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REASONABLY OR AGAINST RATIONAL CHOICE: SPACES FOR PEOPLE WITH PERCEPTION DISORDERS

ROZWAŻNIE CZY WBREW RACJONALNEMU WYBOROWI: PRZESTRZENIE DLA OSÓB Z ZABURZENIAMI PERCEPCJI

Abstract

One of the ways of supporting persons with mental and intellectual disorders is shaping the surrounding space in such a manner that functioning there in itself could be therapeutic. In this context, contemporary architectural design involves using clear intuitive solutions adapted to the needs and behavioural patterns of the users. While analysing the principles of design for persons with mental dysfunctions, the author refers to various examples of hospitals and psychiatric clinics. The research revealed the current worldwide trend of providing patients suffering from perception disorders with facilities which, at first sight, might seem to be incompatible with the idea of creating spaces enabling simple verification of external stimuli. They could be described as spaces designed without any logical assumptions or even against rational choice. However, the creations that seem to be the result of an intuitive impulse on the part of the designers might in fact be the result of some kind of hidden logic.

Keywords: architectural design, hospitals, clinics, rehabilitation space, perceptual disorders

Streszczenie

Jednym ze sposobów wspomagania osób z zaburzeniami psychicznymi i intelektualnymi jest takie kształtowanie przestrzeni, która je otacza, by już samo funkcjonowanie w niej miało charakter rehabilitacyjny. W tym kontekście współczesne projektowanie architektoniczne polega na stosowaniu czytelnych, intuicyjnych rozwiązań, dostosowanych do wzorców potrzeb i zachowań użytkowników. Analizując reguły projektowania dla osób z dysfunkcjami umysłowymi, autorka odniosła się do różnorodnych przykładów planowania szpitali i klinik psychiatrycznych. Doprowadziło to do stwierdzenia, że obecnie na świecie osobom z zaburzeniami w zakresie percepcji poświęcane są obiekty na pierwszy rzut oka sprzeczne z ideą kreowania przestrzeni umożliwiającej prostą weryfikację bodźców płynących z otoczenia. Można je określić jako przestrzenie stworzone bez logicznych przesłanek albo nawet wbrew racjonalnemu wyborowi. Z pozoru twory intuicyjnego impulsu projektantów stanowią być może wynik niejawnej logiki.

Słowa kluczowe: projektowanie architektoniczne, szpitale, kliniki, przestrzeń rehabilitacyjna, zaburzenia percepcji

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1. Research problem

One of the substantial tools for supporting persons with a variety of mental and intellectual disorders is shaping the surrounding space in such a manner that functioning there could in itself be therapeutic. In this context, contemporary architectural design for people with mental dysfunctions and perception disorders involves using clear, intuitive and, in the same time, comforting and harmonious solutions adapted to the needs and behavioural patterns of the users.

However, the analysis of modern architectural work conducted by this author has revealed that, in recent years, people with dysfunctions in concentration, rational deduction and perception have been provided with spaces which might cause a sense of insecurity or enhance anxiety. This negative perception may result from the fact that the facilities discussed in the paper such as *Cleveland Clinic Lou Ruvo Center for Brain Health* in Las Vegas or the psychiatric clinic *Md.net* in Tokyo were designed in disagreement with the idea of arranging spaces enabling simple verification of external stimuli. They can be described as architectural creations made without any logical assumptions or even against the rational choices of their designers. The examples presented may seem to be the outcomes of the intuitive impulse of architects, understood as a belief appearing before reasoning.

The aim of the paper is to formulate current views on designing spaces for persons with various mental dysfunctions, as well as presenting examples of hospitals and clinics for the treatment and rehabilitation of patients with reduced perception resulting from mental and intellectual dysfunction, which were designed against the principles commonly approved by researchers. The author attempts to answer the question: are these facilities merely the outcome of the free creative inspiration of the architects? Or perhaps they result from some kind of hidden logic which cannot be observed on first sight, and might even be a product of designers' premeditation in the pursuit of pragmatic objectives that had been set far in advance.

2. Prevailing principles

Multidisciplinary scientific analyses in the field of architecture tend to focus on the built environment of the psychiatric treatment, geriatric care, the quality of spaces designed for adults, children and elderly persons with various brain function disorders. The research concerns such issues as the role of senses and receptors responsible for the perception of different types of sensations by individuals with intellectual dysfunctions¹. A. Smrokowska-Reichmann discusses the influence of the environment on humans, starting from the space where the person receives well-considered and properly selected stimuli up to impulses which "attack the user"². A continuous development of knowledge on the potential spatial stimuli activating the patient via non-invasive polysensory stimulation and calming via polysensory influence has been observed.

¹ I.a. A. Smrokowska-Reichmann, *Snoezelen – Sala Doświadczania Świata Kompendium opiekuna i terapeuty*, Fundacja Rosa, Wrocław 2013.

² A. Smrokowska-Reichmann, *op.cit.*, p. 23.

According to J. Bil, the environment built for mentally handicapped users is determined mainly by the set of symptoms which occur in mental diseases and their exacerbation³. In the light of the Act of 19th August 1994 on the protection of mental health, a person with psychiatric dysfunction is defined as: a mentally ill individual, that is a person with psychotic disorders; a mentally handicapped person; a person with other disorders of mental functions, which, according to current medical knowledge, are regarded as psychiatric disorders.

During the stay of patients with psychiatric and intellectual disorders in treatment and rehabilitation facilities, “apart from the stress factors resulting from the disease itself, a big role is played by the built environment”⁴. Buildings that house hospitals and clinics often fail to meet the specific needs of their users, which might generate serious threats to the support processes. These could include: *aggressive and auto aggressive behaviour of patients, (...) escapes, theft*⁵, which contribute to lowering the quality of patient care. The researchers emphasize that it is not the architect’s intuition but the implementation of *Evidence-Based Design* in the decision making processes which allows a space to be created that reduces stress and increases the sense of happiness of the patients, their families and medical personnel⁶. J. Bil shows that in the case of numerous healthcare facilities, this way of thinking has caused measurable effects, among others reduction of the stress level in patients⁷.

A. Szewczenko points to the fact that persons with mental dysfunctions, e.g. dementia, find functioning in the healthcare environment particularly difficult due to disturbed cognitive processes and limitations in spatial orientation⁸. While analysing the adaptation mechanisms in dementia patients, the author provides a detailed presentation of the therapeutic role of the environment (*healing environment*) as well as conditions facilitating the user’s adaptation to the surrounding space⁹. A. Szewczenko emphasises the significance of obeying *universal design* principles¹⁰.

It should be noticed that the particular character of a building intended for persons with mental or intellectual disorders requires specific architectural solutions designed for the whole facility, including its interior and the equipment being used. Thus the task of an architect can be determined as a creation process compatible with the rules of design based on scientific evidence as well as *universal design* principles for developing a friendly, safe environment which is free of improper stimuli, serves the patients and focuses on their needs.

The role of the architect defined in this way is in line with the description of the most characteristic trait of human nature, which, according to W. Dobrołowicz, determines the

³ J. Bil, *Shaping built environment of mental health hospitals*, Space & Form, Vol. 25(1), Szczecin 2016, p. 76–77.

⁴ J. Bil, *List do Redakcji. Architektura szpitali psychiatrycznych – wybrane problemy istniejącego stanu infrastruktury*, Psychiatr. Pol., Vol. 50(4), Kraków 2016, p. 887–888.

⁵ *Ibidem*.

⁶ J. Bil, *Evidence Based Design for Contemporary Healthcare Facilities*, Space & Form, Vol. 22(1), Szczecin 2014, p. 78.

⁷ J. Bil, *List do Redakcji... op.cit.*, p. 887.

⁸ A. Szewczenko, *Przestrzeń opieki geriatrycznej*, Wydawnictwo Politechniki Śląskiej, Gliwice 2018, p. 19.

⁹ A. Szewczenko describes dementia as a pathological syndrome characterized by developing and progressing mental disability including dysfunction of cognitive processes. Szewczenko A., *op.cit.*, p. 45.

¹⁰ *Ibidem*, p. 70.



III. 1. The psychiatric clinic outside the village of Melle, Belgium. Architectural Design: Architecten de vylder vinck taillieu. Author of the photographs: F. Dujardin. Source: *PC CARITAS / architecten de vylder vinck taillieu*, ArchDaily, 12.05.2017. Available online: <https://www.archdaily.com/871034/pc-caritas-architecten-de-vylder-vinck-taillieu> (accessed on: 03.05.2018)

purposeful character of decisions made¹¹. At the same time, the researcher presents the thesis that it is intuitive decisions that are particularly useful in the analysis of creation processes¹². “We solve problems and take decisions under particular circumstances (...). An issue solved under different conditions, even by the same expert, might lead to different decisions. The surrounding conditions create both opportunities and limitations, or even threats”¹³. Currently the advantages of “limited rationalism” are being increasingly appreciated, where intuition is understood not as an instinct but as a higher form of thinking (besides intuition, making a right decision requires the knowledge of the subject)¹⁴. In the context of this paper, it will refer to a deep awareness concerning the users of the space supported by scientific research as well as the knowledge of appropriate methods, the application of which will ensure the fulfilment of particular needs of persons with dysfunctions in concentration, deduction and perception.

3. Disobeying the rules

While creating a safe environment that is friendly to sensitive users, the implementation of purposeful and correct design solutions requires the skill of using rational, analytical and synthetic decision parameters. In the opinion of some researchers, only the last stage of the right decision process might be led by intuition¹⁵. Thus intuition is believed to be part of rational thinking or even, as indicated by P. Goldberg, intuition is rational thinking¹⁶.

At the same time, architectural facilities and interiors analysed by the author from the very beginning create an impression of being the outcome of uncontrolled, irrational assumptions resulting from the creative impulse of the designers. Particular attention is drawn to the semantics of the architectural forms and interior spaces created seemingly without a logical choice and intended for the treatment of brain diseases and psychiatric disorders, such as the psychiatric clinic *Md.net* in Tokyo, the clinic for psychiatric diseases near Melle in Belgium, the psychiatric rehabilitation centre for children in Hokkaido and the *Cleveland Clinic Lou Ruvo Center for Brain Health* in Las Vegas. The characteristic feature of these facilities is their lack of compatibility with the following principles of *universal design*¹⁷:

- *Simple and Intuitive Use*, which involves applying intuitive solutions in the usage of space (among others information priorities are considered) and design taking into

¹¹ W. Dobrołowicz, *Intuicja w procesie decyzyjnym*, Studia Pedagogiczne. Problemy Społeczne, Edukacyjne i Artystyczne, Vol. 17, Kielce 2008, p. 127.

¹² *Ibidem*.

¹³ *Ibidem*, p. 133.

¹⁴ *Ibidem*, p. 134.

¹⁵ According to S. Tokarski and K. Tokarski, intuition is a rational and logical ability, not always conscious, which can be examined, developed and used for supporting the decisions taken. S. Tokarski, K. Tokarski, *Rola intuicji w procesie podejmowania decyzji*, Handel Wewnętrzny, Vol. 3(368), Warszawa 2017, p. 103.

¹⁶ I.a. P. Goldberg, *The many faces of intuition*, P. Tarcher Inc., Los Angeles 1983.

¹⁷ Translated after: M. Wysocki, *Przestrzeń publiczna przyjazna seniorom. Poradnik RPO*, Biuro Rzecznika Praw Obywatelskich, Warszawa 2015, p. 22.



III. 2. Model of *Children's Centre for Psychiatric Rehabilitation in Hokkaido*. Architectural design: S. Fujimoto. Source: Pollock N., *Sou Fujimoto: 'Foreigners don't want really crazy things'*, *The Architectural Review*, 24.10.2016. Available online: <https://www.architectural-review.com/essays/profiles-and-interviews/sou-fujimoto-foreigners-dont-want-really-crazy-things/10014022.article> (accessed on: 03.05.2018)

account the knowledge and skills of the user. This allows avoiding unnecessary intricacies and ambiguities¹⁸;

- *Perceptible Information* is understood as an information system in the space, which is designed with attention paid to the information priorities and perception abilities of each user of the facility¹⁹;
- *Tolerance for Error* involves reducing anticipated and accidental threats as well as the risk of making mistakes connected with the use of spatial solutions²⁰.

An example of a concept which lacks intuitive solutions in the usage of space is the Belgian psychiatric clinic near Melle, which is an outcome of the modernization of a complex built around 1908²¹. The designers: Architecten de vylder vinck taillieu gave new life to the degraded facility while maintaining the earlier ambience of the space resulting from its state of preservation [Ill. 1]. There was no place for exclusively intuitive design solutions because the designers carefully considered preservation issues as well as the problem of maintaining the character of the degraded historic structure²². The architects used noninvasive, modest and original means which would not dominate the foregoing character of the building. Analyses of this concept may lead to the conclusion that focusing on the issues of modernization and preservation of the building, the designers happened to neglect the issue of specific needs and particular sensitivity of persons with psychiatric disorders.

In the author's opinion, a similarly surprising form was given to the *Children's Centre for Psychiatric Rehabilitation* on the island of Hokkaido in Japan. The monolithic but, at the same time, extremely dynamic and peculiar form creates in the provincial landscape a chaotic group of identical abstract white cubes [Ill.2]. The atypical anatomy of the facility has become a phenomenon which attracted the attention of architecture critics²³. As is the case worldwide, the majority of designers in Japan decide to create intimate "second houses" for patients instead of large treatment centres. Moreover, psychiatric clinics are rarely designed as *a jumble of boxes, randomly scattered like toy blocks*²⁴. The centre was among the winners of AR Emerging Architecture Awards. Through this recognizable conception S. Fujimoto expressed a novel way of thinking. He keeps emphasizing that he has consciously created avant-garde, but coherent and structured architecture, only apparently accidental²⁵.

¹⁸ Study based on: *Realizacja zasady równości szans i niedyskryminacji, w tym dostępności dla osób z niepełnosprawnościami. Poradnik dla realizatorów projektów i instytucji systemu wdrażania funduszy europejskich 2014–2020*, Ministerstwo Rozwoju, Warszawa 2015.

¹⁹ *Ibidem*.

²⁰ *Ibidem*.

²¹ H. Strange, *Technical Study: Melle Psychiatric Clinic, Belgium*, Building Design, 24.11.2017, London 2017. Available online: <https://www.bdonline.co.uk/technical/technical-study-melle-psychiatric-clinic-belgium/5090787.article?adredir=1> (accessed on: 05.05.2018).

²² *Ibidem*.

²³ N. Pollock, *Sou Fujimoto: 'Foreigners don't want really crazy things'*, The Architectural Review, 24.10.2016, London. Available online: <https://www.architectural-review.com/essays/profiles-and-interviews/sou-fujimoto-foreigners-dont-want-really-crazy-things/10014022.article> (accessed on: 04.05.2018).

²⁴ *Ibidem*.

²⁵ S. Fujimoto, *Les diversités de l'inattendu*, Interview by A. Kofler, AA: Therapeutic architecture, vol. 405, Paris 2015. Available online: <http://www.larchitectureaujourd'hui.fr/les-diversites-de-linattendu> (accessed on: 06.06.2018).



III. 3. The interiors of the psychiatric clinic *Md.net* in Tokyo. Architectural design: Nendo, O. Sato. Author of the photographs: J. Cohrsen. Available online: <https://divisare.com/projects/287888-nendo-jimmy-cohrsens-md-net-clinic> (accessed on: 03.05.2018)

During the attempts to formulate the key principles of space design for persons with various psychiatric dysfunctions, it is not possible to ignore the facilities which evidently violate the rules of *healing environment* and *universal design* and can still be recognized as the icons among some enthusiasts and architecture critics. They arouse great interest all over the world, which is undoubtedly a result of their controversial semantics. The first of them is the design of the interiors of the *MD.net Clinic* in Tokyo realized in 2010²⁶. Its concept is a symbol of a completely new way of thinking as regards the functioning and the structure of a psychiatric clinic. The construction developed by the Nendo office is an example of a conscious process of exceeding limitations in design. The clinic is entered through the windows instead of doors. Secret passages are hidden behind sliding book-cases. The walls with mirrors, pictures, furniture, decorated with black antlers unexpectedly crank open giving the entrance to the doctors' offices. The design by the Japanese architects is a purposeful play of illusions in a theatrical contrastive and a little dark stage design arranged with a precise care for each detail [Ill. 3]. Instead of bringing the patients back to the neutral state of emotions, like it is commonly accepted in the traditional model of psychiatric care, the authors deliberately suggest introducing a rich content into the patients' everyday lives and incorporating a new quality, which patients were not familiar with before beginning the treatment. Thus the interior of the clinic could be considered as a deliberate attempt to express the philosophy of its designers²⁷.

The *Cleveland Clinic Lou Ruvo Center for Brain Health* in Las Vegas by F. Gehry is an equally amazing facility although it represents a different scale of architectural design. It was opened in 2010 and specializes in neurology and psychiatry²⁸. Gehry Partners created a structure representing distinctive but connected with each other aspects of architecture. The offices are located in an architecturally balanced form bringing the associations with a pile of stucco bricks. The second wing of the building, which gained the most publicity, consists of an irregular group of sculptures dressed with panels of brushed stainless steel [Ill.4]. A wanton cascade of shapes contains a hardly definable space for meetings and important events. The facility is described as a geometric invention, whose form represents spontaneous sketches and models made by its designers²⁹. According to M. Webb, the two wings of the building are connected like two, rational and intuitive, halves of the human brain³⁰. The perception of the design may change during the analysis of the intentions of persons interested in the design process. Currently, the *Cleveland Clinic Lou Ruvo Center for Brain Health* is probably the most characteristic healthcare facility in the world when looking from the architectural point of view. Its concept seems to be in full agreement with the conscious intentions of L. Ruvo, the founder of *Keep Memory Alive*, an organization for combating human brain diseases. L. Ruvo claims that he invited F. Gehry to participate in the project because he intended to

²⁶ U. Bresan, *MD.net Klinik In Tokyo*, AIT Gesundheit und wellness, Vol. 11, Berlin 2010, p. 111.

²⁷ *MD.net Clinic*. Available online: <http://www.nendo.jp/en/works/md-net-clinic/?erelease> (accessed on: 14.05.2011).

²⁸ M. Webb, *Splashy and sustainable*, Contract, 11.10. 2010, New York 2010. Available online: <https://www.contractdesign.com/projects/healthcare/splashy-and-sustainable-gehry-partners-design-a-medical-research-facility-in-las-vegas/> (accessed on: 23.04.2012).

²⁹ *Ibidem*.

³⁰ *Ibidem*.



III. 4. *Cleveland Clinic Lou Ruvo Center for Brain Health* in Las Vegas. Architectural Design: F. Gehry/Gehry Partners. Available online: <http://legacy.pitchengine.com/louruvocenterforbra-inhealth> (accessed on: 03.05.2018)

take advantage of the architect's position and create a space which would arouse interest in order to obtain financial means for fighting diseases³¹. The author of the design explains that it was necessary for the building constructed for performing a particular function to have a purposeful and interesting form, which means that the whole design process was based on conscious design solutions³². One can draw a conclusion that F. Gehry used architecture as a symbol and the expressive architectural structure achieved success in its mission of promoting the aims of the organization³³.

4. Conclusion

The conducted analyses point to the fact that the selected facilities characterized by really unconventional, almost poetic semantics are not merely the effect of free subconscious thinking processes, sometimes referred to as "creative intuition". Observations of the concepts and statements of their creators suggest that, guided by different aims (preservation and protection, expressing avant-garde philosophy, campaigning medical issues), the designers took many daring decisions, whose character was not accidental. However, it may be possible, that the particular needs of persons with potential perception dysfunctions were approached with some kind of carelessness. Lack of characteristic references to the conventional principles of creating non-intricate solutions may give the users the impression of confusion and disorder.

The majority of spaces in the contemporary facilities dedicated to the psychiatric healthcare constitute a calming neutral background, which allows the patients to get rid of the strain. Attempts are being made to create an environment based on the models familiar to human beings and providing them with a sense of security. The architectural works discussed in the paper are difficult to define because in their structures there can be found elements which might destabilize the patient during the therapy. Although it cannot be denied that the designers showed a great design sophistication, there appear some doubts concerning the effects of the patients' confrontation with the spaces which by themselves contradict reality.

A single aim can be achieved by many ways and means. Architects issue verdicts concerning the fate of people, therefore, as the researchers of the issue point out, it should be recommended that in the designers decision processes, regardless of the rational or subconscious background of the assumptions, take into consideration a possibility of creating spaces which would not sabotage the aims and needs of the users.

This is what both rationality and intuition suggest.

³¹ *Ibidem*.

³² *Ibidem*.

³³ J. Giovannini, *Cleveland Clinic Lou Ruvo Center for Brain Health*, The Journal of the American Institute of Architects, 07.04.2011, Washington DC 2011. Available online: http://www.architect-magazine.com/design/buildings/cleveland-clinic-lou-ruvo-center-for-brain-health_o (accessed on: 19.09.2012).

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