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THE INTUITIVE CREATIVE PROCESS IN THE SPATIAL ENVIRONMENT

INTUICYJNY PROCES TWÓRCZY W ŚRODOWISKU PRZESTRZENNYM

Abstract

In today's socio-economic environment, the ability to think creatively and innovate is tantamount to economic success. Creative actions are conditional upon the right psychological attitude, which is in turn affected by the community setting which constitutes a set of motivating factors. The article presents the author's ideas, supported by research on the impact of the spatial setting (the surroundings) on the intuitive creative process. Research conclusions are of a practical dimension and may expedite the creation of such a spatial environment which will stimulate the process in question.

Keywords: creative process, spatial environment, creative class

Streszczenie

We współczesnych warunkach społeczno-ekonomicznych zdolność twórczego myślenia i innowacji równoważna jest z sukcesem ekonomicznym. Warunkiem działań kreatywnych jest odpowiednie nastawienie psychiczne, na które wpływ ma sytuacja środowiskowa, stanowiąca zespół czynników motywujących. Poniższy artykuł prezentuje przemyślenia autorki poparte badaniami dotyczącymi wpływu środowiska przestrzennego (otoczenia) na intuicyjny proces twórczy. Konkluzje badawcze mają wymiar aplikacyjny i mogą ułatwić takie kreowanie środowiska przestrzennego, aby proces ten stymulować.

Słowa kluczowe: proces twórczy, środowisko przestrzenne, klasa kreatywna

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1. Introduction

The question on the “rational or intuitive path to architecture” opens up a discussion on revaluations which occur with each new generation and epoch throughout the history of architecture; the fascination with science and cognition occurring outside of the conscious process, intertwined throughout the epochs. In the early 21st century, during a period of an eclectic symbiosis of concepts, trends and philosophies, these two methods may be viewed as two complementary elements in the design process; two paths which intertwine at various stages of the idea forging process, and lead to the same destination. Subject to technical and functional requirements as well as market forces, architecture is a discipline based on a rational approach to issues, within which the creative process is based on pre-determined methods and strategies. Rational thinking is conscious and codified. When the creative problem becomes too complex, multifaceted and when a straightforward application of the *method* becomes insufficient to achieve a satisfactory result, the *creator* often embarks upon a path of an unconscious creative process, based on intuitive thinking. Here a solution appears suddenly, unexpectedly and seemingly out of nowhere after a sustained period of gestation. The intuitive creative process is extremely difficult to research, as it touches upon the essence of genius. However, it always takes place in a certain spatial environment. The answer to the question on how the creator’s surroundings impact the intuitive creation process can tell us a lot about the process itself. The article presents the author’s ideas, supported by original research on the impact of the spatial setting (the surroundings) on the intuitive creative process. The research entails an analysis of data collected during research carried out in 2017. Research conclusions are of a practical dimension and may facilitate the creation of such a spatial environment which will stimulate the process in question.

2. The significance of the intuitive creative process in a contemporary socio-economic context

In modern economic, social and cultural conditions, the ability to think creatively often goes hand in hand with economic success, which relies on intellectual effort and the ability to find innovative solutions. This situation is described by the expression “creative class”, formulated by Richard Florida, an American economist and social scientist. That is how he defined the workforce which is the driving force behind economic development of post-industrial cities (Florida, 2010). The socioeconomic creative class concept spread across the USA as a result of research within the scope of the Standard Occupational Classification System. In the United States, 30% of the entire workforce is estimated to constitute the “creative class”. A secondary classification introduces the “super-creative core” and “creative professionals”.

Creative actions are conditional upon the right psychological attitude, which is in turn affected by the community setting which could be understood as a set of factors motivating to achieve goals (Nęcka, 1994). Thus, stimuli coming from the surroundings impact the effectiveness of performed work of a creative nature. Well-being, comfort, concentration, inspiration and mood are important factors which impact the creative process. The spatial surroundings affect a person’s overall psychological and physical state. Research on lighting, acoustics, colour range, texture and materials used in interiors is reflected in drafted

legal acts (for example lighting or acoustic standards). Such knowledge constitutes a tool for creating an optimal work, living and rest space. One should bear in mind that *the physical architectural form, in creating a meso environment for people is a source of stimuli which affect a person and elicit certain reactions as well as its task related aspect, stemming from the architectural setting constituting a field within which humans develop their activities (...). Therefore in describing various human behaviours within architectural space, one should not only take into account that they are a reaction to that situation, but also that some manifestations of behaviour are a solution to that situation* (Bańka, 1997). The primary objective in this context should be to support behaviours and behavioural traits which aid in the creation of economic value. A designed space may deliver stimuli acting upon certain, desired behaviours and support the basic gestation methods (Nęcka 1994):

- free association method
- noticing similarities method
- associating distant facts and ideas technique
- the ease of comprehending and using metaphors (metaphorical thinking)
- performing deep transformations
- use of creative imagination¹.

This approach is confirmed by designs of interiors published by leading firms, whose potential relies on particular creativity of its staff and innovativeness of solutions embarked upon, such as Google and Facebook. These prove the thesis that interiors arranged in a diverse manner, containing abstract elements, spatially personalised, quite informal and additionally fitted out with appropriately composed elements inspire and prompt creativity.

In the *Cityscape in the Era of Information and Communication Technologies*, the author identified spatial properties which hypothetically might support the creative process within architectural spaces².

3. Accomplishment in the intuitive creative process: revelation – epiphany

The moment of revelation, since antiquity referred to as epiphany, may be considered to be the culmination of the gestation process. Epiphany is one of those concepts which appear across texts from many scientific disciplines: theology, religious studies, literary studies; therefore there are significant differences in the way this expression is understood³. Karl Rahner and Herbert Vorgrimler, authors of the *Theological Dictionary*, ascertain that this word in religious discourse which describes the world of Greek and Roman mythology, meant a sudden manifestation and disappearance of a deity. A significant weight of the concept is expressed in numerous literature references, from James Joyce's *Epiphanies*, where he described it as "spiritual manifestations". In his anthology of world poetry, *Wypisy z ksiąg użytecznych [A book of luminous things]* Czesław Miłosz wrote: *I will not deny that I seek revelation in the verse of reality, which in Greek goes by the name epiphaneia (from the same source as the verb phaino, thus phenomenon, epiphenomenon in our vocabulary). This word*

¹ E. Nęcka, *Koncepcja twórczości*, Wydawnictwo Psychologiczne, Gdańsk 2005.

² A. Cf. Bonenberg, *Cityscape in the Era of Information and Communication Technologies*, Springer International Publishing, 2018.

³ J. Szarlej, *Epifanie biblijne*, Katowice 2002, p. 27.

primarily signifies the appearance, the arrival of a deity among mortals, or its recognition under the ordinary, familiar shape of a man or woman. The epiphany thus interrupts the everyday flow of time and intrudes as one privileged moment, where there is an intuitive grasping of the more profound, more essential reality contained in things or people⁴.

For the needs of this research, the author assumed that revelation – epiphany is a rare occurrence and one which arises after profound creative problem contemplation. It may be triggered by new, crucial information, but here extensive knowledge which precedes the process and constitutes a basis for the scrutiny seems even more significant. A basis which facilitates rapid progress in the gestation process. The Archimedean call “eureka” may be considered to be a famous revelation (epiphany) moments. Due to the strong religious connotations with the concept of epiphany in Polish, for the needs of the experiment the author used the expression “revelation”, “the eureka moment” as non-scientific synonyms, but ones which better communicate research objectives.

4. Method

In the research of spatial environment and its impact on the creative process, the author uses analysis of visual data (graphic materials).⁵ Information obtained through data analysis pertain to spatial and time aspects of events, which are the subject-matter of the research. The research, which essentially pertains to the gestation and activity space, required graphic materials to be obtained from the research group.

4.1. Research sample

The research sample – respondents in the research – constituted 160 students from the Poznań University of Technology’s Faculty of Architecture, aged between 20 and 23. FAPUT students are very often confronted with the need to carry out conceptual-design as well as creative work and as such they understand its nature and consequently the instructions contained in the research scenario.

1. FAPUT students are well versed in the use of photography as an information presentation tool.
2. FAPUT students are part of the “creative class” and in this case may be considered to be a representative group.

4.1. Acquiring research data

The research was based on the individual experiences of people engaged in creative work. During the first stage, each member of the group subject to the research defined three instances where they arrived at a satisfactory conclusion of a creative process after an extended

⁴ C. Miłosz, *Wypisy z ksiąg użytecznych [A book of luminous things]*, Kraków 1994, p. 17.

⁵ Original research tool constructed in the basis of Rose, G., *Visual Methodologies: An Introduction to Researching with Visual Materials*, SAGE, 2001.

struggle with a creative problem. The task of the participants was to recreate in their memory as accurately as possible the circumstances which accompanied arriving at the solutions to a creative problem. The purpose was to capture the context and conditions accompanying the conclusion – the revelation moment, understood in this case as experiencing a sudden creative accomplishment.



Ill. 1. Six examples of photograms out of the 480 which were analysed during the course of the research. They depict the locations where revelations came during design problem gestation. They originate from various authors. The author's research archives, anonymous photograms

4.2. The research

Research participants were invited to note down on a piece of paper three revelation situations which satisfied certain criteria. The notes were not subject to research assessment but were only used to focus attention on the events which were the respondents' first choice and to discourage changing the research case during the course of the test. The participants were asked to only take into account those events which occurred within 4 months of the research, to avoid the recollections from becoming blurred.

Subsequently each participant was asked to make three photograms which would depict three different „eureka moments” as accurately as possible. The photographs were made in the „as seen by the respondent” convention and were to depict as faithfully as

possible the image which the given research group member had in front of their eyes at that moment.

Whilst discussing the research scenario, members of the research group were asked to ensure the images were as accurate as possible: to take into account the surrounding space, time of day, persons or animals accompanying the event as well as objects and the prevailing atmosphere. They were also asked not to use graphic filters or otherwise interfere with the images for the purpose of improving the appearance of the photograms.

4.3. Visual data processing method

The method for processing data (photograms) was based on standards used in social sciences, systematized by G. Rose in her works⁶.

- I. The graphic materials provided by respondents were cohesive and concerned the same matter and as such satisfied the basic methodology criterion.
- II. The set of criteria used in the research is shown below. It takes into account the attributes, used by the author in analysing the graphic materials constituting the subject-matter of the research⁷.
 1. VISUAL DATA ASSESSMENT CATEGORIES
 2. LOCATION
 3. TYPE OF ACTIVITY
 4. TIME OF DAY
 5. PRESENCE OF PEOPLE
 6. PRESENCE OF ANIMALS
 7. LIGHTING
- III. The scope of categories according to which the photograms are analysed is exclusive, therefore the categories do not overlap. They also have an “enlightening” effect, which means the obtained data lead to analytically interesting results and are coherent.
- IV. The coding process was a significant stage of the analysis, entailing a reduction of the variety of visual materials and facilitating the capture of the main, reoccurring motifs. Analysis of the material was aided by saving the results of coding onto a computer.
- V. The first and fundamental step in processing the data was to count the frequency with which given categories occurred. This fundamental operation made it possible to spot trends and to draw research conclusions.

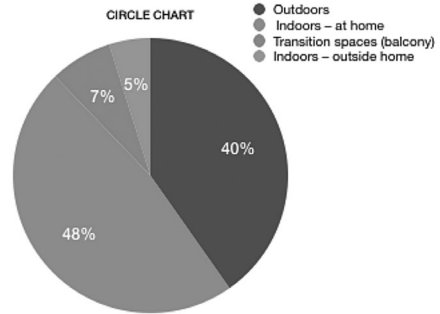
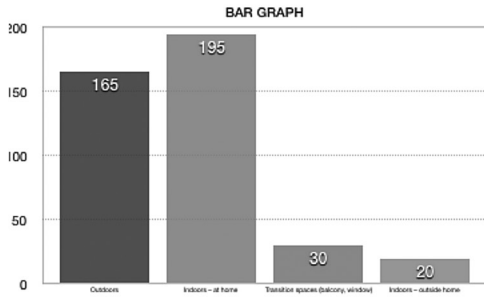
The collected results are depicted on an Experiment card shown below.

⁶ G. Rose, *Visual Methodologies: An Introduction to Researching with Visual Materials*, SAGE, 2001.

⁷ T. Ferenc, *Analiza obrazów – przegląd metod i inspiracji teoretycznych*, Acta Universitatis Lodziensis Folia Sociologica 32, 2007, access on 09.07.2018. http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.hdl_11089_11073/c/Folia_Sociologica_32_2007_6-27.pdf.

160 people participated, [age group 20-23, students]
480 events registered
480 images analysed

TYPE OF SPACE	SUCCESSFUL COMPLETION OF CREATIVE THINKING PROCESS
Outdoors	165
Indoors – at home	195
Transition spaces (balcony, window)	30
Indoors – outside home	20



III. 2. Experiment card; “external spaces” category research results. By A. Bonenberg

4.4. Graphic data analysis – pilot research

The materials were subjected to analysis in accordance with the specified visual data assessment categories (Chapter 4.5, item II). Photograms illustrating architectural interiors were most frequent (48%), with external spaces in close second (40%). The remaining constitute intermediary spaces, between external and internal. Amongst the illustrated architectural interiors, professional work spaces, desks with computer equipment are dominant. There were also some residential interiors, suggesting housekeeping work. In the exterior spaces category, most photographs depict parks or other high vegetation areas – 39%. Elements of mass public communication in the form of tram interiors, stations and stops are also present. Streets are shown in 19% of these materials. Intermediary spaces are an interesting category, depicted in a number of photograms. There are also moments of gazing down onto the surrounding landscape. These implicate a moment of separation, retreat and distancing oneself from the surroundings. A significant majority of photograms do not show people nor animals (87%). Whereas artificial, not intensive, subdued lighting of the stage occurs often. This suggests relaxation or the moment of going to sleep (16%).

5. Test results and conclusions

The visual data subjected to analysis depict many various types of spaces – architectural interiors, external public spaces, intermediate spaces. Photograms illustrate locations at which the research groups declared to have arrived at positive conclusions to the gestation process. The most significant reflection stemming from the research is the fact that the creative process very often does not come to a conclusion at a desk – the traditional work or study location. It is surprising how many people experience “revelations” outdoors, during activities not directly associated with work, including in parks and public spaces. In this context, urban public spaces may in fact become innovation generating spaces, part of the economic cycle. Seen in that way their role and significance within the boundaries of major cities, large service centres, technology parks and academic centres may be much more profound than is generally assumed. The right design can improve the quality of rest, recreation in a park or use of streets, squares and public communication stops for all residents but also the quality of “results of work” wherever representatives of the creative class use public spaces and where innovation is the driving force behind the economy. The results obtained encourage one to apply them not only to architectural spaces (traditional work spaces) but especially to public spaces – the designs of which rarely take this issue into account.

6. Potential applications for the research

Based on this research and my own experiences, as well as bibliographical materials, I have developed design objectives for public spaces, recreation spaces and parks which support the creative process. Their concept is based on appropriately differentiating as well as a defined sequence of functional and spatial locations, with a view of constructing a path through moods, emotions and actions. The aim is to stimulate the senses, memories and associations. The interiors, enclaves and “passages” sequence principle can be referred to the traditions of Far Eastern and subsequently European romantic gardens, in the sense of a richly developed, multifaceted narrative created by the designed space. However, contrary to objectives wherein narrative in itself is the goal, spaces supporting creativity aim to:

- **stimulate the senses** and apply solutions used in the design of sensory gardens
- support the desire to **discover, be active and curious** in adults, so that similar to children’s playgrounds, they are confronted with a **wide spectrum of experiences**; when it comes to spaces for adults, the familiar techniques and strategies for stimulating creative forces should not be neglected the ability to **personalise space** is important, to furnish it with private signs and markings
- establishment of a good relation with the location’s cultural context is important, associated with inclusion of culturally significant elements, which symbolically arouse the feeling of **historical cohesion, belonging and identity**.

In the architectural and spatial dimension, the concept of stimulating the intuitive creative process is based on the establishment of differentiated spaces facilitating access to deeper emotional resources which aid free associations, noticing similarities, associating distant facts and ideas, metaphorical thinking and the use of creative imagination through psycho-physical activation.

7. Summary

The presented research and concept for its use constitute an example of applying observations and research to the design of public spaces. The attempt to capture spatial surroundings associated with the intuitive creative process provides sufficient information to formulate general objectives for design concepts which stimulate the creative process in public spaces.

The presented postulate for designing spaces dedicated to supporting the creative process does not mean that contemporary cities are devoid of places which inspire and are conducive to reflection or creative revelations. The suggested guidelines are coherent with examples of good practices in contemporary landscape design. The arrangement of public space at Superkilen in Copenhagen, designed by Topotek 1 + BIG Architects + Superflex is a very positive example, where the designers used multifunctionality, visual and functional diversity as well as colour coding to create a space which meets the social challenges of a multinational and multicultural immigrant district head on. The design copes really well with bringing together various cultural and formal motifs to build a colourful spatial collage. In that sense, a space with a multiplicity of meanings and narratives was established. It is addressed to the entire community but refers to various identities; it is flexible with potential to find seclusion.

The High Line Park in New York (2003) was designed in a similar, sequential, context sensitive manner by Diller Scofidio Architecture and Landscape Design. There is a progression to meeting places, places to relax and to feel in touch with natural elements, all strung on a thread of historic industrial railway tracks. This famous and eagerly published design also features a complexity level which reflects the spatial model facilitating creativity.

To summarise, it should be emphasized that the original research part as well as conclusions drawn from psychologists' research support the postulate for designers not to deny themselves a free, enthusiastic approach to creativity which values sensory, motor and affective stimuli. There is a lot of evidence suggesting that the essence of the intuitive creative process lies therein.

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