fig. 1 D. Libeskind, Maldoror’s Equation; source: idem, Countersign, London 1991, s. 29
Practicing Theory. Concepts of early works of Daniel Libeskind as references for real architecture*

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Introduction
Since 1998 when the Felix-Nusbaum-Haus was close to completion, and 1999 when the Jüdisches Museum in Berlin was built, Daniel Libeskind’s career as an architect of a numerous prestigious and and sometimes also large-scale buildings started. Some of those structures bear a certain resemblance in using diagonal lines or blocks with sharp-cut edges, but at the same time reveal the designer’s efforts to create original and unique shapes. It can therefore be concluded that forms in those buildings are not limited by principles of any prescribed appearance. The source for such an architecture is not a set of preliminary approved outlines of blocks. His another regularly occurring proceeding is annotating the buildings with explanations linking an adopted form with particular contents. Also in this case there is a certain peculiarity consisting in his purely individual creation of stories which interpret visual formulas. This peculiar freedom to build narrations concerning structures and arrangements of blocks was received as understandable and obvious, though such a freedom of interpreting one’s own accomplishments was a novelty in architecture. The architect did not refer to formerly known associations, but fictionalized his own compositions.

This approval for Libeskind’s architecture blurs the fact that silhouettes of his constructions are often excessively expressive, and fictitious contents attributed to blocks are not their fully logical descriptions. So what prompts public and private investors on various continents to order those projects and count on their distinctive characters? It would seem that they should tend to more balanced solutions, and also responses of the public response should be more skeptical. Reasons for which Libeskind’s activity wins over the both, are not understandable, especially
when we take into consideration the designer’s deep criticism of traditional rules of architecture. That favour cannot be explained merely by the fact that sources of this architecture lie in a vanguard system of concepts politically against traditional societies. Dynamic shaping of forms whose natural muteness is overcome by a kind of apocrypha referring to literary, philosophical, or historical sources has its roots in a group of early works of Libeskind among which researchers indicate especially the two series of drawings – Micromegas: The Architecture of End Space (1979) and Chamberworks: Architectural Meditations on the Themes from Heraclitus (1983), the three machines referred to as Three Lessons in Architecture, designed for the 1985 Venice Architecture Biennale, the project of multifunctional building for the 1987 Internationale Bauaustellung Berlin, and the commentaries for his winning project for the Jüdisches Museum in Berlin (1989). The thesis that included concepts are references for later solutions was confirmed by Libeskind in his conversation with Paul Goldberger when he stated:

The series Micromegas and Chamberworks, as well as my machines, have a direct bearing on what I do today. They have embedded themselves in my own experience, and I use them continuously within my present architectural work. In fact, these are the scores through which I orchestrate present commissions.¹

Ervi Ioannidou defined Three Lessons in Architecture as “the practice of theory.” This definition could refer also to his earlier works, but even more importantly it might be treated as a presage of a reverse situation when completed objects will be understandable only as a “built theory.”² The architect also describes his proceedings as situated on the edges of the present divisions: “I don’t believe in the split between theory and practice, just as I don’t believe in the immunity of architecture from its social and economic reality.”³ Yet statements of this type do not provide adequate knowledge about the complex relationship between various groups of Libeskind’s works, which could be explained only by more detailed analysis.

Micromegas
The portfolio with 10 drawings, created by Libeskind during his work as a lecturer in the Cranbrook Academy of Arts in an American town Bloomfield Hills, was given a title referring to the philosophical tale of Voltaire from 1752 telling adventures of Micromegas who, travelling through the universe encountered the Earth where he engaged in discourses with scholars. A character of Micromegas’ conversations with terrestrial thinkers showed difficulties in transgressing the established knowledge and rules of thinking conditioned by historical circumstances. The quotation from Voltaire told about Micromegas: “Towards his 450th year, near the end of his infancy, he dissected many small insects

³ P. Goldberger, op. cit.
no more than 100 feet in diameter, which would evade ordinary microscopes.”

It can be added that his treatise on them brought him into trouble, and his allegations that the substantial form of fleas on Sirius is of the same nature as that of snails gave rise to suspicion that such thoughts are affected by heresy. After a trial, lasting two hundred years – he was ordered not to arrive on the court of his sovereign for eight hundred years. The persecution have not done a great impression on the persecuted, but become a beginning of his cognitive adventures.

All this story can be easily transferred on the content of the portfolio: the drawings violate habits, his author expects obstruction on the side of his professional milieu, but potential persecution – travelling around the world, taking posts of a lecturer on over a dozen universities, engaging in discourses with thinkers equally unusual as he himself – do not bother him too much. That new graphic version of the acts of “small-big” Micro-megas should be complemented by adding information that, despise the passage of several decades – with a few exceptions – it was never properly commented on, and still its statements are completely incomprehensible to most architects. This is despite the fact that an expository essay was attached to the drawings. And this essay is worth to devote some attention to. Well, when the drawings were presented at an exposition in the London Architectural Association, they were accompanied by a catalogue with the text En Space beginning with a quotation from August de Villiers de L’Isle Adam’s novel entitled The Torture by Hope. In this tale Pedro Arbuez d’Espila, pursuing Aser Arbanel, a rabbi oppressed by the Inquisition, created for him an illusory chance to escape during which the fugitive stumbled upon his oppressors. But when the threat past, the rabbi noticed a pattern on the wall of the dungeon which he read as a reflection of his oppressor’s sight. The words quoted at the beginning of the essay and reading: “it was the Inquisitor’s eyes reflex, still preserved in his pupils and refracted in two spots on the wall,” spoke of the habit of perceiving any systems as imitation of reality, which is characteristic of the Western culture. This half sentence aptly sums up a reflection on complex relations between various systems of signs and reality, which spread in those years, and was inspired, inter alia, by philosophy of Jacques Derrida, this making a literary source again a starting point of reflections on the nature of architectural drawing shows the assumption of various sources of architecture which certainly do not focus on meeting the needs of utility, strengthening sustainability, and exposing aesthetic.

Libeskind’s profession was transformed from the field of building into a kind of language and literature. In the titles of the drawings, oxymorons (Vertical Horizon) or other similarly paradoxical combinations (such as Arctic Flowers) apperead, and the eighth one (Maldoror’s Equation [fig. 1]) contained another literary reference. This time a reference to Songs of Maldoror, the poetic prose by Comte de Latremount, whose hero, by the power of his imagination, enlivens the richness of language, without ceasing to admire mathematics:


Arithmetic! Algebra! Geometry! Imposing trinity! Luminous triangle! He who has never known you is without sense! He merits the ordeal of the most cruel tortures for in his ignorant carelessness there is a blind contempt. But he who knows you and appreciates you desires nothing more of this world’s goods, is content with your magical joys and, borne upon your somber wings, desires nothing better than to ascendant spiral, towards the curved vault of the heavens. Earth offers him nothing but illusion and moral phantasmagoria. But you, O concise mathematics, by the rigorous fetters of your tenacious propositions and the constancy of your iron-bound laws you dazzle the eyes with a powerful reflection of that supreme truth whose imprint is manifest in the order of the universe.

The drawings from the series Micromegas posed a difficult task in front of commentators. The main aim of their analysis was to point out historical origins, which led to comparing Libeskind’s works to Maurits Escher’s graphics,7 El Lissitzky’s Prouns, Joseph Albers’ drawings, or Al Held’s paintings.8 Micromegas – overlapping presentations, complicated as labyrinths, of lines and planes – were, however, only externally similar to the works of the above-mentioned authors. In contrast to them, roots of Libeskind’s entangled figures were in his reflection on the actual position of drawing in the field of architecture. Libeskind stated that the historical development of architectural drawing brought it to the level of merely utilitarian tool for creating buildings, depriving it of its independent role.9

We can, however, restore for this kind of activity the status of the formula of architectural thinking, in particular that of reflection on the deeper sources of forms. In Libeskind’s view, the primary part of work of architect, belonging to the sphere of feelings, intuition or experiences, is already structured by geometry, or contains a kind of unformed order which reflects then in more objectified and formalized forms.10 Problem is that externalized “geometries of experience” lose their precious qualities of concrete and detail in processes of generalization. Libeskind’s sketches imposed on themselves the task of saving “the other” of architecture and becoming an instrument capable of revealing new areas of reality, becoming realizations maintaining a relationship with the confused and impure side of imagination. In this system, imagination and formalization were not separated but treated as two aspects of the same act of creation that consequently must include conflicting values of darkness and brightness, voluntariness and non-voluntariness. A place where feelings and concepts converge cannot be clearly identified: it is located next to what is usually referred to as the place; it is a kind of borderline. It allows to put interventions done by Micromegas in one row with Derrida’s “exploration of the margin.”11 Thus, these drawings serve no purpose except an intellectual game in creating “spaces which are nor physical nor poetic.” Libeskind declared that what inspired him was the late work of Edmund Husserl, Die Frage nach dem Ursprung der Geometrie als intentional-historisches Problem (1936)),12 but the terms

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8 R. Evans, “In Front of Lines that Leave Nothing Behind,” AA Files 1984, no. 6, p. 90.
10 See ibidem: “I am interested in the profound relation which exist between the intuition of geometric structure as it manifests itself in a pre-objective sphere of experience and the possibility of formalisation which tries to overtake in the objective realm.”
like “the other” and “exploration of the margin” indicate his borrowing from the philosophy of Derrida, who, at the beginning of his road, devoted several works to Husserl, including his thesis *Le problème de la genèse dans le philosophie de Husserl* (1954) and the comprehensive introduction to the French edition of *Die Frage nach dem Ursprung der Geometrie* (1962).\(^\text{13}\) Pointing by the architect to the impossibility of fully distinguishing between the initial intuition of a shape of potential object and its realization can be treated as an attempt to reflect on the indelible state of tension between intention and fulfilment. Such intuition was inspired by the philosophy of deconstruction and influenced the mutual contamination of theory (origin, history) and practice (building), which was characteristic of his later works.

**Chamber Works**

*Chamber Works: Architectural Meditations on Themes from Heraclitus*, 28 ink sketches presented in October 1983 in the London Architectural Association School of Architecture [fig. 2] put critics before even more difficult task than *Micromegas*.\(^\text{14}\) The earlier works seemed to have artistic precedents, but *Chamber Works* did not. The greater part of attempts to explain them emphasized the impossibility of understanding these works. In a carefully edited catalogue of the exposition they were included as many as five essays on the exhibited works and all of them, including the text of Libeskind, showed the resistance of the works against attempts of interpreting them. Even over a dozen years later, in his introduction to the extensive monograph of Libeskind, Jeffrey Kipnis evoked his frustration and annoyance when asked to write analyses of *Chamber Works*:

> Other than seeing the obvious – that the set of twenty-eight drawings divided into two sets of fourteen, each series progressing picture by picture from an oriented field to a horizontal and vertical line respectively – I could make no deeper sense of them whatsoever. Whenever I detected what I thought might be a key to unlock their mystery – chamber music, the tracks of a cloud chamber, the philosophy of Heraclitus, arcane numerology, cabala, chess, Rorschach, formal analysis – I was quickly thwarted. The gratings and grids, notional

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elements, zigs, zags, and curlicues all wandered adrift; they made no sense, followed no esoteric structure, constructed no space, added up to nothing, depicted nothing, meant nothing. 

The issue was extensively described by Robin Evans in his essay *In Front of Lines That Leave Nothing Behind*. According to this author, the problem of critics, who were put in front of the sketches of the architect, in particular those ones who used the iconological method, was finding by them contents originating outside of the work itself. 

This type of analysis usually search for genesis, motives and reasons situated deeper than merely the outward appearance of a product. In the case of *Chamber Works* the architects’ drawings were not appropriated by researchers thirsty for the meaning and could be described only in negative terms: as not being signs of external reality, and not only not presenting any shapes, but also not representing any space. Even though they “do not aim toward unity, they are also not based on fragmentation,” and in many respects separated themselves from the history of drawings.

Separation between systems of representation and various aspects of reality, celebrated in linguistics and philosophy for more than a century, well known also in modern painting, and preceded by the discovery of the non-Euclidean geometry made by Carl Friedrich Gauss, was very lately used for the needs of architecture. 

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15 Herman Rorschach (1884–1922) was the Swiss psychoanalyst applying the diagnosis based on the associations of patients associated with cards with ink stains presented to them by the doctor. Some crowded lines in Libeskind’s drawings (particularly in the horizontal VI and VII) could somehow resemble similar stains.


17 R. Evans, op. cit., p. 89.

18 Ibidem, p. 92.
ssible, but not the real," similar to the mathematical one, was initiated only by such actions like that of Libeskind. Moreover, it was posed the question of belonging such activities to the field of architecture. Werner Oechslin responded to this doubt by comparing the author of Chamber Works to Piranesi. Evans remained of the distance between a concept and its realization, typical for this art, in which the decisive factor was always drawing, which proceeded building. In turn, Steven Holl recalled, in a slightly different context, a story that when Louis Sullivan was told about his Troescher Building being torn down, he allegedly said: “After all, it’s only the idea that counts.” So maybe, as Evans says, the drawings from Cranbrook are these one that lie in the center of architecture.

Not necessarily the most important in the piece of art is whether it is comprehensible or not. As Kipnis asks:

If while looking at a drawing, listening to music, or reading a book, you find your mind wandering, flitting over irrelevant details of your life, does that count as interpretation? Do the rambling feelings and thoughts that arise within a work’s ambience belong in any sense to it, though they are in every sense disjointed from it as matter of its history, form, and content? If not, why are we so often grateful to the work for them?

But the pleasure of unreason is very quickly exhausted and the question arises: Could Libekind’s somewhat demonic lines be read in positive terms? Kurt Forster described them as cases of anamorphism, suggestions for a plane turning around a horizontal axis, and then around a vertical one. Would it be so, especially if they would be exposed according to recommendations of Libeskind: the first series horizontally, the second one – vertically? Evans argues with this concept stating that rather they present compressions, extracts from an expanded form of the line in the first examples of each series to a radical simplifications in their final ones. In this dispute, the use of the word “anamorphism” attracts attention. It become, first for Jacques Lacan and then for Jean-Luc Marion, a term describing a kind of compulsion consisting of the movement of consciousness constituting sense in each perceived reality. Also the architect’s sketches should be set in different perspectives for so long, until they will gain sense. For Aldo Rossi, they were a kind of hieroglyphs, but Evans soberly answered that hieroglyphs have to have meaning while in the case of the “chamber works” even their author do not have knowledge on this subject. So we can point to distant parallels in a kind of music compositions of Wassily Kandinsky, architectural sketches of Erich Mendelsohn drawn while listening to phonograph recordings, graphic works of Hans Hartung, Roberto Crippa, Joel Fisher or Sol LeWitt, but in no way it brings us closer to understanding the meaning of dynamically drawn lines in this works. Although their meaning lies in themselves, it has, however, its own history. In this point they coincide with Husserls’ reflections of on geometry, which
stretched over transcendentalism and historicism. Libeskind’s lines are the primary ones. They are leaven and hope, but even the first examples of a new type has to have their past. It is, however, the common past of Libeskind, his nation, the people who survived the extermination (as his parents), and of the lines that act without geometry (just as geometry, since the time of Descartes, can act without lines).

The draftsman himself pointed to the first of such lines quoting in the introduction to his catalogue a fragment from the memories collected by Jaffa Eliach, *Hasidic Tales of the Holocaust*:

What do you suppose that white line in the sky you saw from the crack in the cattle car on your way to Stutthof really was? the interviewer asked Elaine some thirty years later in her Brooklyn home.

You see, in order to see, in order to survive you have to believe in something, you need a source of inspiration, a courage, something bigger than yourself, something to overcome reality. The line was my source of inspiration, my sign from heaven.

Many years after liberation, when my children were growing up, I realized that the white line might have been fumes from a passing airplane’s exhaust pipe, but does it really matter? 29

The part of the catalogue, which collected the drawings, was preceded by the quote from Heraclitus reading “τὰ δὲ πὰντα οἰακίζει κεραυνός” (“the thunderbolt governs all things”), but it only slightly explain his tendency to zigzag lines that anyway intersect with straight ones, which you cannot treat “the sign on the skye,” described above, as an obvious starting point for. The figure of thunderbolt, as Kipnis noted, could regarded as an early form of Line of Fire, the installation crossing impressively the interior of the Centre d’Art Contemporain in Geneve (1988), and then evolves in many projects, including particularly the Jüdisches Museum in Berlin. However, this sign should be rather read than watched. 30 So understood thundering line allows to connect it with one-hundred-letter words-thunderbolts from James Joyce’s *Finnegans Wake*, each of which – in the opinion of critics 31 – was an abstract of achievements of humanity separated into structures, and only this approach enabled Kipnis to treat Chamber Works as “an eccentric history of the architect of straight line.” 32 Within this interpretation the straight line was given a very long history, in which – furthermore – empirical values combined with transcendental ones. In the course of its history, the line, although it has already past into the ideal world, should related historically. The problem with a relation of this nature is that it succumbs to conditions of an individual interpreter. Thus the line that has “14 billion years old, is far from being ancient” and can exist only in a particular mind or concept. “And though the straight line is a culmination of a vast history, each of us must recapitulate that history anew [...].” 33 This contributes to the fact that the re-told line absorbs the qualities of single existence and even becomes identical with it. The line in Chamber Works is both

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30 J. Kipnis, *op. cit.*, p. 11-12.
32 J. Kipnis, *op. cit.*, p. 12.
fig. 4 A. Ramelli, *Le diverse et artificiose machine*, Paris 1588, il. CLXXXVIII
fig. 5 D. Libeskind, Memory Machine; source: idem, Radix-Matrix. Architektur und Schriften, transl. P. Green, manuscript ed. A. P. A. Belloli, Munich 1994, p. 39
an achievement in the world of geometry and drawing of the existence of the author of the works. Finally we have to note that abandoning geometry by Libeskind’s line prompted the author of its interpretation to abandon also his usual sobriety of comment in favor of an attempt to describe the flash caused by it, an omni spark – a younger sister of the thunderbolt.34

**Three Lessons in Architecture: The Machines**

In 1985 Libeskind constructed three machines presented at the Venice Biennale as: Reading Machine (= Reading Architecture [fig. 3]), Memory Machine (= Remembering Architecture [fig. 5]) and Writing Machine (= Writing Architecture [fig. 7]). A surprise of an eventual recipient could be just temporary because manufacturing of machines, particularly military ones, but not only, always belonged to the field of architecture. Extensive fragments on this subject – as Libeskind reminded – were included in writings of Vitruvius and Alberti.35 A task taken by the creator had both intellectual and corporeal characters. The machines were intended to summarize changes which took place in the history of Western architecture, but also to restore sensory experience which accompanied the main epochs of the development of this field. The work could be undertaken only in the situation of awareness of “the end of the architecture.” The architect understand this term as a state of architecture characterized by questioning its very basic assumptions. Undermining the fundamental myths, even though very close to demolishing them, it turned out, however, to restore pleasures of art of building. Instead of designing (projecting) and realizing a building of a particular designation, Libeskind brought his profession to a position of a researcher, but his research was not devoted to a particular object, it was not spinning theories, but an activity which was undoubtedly philosophical – a metaphysical reflection. Furthermore his metaphysical considerations had no former solemnity, but were inspired by essays, by literature rather than academic science. In turn Libeskind’s writing could be distinguished as literature by the attempt to constitute itself on the level of experience, to create a kind of record of sensation from a trip into unknown imaginary areas. Maybe to the land such as Lapute where the similar engine was designed. In many cases the designed machines diverged from encountered oppositions. So, for example: they were metaphysical appliances materializing ideas, thus they diverge from the traditional – since the days of Plato – distinction between what is ideal but unreal and what is real but secondary. Moreover, the architect wanted his machines be placed on the central square of Palmonova, the ideal city by Scamozzi, and that passing inhabitants could move them. In that way metaphysics would gain not only visibility but it would be possible to hear its crackling. No way to tell whether it was serious or not. Reading machine was built manually out of wooden elements. As former craftsmen, the architect with a group of his friends constructed it mostly by daytime, getting

34 See ibidem: “It is obvious that these remarks are far from a studied commentary on Daniel’s drawings, far even from sober interpretation; they are the fumes, bubbles, and sparks the drawing evoke in me.”

up at dawn and going to bed soon after dark “because with candlelight you can't work late.” The idea was to reconstruct the experience of handcraft production of architecture, which, although in the past it could not be fully realized and has been superseded by other forms of production, yet stubbornly stuck in ideas about the act of building. Handcraft production developed together with the culture of writing and maybe Victor Hugo was not right while stating that the cathedral as the book, has been wiped out by the printed book. In Libeskind's system the forms of production are never fully superseded but have no ends, and also have no beginnings. State of the end of architecture, diagnosed in several essays, lasts then since its origin. In the case of the “reading machine” (equal to the “reading architecture”), the handcraft factor was only apparently characteristic to the Middle Ages and it preceded the intellectual factor allegedly characteristic only to the Renaissance. Therefore, it was not a mistake that the machine representing the Medieval type of operation took the form of a rotary reading desktop, which was shown in Le diverse et artificioso machine, the Renaissance work by Agostino Ramelle from 1588 [fig. 4]. After all, the sophisticated and “intellectual” machine of Ramelle was overtaken by never again surpassed philosophical achievements of Albert the Great, Thomas Aquinas or Duns Scotus, and the much more complicated Antikythera mechanism dates back to II century BC. While creating the project, Libesking discovered that architects' penchant for military devices, which after developed in creating destructive devices such as a machine gun or nuclear bomb, has its origins in monastery's books and minds of medieval and earlier thinkers.

Blades of water wheel, being a model for the “reading machine,” took the form of desktops supporting eight hand-made books. Each book contained a text being an anagrammatic transcribing to the entire content of a volume one of the words: idea, soul, subject, authority, will of power, energy, being, created being. In this way “a device for comparative reading of architectural text” was created. Placing the books on the wheel allowed comparing them and crossing with each other in similar way as intersecting of the circle with the square showed in the Vitruvian Man, Leonardo da Vinci's illustration to the Book III of On Architecture by Marcus Vitruvius Pollio. The machine was literally revolutionary because it revolved and drove the text which was set in it. In so arranged rotation the architectural text turned out to be a tautology and a constant repetition. For a potential reader, who never existed, a sense that a book on the upper desktop falls on his head, and this from the lower one falls on the ground, could be unpleasant experience. Reading was unpleasant and the machine started to resemble a torture wheel. This laceration of experiencing the text into pleasant and unpleasant sensations resembled a reflection on Michel Foucault, whose spirit embedded in the machine as strongly as Derrida's one. The ultimate purpose of the device was “to see reading,” but the presence of such an intention was real to the same extent as that, which could be attributed to this one of the books, which was devoted to the idea. It was stolen five minutes after opening the Bien-
nale. It was already absent but as if it was still present. It become past, so still somehow existed.

Both the nature of the construction and the language of its description, which equally characterizes the architect’s essay and its interpretations, blurs the distinction between the philosophical understanding and the metaphorical one. It does not allow to determine the meaning at all. Memory Machine was very similar to Reading Machine. Perhaps it was only more senseless, almost as experiments in Balnibari. Multiplied gears and wheels for displaying plates covered with inscriptions or symbols had more in common with devices hidden behind the theater stage. Impression of staying behind the curtain of phenomena, intensified by rattling typical of puppet theater, where Do Quixote had killed a puppet king, without distinguishing between truth and fabrication, were based on desire to reproduce the “theater of memory” of Gulio Camillo [fig. 6]. This Italian thinker who combines hermeticism with modern science, put the thesis that the relations between signs and realities signified by them are not accidental but are based on the symmetry reaching deeper into the being. 38 Mechanisms of memory, consisting of recalling specific aspects of the real world by visual symbols or systems of signs, were for him actuating the forces, which make up the world. The ordering scheme of all knowledge, laid out by him like theater, was not only a mnemonic device promising the computer, but expressed the belief, always current among artists, in extraordinary forces, which are emanated by a shape aptly captured in a figure, a sign, a form or a writing. Libeskind draw from it the belief that also the architect is a creator of signs, which, as symbols, not only induce the memory performance, but also actuate forces behind the comprehensible reality. Difference between Camillo and Libeskind lies in the fact that these particular forces, which can be recalled by specific signs, were now not perceived as divine or cosmic, but as excerpts from that what is still unknown and thereby is livening the known. Libeskind is a completely secular mind possessed by desire to impress the sign of what does not yet exist, but can come into being after formation of its sign. Art of architecture is to help him to overcome contradictions and to cause that this what is entirely other could be recognized as a part of the oldest tradition.

“Clearly signs and art are only stages on the way. [...] Now I would like to make architecture without signs and without art.” 39 Writing Machine, the device for industrialization and computerization of all building processes, was meant to illustrate this possibility. The mechanism composed of more than two thousand six hundred parts setting in motion forty nine cubes whose four sides were decorated by fragments of a model reconstruction of the town of Palmanova, geometric-occult symbols, polished metal pieces, and mirror-reversed names of forty nine saints necessary to complete “the pilgrimage of absolute architecture.” Twenty eight cranks set in surprisingly rapid movement these empty boxes, in which the faith in human invention was buried, and instead mechanized structures of ingenuity were started. The first such ma-
chine to replace human in creating “books in philosophy, poetry, politics, laws, and theology, without the least assistance from genius or study,” was described by Jonathan Swift in the fifth chapter of the Gulliver’s Travel to Laputa. A mockery contained in the work of this Irish author should be, however, limited to the observation that the knowledge of structures and combinatorics may increase the ability to create new concepts. In Libeskind’s dreary computer, “resembles a heavy printing press,” it is included a tension between the conviction that all creativity is just combination of already occurred possibilities and the hope that mechanization of intelligence might be a device to transgress the habits. For this reason Libeskind referred equally to the work of Raymond Roussel, particularly to his Impressions of Africa, and to the first actually built calculators: the simple mechanical combiner designed by Blaise Pascal in 1654, or the differential machine proposed by Charles Babbage in 1822. Even though industrialization of architecture can be treated as one of its actual characteristics, the diagnosis of similar entanglements and plunges is restoration of its human nature.

Posthumanism in the practice of architecture triggered skepticism about granting a high position in creativity to operating freely and not conditioned subjectivity. It was also the weakening of faith in the originality of the project, its universality and connections with absolute architectural principles. Instead of questioned values, it invigorated the variability and the dependence of any actions on various external factors and structures. Libeskind’s Three Lessons, perhaps influenced by texts of Peter Eisenman who was a precursor of posthumanism in architecture, clearly joined this trend displaying the historical variability of values, methods and objectives of this field. It extend from a situation of exposing the importance of a material object produced in accordance with possibilities and needs of human, through a situation, in which architectural works pass into the realm of intellectual works, to the current state when all previously established rules are examined and undermined. Libeskind still produces objects, but they are machines to contemplate the past and to describe the differentiation of epochal versions of architecture.

Looking at the past they not only form its images, but are experiments on past and current ideas. Libeskind saw that the time, looped in his concepts, examined also an unknown future. In this system, showing the historicity of humanism leads to explosive reactions and flares in the form of countless references to history, religion, literature or philosophy. This approach become a template for the subsequent works of the architect, in which he combined erudition of an old-school intellectualist with ability to generate new forms stimulated by new discoveries of humanities.

The stretching of Libeskind’s works between hermeneutics and heuristics was the subject of analysis of Andrew Whiteside, whose essay enabled to make reconstruction of the design process of this architect. The beginning of each of these works should be located in assimilation of cultural heritage components, whose origins were various and their combination into a set was not rationally motivated. Emerging associative ele-

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40 E. Ioannidou, op. cit., p. 84.
41 See ibidem, s. 88: “His machines are contemplative objects revealing the nature of architectural practice;” see also D. Libeskind, The Pilgrimage..., p. 38: “The three machines propose a fundamental recollection of the historical vicissitude, in particular of Western architecture.”
42 See D. Libeskind, The Pilgrimage..., p. 38: “architecture was, from its very beginning, at its end. At the end it’s possible to retrieve in some sense the whole past and future destiny, because the end, of course, is nothing in the future, nor is it anything in the past, nor is it anything in the present – it is simultaneously on all the three levels.”
43 E. Ioannidou, op. cit., p. 89.
ments that once created only mood during sketching the outlines of the project, now were realized and sustained in consciousness as decisive starting points. Subsequently it was followed by the process of translating them to the needs of the project. It was a kind of interpretation and transferring into another realm. Then mixing of “languages” occurred, in which, for example, a music fragment united with a drawing. During this phase, traditional contradictions and a lack of logic were eliminated, and instead a state of experiment with undirected purpose was activated. Ideas, contents or figures were transposed to the language of forms, which was produced like esperanto. But not only the contents, but also grammar and syntax were invented without seeking any precedents. The architect examined possibilities of transferring meanings by created forms. But the problem is that adopted forms merely suggested unspecified meanings. The new language did not seek to establish meanings, but postponed them even further than the natural language. Signs of a formed record created a system of abstracts, which were not numerous but had great evocative power. Partial narratives, produced by uncertain relations of forms and contents, do not forfeit their origin and do not achieve consolidation into a fully readable uniform story. Instead, the recipient becomes fascinated just by the signs, their ambiguity, their references to different methods of notation, to the Middle East (including the Jewish language), to ancient symbols (for example, the Zodiac signs), or to already forgotten recordings of notes (such as neumes). The signs prompt to spin interpretation related not only to the external world, but also to the very nature of the signs, their variations, and their possibilities of evoking emotions. As it was the case of Micromegas and Chamber Works, any explanation on Three Lessons seems to be too hasty, because, when the machines are explained as signs, we loose their relations with
something what precedes the signs, with unstructured reflexions, imprints or traces. Rational comments on these works blur their origin, which was not exclusively rational, and also their later, equally little rational purpose. As Whiteside put: “Libeskind work is heavily invested in non-logical procedures, ones which resist the totalizing forces of reason.”

For this reason it could be concluded that the works were not only sets of references to something what is comprehensible, but constructed a being of something what could be sensed, experienced, and only later, secondarily and not necessarily, can be named. They extended into the realm before reason, and achieved their goal in the area after reason, reaching rationality only in an almost humorous form.

Jüdisches Museum
The Jewish Museum in Berlin, in the context of the above considerations, might be treated as a *summa* of the architect’s former efforts and interventions. The drawings of the horizontal projection of this object closely resemble graphic works of the architect, as the zigzag known from *Line of Fire* or many solution adopted in the Felix Naussbaum Museum built around the same date. The recognizable set of intersecting straight lines in the case of the Berlin museum were charged with content in a violent, accidental and irrational way that was close to the dynamic character of sketches of the plan. Given sources of ideas overlap, and even though sometimes there is no logical connection between them, micro-novels, which has been produced using them, combine into an illusory wholeness. In numerous statements concerning the formation of the project the author recalled – as the genesis – a two-volume book, received at his own request from one of the agencies of the federal government, with names of Jews persecuted during the Nazi era with dates of their deportations or deaths. In the same time, he mentioned prewar Berlin phone books where you could find addresses of many inhabitants scattered throughout the world during twelve years of the reign of Nazism. Ultimately, however, he states that the deformed Star of David as an outline of the plan emerged when he connected on the map of Berlin addresses of six Berliner admired by him, which he paired: Rachel Varnhagen with the Luterian theologian Friedrich Schleiermacher who used to visit his salon; the poignant poet of Holocaust Paul Celan with the architect Mies van der Rohe; and finally the author of fantastic and horror stories E. T. A. Hoffman with the romantic writer Heinrich von Kleist. Most of those figures who made up this oblate image of the six-pointed Disc of David or the Seal of Solomon, were not Jews, Varnhagen had a complex and close to the disgust attitude to her origin, while Celan in no way can be considered as a Berliner because he was just passing Berlin through during his trip to Paris. The manipulation performed by him cannot be repeated also because of this that the addresses of those persons are difficult to obtain, and the mentioned books cannot help in it. For example Varnhagen died forty years before the phone was patented, and for the same reason it would be difficult to find addresses of Schleiermacher, Hoffman or von Kleist in any phone book. The story is fascinating and perhaps because of that it was uncritically repeated by countless commentators of the project. A literary fiction, not regulated by the rules of probability, was created.

We can be similarly skeptical with regard to Libeskind’s thesis that the project is divided into sections according to the structure of *One Way Street* of Walter Benjamin, the admirable combination of fragments spun around the issue of life in the big city. It remains also beyond the possibility to confirm or deny the thesis that the project was an attempt to complete *Moses and Aron*, the opera of Arnold Schönberg deliberately devoid of completion. Conflictual relations of heroes of this opera, representing religious and secular views, were brought by the architect to a new situation, in which also his act is another “waiting for the Word.”
However, there is here a reversal of the ultimate direction of the excited hope. For Moses, behind the notion of the “Word” the God stood, but for the architect it is waiting for an endless string of comments. “I had always imagined the building as a sort of text, meant to be read,” he wrote in his memories.  

Putting forth above-mentioned statements Libeskind created an image of the project that was close to the world of literary fiction or even that of advertisement, but in the same time he provokes to spin more and more sophisticated interpretations. The largest part of formulated explanations concerned empty spaces organizing the interior structure of the museum.  

Expressive voids form both utility room and completely useless or even inaccessible ones. Therefore, it could be stated that they are preceded by a kind of a pure and more basic void, which was associated by Jarosław Lubiak with the description of emptiness of Heidegger or the concept of trace of Derrida.  

This kind of void is by its nature making room, enhancing space, and only secondarily it can gain a purpose, either utilitarian or symbolic. The solution adopted by Libeskind assumed that both these derivative types of void were endowed with meanings. So – for example – the main corridor was defined as The Axis of Continuation (intersecting with corridors with the given names: The Axis of Migration and The Axis of Infinity) and changes into The Stairs of Infinity, leading both to exposition rooms and to nowhere, a high staircase resembling the so-called Grand Gallery in the Pyramid of Cheops.  

A major role in charging the building with contents was attributed

51 D. Libeskind, Przełom..., p. 75.  
by the author to so-called lost cubatures, i.e. several empty spaces like shafts or spatial rifts left in raw concrete, of which the most known is the Holocaust Tower, added to the building and accessible from the underground part of the object. Some of these cubatures are made completely inaccessible and 10 thousands metal masks of faces are placed on the floor of another one, and potential visitors must tread on them if they want to see its interior. These voids or vacuums are to symbolize the lost presence of the Jewish community, exterminated or expelled Jews who had their great contribution in the high position of Berlin in many areas of social life. Association of the spatial voids with the absence of lives as a result of extermination had its roots in impressions of the author while visiting the Weissensee cemetery in Berlin, where never engraved inscriptions on abandoned gravestones can be seen by none of their owners or their family members, both murdered or never born. The voids treated as Traces of the Unborn transform the memory, which is usually maintain in museums, and show the Holocaust not as an event in the past, but as a rupture in the history of humanity, a dramatic abyss that cannot be captured in any traditional way.

The museum was deliberately and in many ways made to prompt to spin interpretations, among which those attracting attention were mostly explanations, which combined various forms of the Museum with the Jewish tradition and used categories of the research on the memory and the psyche. Also in the case of such analyses the verifiability of thesis is less important than rhetorical inventions of their authors. A good example could be statements of Artur Kamczycki that the plan of the system of corridors in the underground part of the museum [fig. 8] and the shape of the windows on the elevation from the side of the Garden of Exile resemble the reversed Hebrew letter shin. As during the designing of the museum a whole alphabet of similar signs was created [fig. 9], another author felt entitled to state that the intention of Libeskind was to write a text, which could not be transmitted in the existing languages. This particular inscription would be characterized not only by recording the dramatic absence of exterminated or never born generations of Jews, but also by filling “those who are yet to be born” with hope.

Treating this museum as a memory tool lead to include into the processes of interpretations not only findings on the structure of awareness of the past, but also the formulas of referring to events filling with sadness, or the mental ability to distinguish between real, symbolic and imaginative values. Thanks to this kind of references, it was possible to formulate the view that the work prevents fading of memory into typical forms of melancholy or mourning, and instead attempts to transfer the contents of events into a state, where “any fading, any retention, any denial does not cause the experience of the Holocaust goes away into the past.”

Already when building the Memory Machine, Libeskind proceeded according to the view that the memory has a structure similar to a product of architecture, and – as Frances Yates described it in the work, which

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57 Ibidem, p. 20.
58 Ibidem, p. 182.
he then read – it could be compared to edifices such a palace or a theater hall. It was adopted in the Western culture to associate the memory with the building of museum. In the case of the Jewish Museum in Berlin, which is unofficially called the Holocaust Museum, the problem was to avoid to form too easy the memory of the extremely dramatic event, and to reject, already on the state of preliminary assumptions, erecting yet another traditional memory storage. To grasp that issue more accurately, Lubiak recalled the Freudian insights into the psychological reaction to death. In the opinion of this Austrian researcher our behaviour toward tragic events takes the form of mourning, which ends with forgetting or a melancholy as a permanent state but destructive for the psyche. In Lubiak’s opinion Libeskind has exceed the existing rules of referring to tragedy. Creating the concept of Unborn Traces the architect used the Derridean idea of the trace as the prephenomen of memory.

The trace is a situation of emerging, which can be related to revealing of the space, and more precisely: linking a given formule of awareness, which is the space, with a time possible for the mind only as the work of memory. The trace blurs when becoming its own preservation, its own visual effect. Even though a part of the voids of the museum took functional of symbolic values, their author managed to draw the visitor’s attention to the void more preliminary, not blurred in any fixation. It is the echo of this infinitive emptiness, resounding in the project, that could cause that the extermination does not become the past and is not fixed in a monumental accomplishment, but returns into the form of fresh trace, into the state of irritant present. Memorizing is moving away information to distant parts of consciousness, so actually it is forgetting. A museum organized around the concept of trace makes forgetting difficult. It is a counter-monument and a counter-museum

Conclusion

Components of Libeskind’s specific methods of production of real architectural object were formed in the early period of his activity. Particularly while lecturing in the Cranbrook School (1978–1985) he adopted a number assumptions necessary to understand the work he created later. Accomplished works cannot be aptly perceived without having known and having ordered the concepts formed before building the two first museums. In the essay Symbol and Interpretation, as if the manifesto of teaching at the above mentioned American school, he objected to continuing the reduction of architecture to the dimensions imposed by the cult of technicized mind, and on other side to treating this field as a purely autonomous art. According to the thesis contained in the essay, architecture, which is subordinated to the requirements of functionality, not only makes the architect merely one a series of anonymous engineers of the civilization, but also, under the guise of meeting social needs, it flatters the authoritarian order and suppresses the freedom. Libeskind had similarly low opinion of clinging to the inviolability of.

59 D. Libeskind, The Pilgrimage..., p. 41.
61 J. Lubiak, Pustka..., p. 172.
62 D. Libeskind, “Symbol und Interpreta-
tion,” [in] idem, Radix-Matrix. Architec-
ture and Writings, transl. P. Green, ma-

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fig. 9 D. Libeskind, Architectural Alphabet; source: Radix-Matrix..., p. 36
the principles of architecture, even those supposedly renewed by Modernism, but in reality, no different from censorship. Instead he proposed study of metaphysics of architecture, treating architecture as diffused in other fields of art (including music or movement), and therefore to analyze ways of achieving the symbolic meanings by architecture. So conceived architecture had no constant nature and its only tradition turned to be an event, a happening being not only an environment of the creator, but also the characteristics of the work. With temporariness of each of architectural events the impossibility of its fixation is connected, and signs done during their creation are characterized by a specific excess provoking references and correspondences. It is this very excess, which make any meanings of architecture a mysterious labyrinth or “a machine for bothering the mind.”

The entangled structure of meanings contained in such works like the Jewish Museum, not only reflects the sophistication of its author floundering in the culture like Leopold Bloom – the literary predecessor of Libeskind – wandering in Dublin, but also prompts observers of his works to similar behaviour. They also have to abandon the hope of keeping meanings in the place, and to follow the moving symbol of this what is other, what is disturbing, and what is still unknown. And ultimately this kind of architecture does not reflect any overt or hidden order, but explores the structure of the chaos as an irremovable part of any establishment.

Translated by Tomasz Bauer

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Streszczenie

CEZARY WAS / Praktykowanie teorii. Koncepty wczesnych prac Daniela Libeskinda jako wzorce realnej architektury
