

The fashion for Chinese culture arrived in England together with drawings of Chinese gardens they were characterized by symmetry. The origins of the English style, like origins of Chinese gardening art, stem from poetry and landscape painting (Figure 1).

The immediate cause of creating now famous landscape parks (complemented with artificial landscape) was deforestation resulting from the demand of building ships, traders and warships.² In these gardens they designed and built rockeries, ravines and streams which equally contribute to produce the final effect conceived as a supplement to the natural landscape. Gardens laid out according to paintings representing natural landscapes became a counterproposal to the existing French style. Copied and modified, the English landscape garden style has become well known around the world and a permanent English contribution to the art world. The new landscape parks resembled so much nature that it was hard to tell which was made by man and which by God. In places where the terrain wasn't too attractive to designers, artificial hills, rockeries, streams and ponds were constructed. The designer, Sir Lancelot Brown earned his nicknamed "Capability" because his job consisted in assessing lands usefulness, at the initial stage of laying out the park or garden. We know that true works of art in the domain of artificial landscape could

In the seventieth century England was engaged in naval warfare and English shipyards were running at full steam. The demand for wood for constructing warships led to the destruction of forests in the whole country. The situation is described by A. Mitkowska in the following way: "The ideas of landscaped parks and gardens quickly found favourable conditions in then deforested England" [Mitkowska 2013].

not be distinguished from the natural ones. Some experts believe that Lancelot's works are most representative of this style [Hobhouse 2005].



Source: Kluckert 2005

Fig. 1. Chinese Pavilion, Georges-Louis, Le Rouge, Détail des nouveaux jardins à la mode, 1784, cahier XII

One of the best known example of many landscape parks, constructed artificially on a specially prepared terrain is Birkenhead Park, in England. It was one of the first urban parks created in Britain. The town council of Birkenhead purchased marshy, exceptionally unattractive land and chose Joseph Paxton to design the park. The construction work took five years. Several miles of drainage pipes were lain to dry the marshy land. Slopes, terraces and lakes were created and then trees and plants were planted. The results were admired by the town dwellers and by guests from abroad. Frederick Law Olmsted³ during his stay in England, paid a visit to Birkenhead Park and was greatly impressed by Paxton's work.

³ Frederick Law Olmsted wrote about the aesthetics and social values of Birkenhead Park: "Five minutes of admiration and a few more spent studying the manner, in which art had been employed to obtain from nature so much beauty, and I was ready to admit that in democratic America there was nothing to be thought of as comparable with this people's garden".

In the nineteenth century the English landscape garden style reached the United States along with immigrants settling on the East Coast. Central Park in New York City, designed in the English landscape garden style, opens a new era in American land-scape architecture. It was the era of building recreational parks in densely populated cities. These were for the working class, who could not afford holiday trips or country houses. "Big" urban parks were created in the nineteenth century as a reprieve and recreation places for rapidly growing city populations. They had a romantic English garden style, an ideal landscape with scenic meadows and naturally looking greenery. The most famous of them is Central Park, in New York City [Wilczkiewicz 2013]. The place chosen by the New York authorities for the future park consisted of marshy and stony wastelands [Homberger 2005], devastated by their former usage, that of farms raising pigs. The designers of Central Park, Frederick Law Olmsted and Calvert Vaux, charged with the task of constructing the landscape, totally redesigned the terrain, creating new elements of natural landscape. With time, these objects integrated with the surroundings and now it is difficult to tell which of them are formed artificially.

Central Park is entirely a man-made object, a masterpiece of artificial landscape with its artificially built slopes and streams – supplied with water from municipal waterworks – running among the rocks. Water, in naturally looking lakes and scenic ponds comes from the same source as water filling New Yorkers' bathtubs [Wilczkiewicz 2013]. Water elements in Central Park were marshes, like the pond near 59th Street. The bottom of the pond is strengthened with reinforced concrete. The water in the pond comes from a rain drain system and its additional source are municipal waterworks. The naturally looking outflow is in fact a concrete overflow regulating the water level. The banks are reinforced by synthetic clay to keep the scarps stable and the pond water-resistant.

Within the area of Central Park, a very picturesque water systems has been created,⁴ like the one starting from a pond near 100th Street. The pond was created out of a stream that flows form West Manhattan. Parallel to the stream, there runs a walking track, one of the most unusual in the whole park. Following the track, and passing by the waterfall on the way, we arrive at Huddlestone Arch (Figure 2). Strolling among rocky waterfalls and admiring the flow of the stream, we have an irresistible impression that we are at the heart of picturesque, mountainous, natural landscape rather than in the middle of Manhattan.

Sara Cedar Miller writes: "Many people assume, that the Park is the last remaining tract of Manhattan's natural land forms. Horace Greeley, the famous newspaper editor, went to the Park shortly after it was opened and exclaimed: 'Well, they have let it alone better than I thought they would'. Greeley was entirely wrong. Central Park, in the 1850's was America's greatest example of the marriage of aesthetics and engineering. In this, it has always been a glorious paradox: above ground it is designed

⁴ F.L. Olmsted was a master of creating naturally looking ravines and gorges in which "artificial" streams were flowing. Apart from Central Park we can admire his artistry observing a land-scape of his creation, resembling the Adirondack Mountains, in Prospect Park. For more see Wilczkiewicz [2015].

landscape that copies nature so closely that it disguises its own fabrication and below ground, it is an efficient technological system" [Miller 2005].



Photo by Wilczkiewicz 2005

Fig. 2. Central Park in New York City, USA. Fragment of North End: Huddlestone Arch

Another example of Olmsted's artistry in Central Park is the Ramble. This 36 acre area was created as one of the first and (except for rocky platform on which it was placed) is entirely man-made [Miller 2005]. The designer intention was to make the Ramble a "wild garden", imitating natural landscape in which one can get lost in the thicket of trees and bushes. Over the years, this fragment became so natural that only a handful of strollers are aware that they find themselves in artificially created surroundings.

Modern architecture theoreticians know that Central Park is an artificial creation, as proven by R. Koolhas statement: "If Central Park can be read as an operation of preservation, it is, even more, a series of manipulations and transformations performed on the nature 'saved' by its designers. Its lakes are artificial, its trees (trans) planted, its accidents engineered, its incidents supported by an invisible infrastructure that controls their assembly. A catalogue of natural elements is taken from its original context, reconstituted and compressed into *a system of nature* that makes the rectilinearity of the Mall no more formal than planned informality of the Ramble. Central Park is a synthetic Arcadian Carpet" [Koolhas 1994].

We may admire F.L. Olmsted's talent for creating landscape, as also done in Prospect Park, built 20 year later. The project of Prospect Park was based on natural land configuration, but the elements of artificial landscape are there also. To achieve the desired effect of land features Olmsted made a detailed topographical map of the terrain [Colley 2014]. Using the map, the workers mixed masses of soils, producing the effect intended by the designer: shapes of walking tracks, bridges and lanes for vehicles. Many of the walking tracks are situated on elevations to give the park as many broad views as possible.

Careful drainage of the area was carried out, which moves water to a natural lake – The Lake. Existing plant material was also replaced with a new one. Old trees were removed, and new ones were planted in their place. Some specimen were moved, by a special machine, to other places. Like in Central Park, F.L. Olmsted planted many exotic trees and bushes, mainly imported from Europe. Prospect Park has fewer artificial elements than Central Park. It seems that the original site of the former was less devastated than that in Manhattan, it did not require such a deep renovation. Also, smaller financial means for the construction of the park could be a factor here. The designer restricted himself to building one fragment of an artificial landscape – The Ravine [Wilczkiewicz 2014]. For the designers The Ravine was the heart of the park and the place intended to evoke Adirondack Mountains landscape. The area of The Ravine is the most diverse topographically in the whole park and reflects a vision of creating green mountainous landscape in the center of Brooklyn.

4. Artificial landscapes in European parks

At the end of the eighteenth century, the English garden style spread across Europe. Parks called *jardins anglais* or *jardins anglo-chinois* were created. Not all foreign adaptations of English parks were good. Continental versions were often strange reflections of the original and sometimes, they were created as adaptations of baroque gardens. Writers and politicians like J.-J. Rousseau, J.W. Goethe, T. Jefferson (visited English parks in 1785), German land owner, duke Franz von Anhalt-Dessau or prince H. von Puckler-Muskau from Silesia encouraged designers to create English parks, sometimes forgetting about moderation and making on relatively small sites orgies of winding paths, bridges or ruins [Hobhouse 2002].

The monarchs of northern countries, such as Sweden or Russia, wanted to have vast English lawns in the new English style [Hobhouse 2002]. Among lakes of irregular shape and gentle slopes, their designers built Chinese gardens and arbours with characteristically bent roofs. Catherine the Great was a fervent admirer of the new style. In 1772 she wrote to Voltaire: "I now love to distraction these gardens in the English style" [Hobhouse 2002]. She invited English architect Charles Cameron to participate in the development of Catherine Park in Tsarskoye Selo. The sculpture gallery called Cameron Gallery, Hanging Garden and landscape object or the Grand Caprice⁵ are

⁵ Catherine, being a practical person, at first rejected the idea of building an expensive object of 110 m long that served no function. Cameron was trying to convince her to it, and czarina, after long hesitation, finally gave it up saying: "Let it be my caprice." http://eng.tzar.ru/museums/palaces/alexander_park/new_garden/caprice (accessed: 27.11.2015).

of his design. The latter was built perpendicularly to a road (Pricaprisovaya), by which carriages were leaving the palace area for the city. The Grand Caprice is a sculpture situated on a flat ground and besides adding variety to the park's landscape it fulfils no other function. In the times of Catherine the Great, it was used as a beauty spot from which a panorama of the park could be admired (Figure 3).



Photo by Wilczkiewicz 2008

Fig. 3. Catherine Great Park in Tsarskoye Selo. Grand Caprice, St. Petersburg, Russia

The romantic style reached Poland in 1870' and became a canon of fashion for Polish aristocrats initiating creation of parks and gardens in their residences. English parks emerged around magnates' palaces. The compositions in an informal style were created on the initiative by Izabela Lubomirska (Mokotów) and Izabela Czartoryska (Powązki and Puławy). An English park was also created by the residence of Kazimierz Poniatowski at Solec and of Michał Poniatowski at Jabłonna. Among them, the park Arcadia at Nieborów, initiated by Helena Radziwiłłowa, stands out as one of the best in this genre. All these parks were created by Szymon Bogumił Zug, an architect and landscape architect active in 1870' and 1880' in Warsaw. The designer of many classicist buildings and the author of many landscaped parks and gardens [Kwiatkowski 1971]. He represented an early romanticist style. Szymon Bogumił Zug was most of all an architect, an author of many Warsaw buildings, and his work as a landscape architect consisted more in supplementing his English style parks with buildings rather than landscape objects.

In Poland, the English style was distinguished by a fashion for landscape parks and gardens, enriched by symbolism referring to antiquity or tinged with patriotic elements (depending on the political orientation of their owners). They do not have many landscape elements and those rare ones are mostly water systems (ponds, streams or devices supplying park fountains). It may partly be the result of the attractiveness of residences' surroundings which did not require restoration but only development and management. Other landscape elements in these parks were constructed out of owners' snobbery and the will to keep up with the fashion rather than from the need to make the area more attractive.

Among the Polish eighteenth century English style landscape parks Sofiyivsky Park, (in Polish "Zofiówka"), in Uman (now in Urkaine) clearly stands out. The park was built from scratch, on the initiative of Polish magnate, Szczęsny Potocki. This was as a gift for his wife, Zofia Glavani Potocka, called the Beautiful Bithynian. Zofiówka is an example of a European landscape park, the whole area of which is artificially formed. In terms of amount of ground and hydraulic works, it can be well compared to Central Park built fifty years later. "It was undoubtedly after her visit in July 1795 in Arcadia (own by Helena Radziwiłłowa), on the way back from Hamburg, when Zofia began to dream about her own garden" [Brzozowski and Jagiełło 2015]. The area chosen by Szczęsny Potocki, originally with no trees, did not arouse enthusiasm. Stanisław Trembecki described it as "originally meagre and barren hillocks" [Trembecki 1883].

Its designer and builder, Ludwig Metzell created a real masterpiece of artificial landscape in an originally scenically unattractive ravine of the Kamionka river. The task, with which Metzell was charged, was realised in nine years. It mainly consisted in changing the lie of the land which required moving large masses of earth and huge stone blocks that were used to form numerous rock debris and caves. These stone compositions were harmonized with an ingenious water system which is clear proof of the author's artistic sensitivity and his perfect knowledge of hydraulics. A small amount of water supplied by Kamionka had to be sufficiently accumulated to keep water attractions working. Therefore, two water bodies were dug and level differences between them allowed for the creation of fountains, cascades and waterfalls [Trembecki 1883, after: Brzezowski and Jagiełło 2015].

Also, Metzell's work was a complex of caves scattered in various places of the garden, which made the impression of being created by nature. They had names from Greek mythology (Diana's Mirror, Calypso's Cave), where the designer, using various measures, produced a dramatic effect of the place, enhancing the impression of dangerous "wildness". Another cave in the park (Cave of Fear and Doubts) arouses anxiety due to its huge boulders, amassed in a way that seems to defy the laws of gravity. It was undoubtedly Metzell's genius that allowed him to create the landscape park well ahead of its time in terms of design. This kind of narration, aimed at engaging intense emotions of the visitors so that it permanently remains in their memory, resembles theme parks created in the United States in the middle of the twentieth century.

Sofiyivsky Park cannot be compared to any European landscape parks of English style created in the eighteenth century. Evidently, Metzell's idea was to create an almost naturalistic composition, only faintly revealing man's intervention. That is why the elements typical of sentimental garden of the time are hardly represented [Brzezowski and Jagiełło 2015]. The enormous wealth of Szczęsny Potocki must have also contributed to the designer's success. To create artificial landscape of that scale, as was done in Sofiyivsky Park, required massive financial expenditure.

English landscape parks were built in Poland throughout the nineteenth and the early twentieth century but none of them equalled Sofiyivsky Park. However, Warsaw's Skaryszewski Park built in the early twentieth century is worthy of note. It has elements of artificial landscape (two ponds connected by a stream) and the artificial waterfall situated on a weir formed with the left soil over after digging the pond. The park was created on the site of a former pasture (village of Skaryszew) between 1908 and 1922. The way that landscape interiors and bridges details were created seem to have been inspired by Central Park.

5. English landscape park tradition continued in the twenty-first century

The tradition of English parks with artificial landscapes is continued in our times. In the early twenty-first century, on the East Cost of the United States, there emerged a landscape architect who "builds" New York parks in the tradition of English landscape parks. Frederick Law Olmsted is his idol, as an architect who in designing landscapes used technical capabilities of his era. In 2003, Michael Van Valkenburgh, adopted a small space between residential buildings creating Teardrop Park to the delight of demanding New Yorkers [Wilczkiewicz and Wilczkiewicz-Janas 2014]. The site of the park was originally completely flat and the lay of the land was artificially changed (Figure 4). Landscape elements of the park were given poetic names: Beech Grove, the March, Shadbush Hill. The magic of the place lets its users forget about the busy nearby streets of Manhattan. The unusual charm of Teardrop Park made it a favourite place for the inhabitants of the neighbouring buildings and other Michael Van Valkenburgh designed New York parks and urban spaces. His works are not only inspired by Olmsted but also by the environmental principles of John L. McHarg, who respects the idea of sustainable development. In his parks, indigenous plant species can survive hard conditions of a scorching New York summers and the soils are selected to maintain plant life without the use of fertilizes.

Another of Valkenburgh's parks, Pier C Park, is an artificial island located along the Hudson River Waterfront Walkway in Hoboken, New Jersey. Apparently constructed in imitation of islands in English parks. On a concrete platform, connected with the mainland by piers, an artificial landscape was constructed according to the demands of an inhabitant of a twenty-first century city. There is a playground, a promenade, a bridge for fishermen and beaches and toilets [Wilczkiewicz and Wilczkiewicz-Janas 2014].



Photo by Wilczkiewicz 2010

Fig. 4. Teardrop Park in New York City, USA – slide



Photo by Wilczkiewicz 2015

Fig. 5. Brooklyn Bridge Park in New York City, USA – "artificial river"

New Yorkers took a liking to Valkenburgh's artificial meadows and hills located in the middle of the city and entrusted him with a park project that was planned, in the place of old docks on the East River (Brooklyn). Between 2005 and 2015 six platforms were created as part of Brooklyn Bridge Park (Figure 5). On ferroconcrete piles stuck in the river bed, a construction system is fixed, on which outside layers are placed [Wilczkiewicz and Wilczkiewicz 2014]. In the construction system, reservoirs for rainwater are hidden which are used for irrigation of plants growing on the surface of the construction. Six platforms are connected by a promenade running along the East River shore line which was modified and formed by Valkenburgh. Between these platforms, small gulfs were designed offering easy access to water.

Michael Van Valkenburgh's parks are constructed according to environmental principles, underlying modern landscape architecture. The dominant element of his parks are artificial landscapes and the architect idea is that his parks could function without man's help.

6. Conclusions

The above analysis shows that artificial landscape in recreational parks may play various roles depending on local conditions.

In parks situated in attractive locations, there is no need to create landscape and have architects introduce landscape elements mainly for compositional purposes, as it is in NYC's Prospect Park or Skaryszewski Park in Warsaw. The importance of artificial landscape is immense when a park is deprived of scenic values or its site is devastated by the previous use – as it was, in Central park and Sofiyivsky Park. A landscape composition is created, an artificial one, which is a challenge to an architect and a contractor. Both parks were entirely created, as an architect vision transferred onto the terrain. The artificial landscape, also played a crucial role in Michael Van Valkenburgh's parks, which were conceived entirely man-made landscape creations.

Construction of artificial landscape parks is costly and takes years. The construction of the English park Birkenhead took fives years. Sofiyivsky Park was finished in ten years and Central Park after almost twenty years. The costs depend on the size of the park. Modern recreational parks constructed on the basis of an artificial landscape are expensive, therefore only a wealthy countries can afford them, such as the United States or the Emirates.

The artificial landscape objects constructed in Europe, in the twenty-first century emerge in special conditions, in places devastated by former users, and in cities. These are antidote for concrete urban squares. In the twenty-first century the popularity of artificial landscape is related to the postulate of sustainable development. Parks laid out on a devastated area are used by city dwellers and spatial objects conceived as landscape creations, introduce green form into stone urban space. The landscape in recreational parks changes depending on the era of its construction. Evolving from Chinese and Japanese gardens, through English landscape gardens, architecture

landscape objects imitating nature today are becoming urban architecture objects on a par with new buildings.

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