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THINGS AND PLACES: THE MEANING OF THE PHYSICAL ENVIRONMENT FROM AN ENVIRONMENTAL PSYCHOLOGY AND ENVIRONMENTAL COMMUNICATION PERSPECTIVE

ABSTRACT[1]

According to environmental psychology, in the process of behaviour physical environment is man's companion, equal partner, which, together with the internal psychological processes and in interaction (transaction) with these, partakes in the behavioural process. This standpoint makes it possible to raise quite a few questions, psychological in nature, about humans acting in a built/physical and natural environment, starting from this psychologically unusual set-off. These questions can (or for the most part can) be answered with psychological tools – "only" the man-environment transaction must be taken seriously, both from theoretical and practical perspective.

ENVIRONMENTAL PERCEPTION AND REPRESENTATION

According to ecological psychological research results, the successful behaviour (or more widely: the survival) of individuals largely depends of the degree to which the organism is able to accurately perceive the surrounding environment. Practically, the processes of sensation and perception are the only direct connection of living organisms – humans among them – with the outside world (see e.g. Sekuler–Blake 1994/2000). The perception of the environment is the basis of all environmental behaviour: in order to comprehend, alter and efficiently utilise the physical environment, first of all a clear and accurate environmental perception is needed. One of the most important psychological roles of human environmental perception is, that in an active interconnection, transaction with the environment (see Dúll 2002c), it oversees, organises most of the human activities constituting everyday life. Transaction means that environmental perception is the basis of knowledge about the world – mental representation –, the existence and operation of which is a basic condition of efficient functioning in the world. Based on the perception of the world around us, representations mapping the world in our heads and words expressing them are developed, which have direct reference to the actual, physical/material world. Let us quote the thought experiment of Putnam about the mental representations of the physical world, of the people of the imaginary "Twin Earth":

"We imagine that the year is 1750 (both on Earth and on Twin Earth) and Daltonian chemistry has not yet been invented. We also imagine that the people on Twin

Earth have brains identical with ours, a society virtually identical with ours, and so on. […] The only relevant difference between Earth and Twin Earth is that the liquid that plays the role of water on Twin Earth is not H2O, but a different compound, call it XYZ. On Twin Earth it does not rain H2O but it rains XYZ, people drink XYZ, the lakes and rivers are full of XYZ, and so on. […] Imagining this case to be actual, we should say that the term »water« does not have the same reference (even in 1750) in Earth English and Twin Earth English. […] The reference of the word »water« on Earth is the stuff we call water, the stuff we have discovered to be H2O. […] What they call »water« on Twin Earth, [or the stuff it is referred to as »water«] is the stuff that the people of Twin Earth discovered to be XYZ. […] The »mental representations« of the speakers on Earth and on Twin Earth do not differ in anything, […] the references are different because the compounds are different" (Putnam 1988/2000: 66–69.).

Following the above train of thought, it becomes quite clear that the material-physical world, even in such a broad sense, has got a direct role in shaping mental representations and the psychological meaning of the world.

THEORIES OF PERCEPTION: A SHORT OVERVIEW

Processes of perception are tried to be explained by two groups of theories[2] in an animated debate with each other: the theory of constructive perception (e.g. Neisser 1967) and the theory of direct perception (e.g. Gibson 1979). As we will see below, the contradictions between the constructive and the direct views of perception seem to be radical. Their discussion and the attempts to solve them (e.g. Neisser 1976/1984) are not the subject of this chapter – on the issue see for instance Fodor–Pylyshyn (1981), Gibson (1991a) and Eysenck–Keane (1990/1997).

THE THEORY OF CONSTRUCTIVE (INTELLIGENT OR CREATIVE) PERCEPTION

According to the theory of constructive perception the first step of perception is when the organs of sense receive the stimuli of the surrounding world. Sensation is the activity of physical systems (neural receptors) as a consequence of the physical and chemical stimuli arriving from the outside world, respectively from inside the body. The sensation of the stimuli, or in other words, the sensory processes are followed by perception, in fact active, interpretative perception[3], during which "environmental information turns into experiences of objects, events, sounds, flavours and others, with the help of the organs of sense" (Roth 1986: 81.). Perception is considered to have a constructive nature in modern psychology, which means that the actual perception of the world surrounding the observer is very complex, and in fact "objective" only from a psychological perspective: the process of perception does not "map" or "reflect" the world at all in the direct sense of the word; the result of perception rather contains the information and its relations very efficiently – in the form of the mentioned representations. It is due to this that we can walk along the

stairs without actually "having them" in our minds, as our conscious perception is not effectively analysing the changes of the surface, but we are following with atten-tion the face of our interlocutor, for instance. The mental representation of the world is not given to us from the day of our birth, but it is rather shaped and enriched by experience. Walking on the stairs with alternating feet for instance is learned for a long time with great attention in childhood. The personal and collective experiences of the perceiver, similarly his/her emotional conditions, personality etc. are all organic part of active and constructive perception processes. Thus, perception is not objective in the sense that the perceiver often does not perceive at all what is there or "really" going on in the outside world, but rather "constructs" his/her own perception (i.e. what he/she is seeing, hearing, touching, tasting) based on physical stimuli, by means of his/her own psychological processes. When someone returns to his/her important childhood environment or faces an earlier experience, disappointment is not rare: a huge "mountain" seen earlier, perhaps as a small child, and represented as such in memories, can in fact be just a small hill for the adult…

> Above a shop I saw a sign
> saying "GIANT" and "Jeweller",
> in golden letters… I watched again:
> G-I-A-N-T ?… Yes, indeed!… Good Lord!… I got excited,
> This means that a Giant is living there,
> announcing his trade!
> […] For five days I waited; for five full days.
> […] And on the sixth day there I was again
> on Main Street. Lifted and let fly
> by all the fairy tales. A wing-opening bliss
> was to observe the golden sign
> shining from afar!… And then I got there… And
> got shocked: "WATCHMAKER^2 and Jeweller":
> that was what the wondrous sign said.
> Who stole my Giant? --
> I cried almost loudly and my heart ached…
> Then I just stood there and felt ashamed.
> (SZABÓ, Lőrinc: "Cricket music", excerpts from the poem)

The essence of perception, as we have seen, is the interpretation of the raw materials of higher level perception functioning, i.e. of sensory information, in other words a perceptual meaning transmission. The meaning of the stimuli are hence not "given", but rather defined by cognition. Still, perception is also interestingly accurate from a psychological perspective, exactly as a result of its consequence character: we know about the vehicle coming in our direction from the end of the street, that it is approaching, and not growing in size (although its growing image on the retina "objectively" informs us about growth). In everyday life artists, building, garden or object designers deliberately build on these constructive, psychological, creative processes: this is how it can be achieved for instance that a building or a garden seem to be greater from an adequate perspective.

The nature of perception also depends on cultural experiences (about this see e.g. Segall et al. 1966/1970; Altman–Chemers 1980; Serpell 1976/1981; Berry et al. 1995). In a classical inquiry (Allport–Pettigrew 1957, quoted by Holahan 1982c/1998) for example, a swivelling, trapeziform window was placed in a room so that the observers could not see it as a trapeziform rotating window, but a rectangular (i.e. traditional) one, that could dangle back and forth. In Western culture people are used to rectangular windows (the meaning of a typical "window" most of the time also implies that it is rectangular), therefore it confirmed the experiences of their perceptions – knowledge, mental representation –: if they observed a moving type of window-like thing, they could more easily perceive it rectangular, even if by that assumption the perception of its movement became inaccurate. This also shows the active nature of perception: movement – unlike the window – is irrelevant in the case of a window as an element of the environment. For that matter, in some cultural comparative surveys, the "window perception performance" of European and African town children, used to rectangular windows, was compared to that of rural African, Zulu children, who had not been familiar with rectangular windows, as the doors on the huts of Zulu settlements are circular. The characteristics of the representation is shown by the fact the Zulu do have a word for the circle, but not for square or rectangular. As it had been expected, the results showed that Zulu children were less likely to be "deceived" by the window illusion than their African or European urban counterparts.

THE IDEA OF "DIRECT PERCEPTION", OR THE THEORY OF ECOLOGICAL PERCEPTION

According to the ecological perception model[5] (Gibson 1979) there is no need for superior, interpretative cognitive processes on the side of the perceiver for the act of perception: on the one hand the actual world includes all the information needed for perception and active behaviour in the environment, and on the other hand, there is often not enough time for complicated cognitive evaluation processes when important decisions must be quickly made (e.g. "attack or run away"). Meaning – present in the environment – is directly perceived from the environment. In animal organisms (including humans) so-called effective perceptual systems developed during evolution, more precisely, during natural selection. Therefore, organisms are biologically "wired" to be able to pull out "readily available" information in the best possible way from the evolutionarily relevant three-dimensional world. This theory also provides a good explanation for the previous "vehicle approaching" example: the background (buildings, pavement surface etc.) and the moving target object itself (changing texture, velocity etc.) provide enough residing information to teach the perceiver that the approaching vehicle is not growing, but coming closer. The representatives of the ecological theory also find the role of learning important in environmental perception (Gibson–Gibson 1955/1975), yet, in contrast to the constructivist approach, they consider that it is not the knowledge about the environment

in the head of the perceiver that is growing to become richer and more accurate, but perceptual systems become increasingly capable to separate relevant and irrelevant environmental stimuli. As I have already mentioned it earlier, it is not that important what the head contains (i.e. representation), but more "what the head is contained in" (Mace 1977).

Ecological psychologists underline the importance of the active movement of the individual in environmental perception. During active movement, we perceive the permanent physical characteristics of the objects in the environment, the so-called constant, invariable functional characteristics, based on which the perceiver is able to judge the usefulness of the objects in the environment: e.g. one can sit, walk, lie down, etc. on a uniformly horizontal surface that is adequately large for the human body: the surface is "fit for sitting, walking, lying". These affordances of the objects inform the perceiver about their useful functions. Holahan's (1982c/1998) affordance example: a non-fenestrated object with a solid surface and with an inner space that is larger than a human body can serve well against wind, snow or rain.

THE PROCESS OF ENVIRONMENTAL PERCEPTION

The perception of the environment and of the physical objects is therefore fundamentally important in everyday life. Perhaps that is why we are so inclined to see this extremely complicated process as self-evident. The processes of environmental perception are often unconscious, and this tendency gets stronger the better we know, or are used to the environment or the object. Thus, one of the important empirical methods of the examination of environmental perception is when researchers observe and describe the behaviour of the people, their primary perception processes and the resulting meanings of new objects or the physical environment unknown to them. Let us take an example: the lady of the house receives a new kitchen appliance with many functions as a Christmas present from her mother-in-law. At first she only observes it, touches it, trying to acquire information about the machine in as many perception modalities, as possible, and as a consequence she may find it "hard to assemble" or "difficult to clean up", in other words "useless". The result of the perception for her in this case is a very complex meaning, that the gadget is "too complicated", or "what I gain by the machine quickly cutting vegetable into pieces, I lose with the disassembling of its parts, their cleanup, picking out jammed pieces etc. I should better stick to the knife. By the way, it is typical for my mother-in-law to come up with a useless object." Let us suppose that she tells the story to her tech-minded husband, who examines the machine thoroughly: "After all you got it from Mom, so it should be good for something". During his perception, the husband might also reach to the conclusion (meaning) that the assembling and disassembling of the machine is a way too complicated technical task. Then the harmless parts of the gadget could end up in the sandpit of the child, for whom they could bear the meaning of "I got a nice little toy from Grandma again". The example shows that the objects and their meanings resulting from the perception

of their physical environment are not always identical, they can depend on the situation, the perceiver (his/her competence, expectations, age etc.), on where the object came from etc. Therefore, when explaining the meaning of objects and the physical environment, in the following parts of the present chapter we will rely on the approach of the "constructive perception" theory.

The general psychological examinations of perception – just like the above example – are primarily connected to the perception of objects. There has been less research – although that is what environment psychologists would be particularly interested in –, on how people perceive complex environments that are composed of many objects (Holahan 1982c/1998), like a room, for example, or a building, an entire city, or a natural landscape. However, studies about object perception, especially the ones that point out the dependence of object perception from the context, are a very useful starting point, or even an appropriate framework to understand complex, molar environment perception. In an interesting, general psychological experiment Biederman (1972/1989) proved for instance, that the perception of objects is extremely influenced by the whole environmental context. The participants were asked to take a quick glance at slides presenting different environments (e.g. street, kitchen). Every picture was projected in two versions: once in a naturally coherent, clear, meaningful format, then cut into pieces, and mixed. The pictures presented to the participants – both the meaningful and the mixed versions – contained the same target objects to be observed, always left in their original positions (e.g. a fire plug on the street photo, or a pot on the kitchen photo). Participants were asked to identify the target objects on the photographs. According to the results of the survey, the participants could recognise the objects much more accurately on the meaningful pictures than on the mixed ones. Thus, a meaningful context helps in the perceptual identification of things. As in the real world objects are almost all the time perceived in a meaningful environment context – this result can be especially important when trying to understand the perception of objects in a real environment (Holahan 1982c/1998).

What is more, according to the approach of environmental psychology, objects cannot even be adequately perceived from just one perspective. In the case of the environment this must be even more underlined: in order to relatively fully perceive a room or a street, it must be observed from several viewpoints and many modalities – in other words, noises, smells, movement experiences can also be important. Environmental psychology-oriented perception theories also emphasise, that the perception of the physical environment and its objects infer target orientedness, as the complexity of the objects/environments, or their size for that matter, make it impossible for the perceiver to perceive them passively (Holahan 1982c/1998; Benedikt–Burnham 1985). In the environmental psychology specialist literature an art exhibition of the New York Jewish Museum is frequently evoked: the artist created an extremely "unusual" environment using eight large mirrors. A stroboscope lamp and a loudspeaker were attached to each mirror, thus creating a multitude of complex and unusual series of light and sound effects. This exhibition inspired

several psychological inquiries (see Holahan 1982c/1998), in which the behaviour of people was observed under lab control, in unusual, more or less complex, artificial environments, very similar to the above one. In our interpretation, the process was examined during which the psychological meaning of a strange space was defined. In one of these inquiries for instance, participants stayed alone in the unusual environment for six minutes. They could have left the space before the time passed, yet the majority remained there for the entire six minutes. According to the observations, people mapped the new environment following two, radically different strategies: those belonging to the structural type handled space independently of themselves, e.g. by setting up hypotheses about how the environment worked, and formulated them, measured the length of sound effects and the time passing between them, tried to find connections between the sounds and the flashes of light etc. Participants belonging to the other experience type obtained information about the space regarding themselves, their own bodies, movements as part of the environment, like e.g. they lied down on the floor, stood on one leg, closed their eyes in order to perceive the environment in different ways. We may assume that the two different ways of cognizance resulted in two types of mental representation, but the role of both physical environmental meanings was to assist the perceiving person in his/her orientation in a world gradually becoming more and more meaningful.

THE MEANINGS OF THE PHYSICAL ENVIRONMENT: SPACE/PLACE AND OBJECT/THING

The highly significant, meaning defining dimensions of the physical environment are real spatial directions and their psychological mappings. During the course of evolution the environment and the bilaterally symmetrical human body are psychologically divided according to the important spatial directions – up and down, ahead and behind, right and left side. However, these directions do not only help in actual orientation; they have also got a more abstract psychological-symbolic meaning for orientation in a meaningful world: they create and express actual and psychological relations: for example the words right/left also express value judgments in many languages (making one side the “right” one as opposed to the other), rules of conduct specify for women to walk on a particular side of men etc. Similar symbolic meanings are attached to the directions up and down (cf. “superior” – “lower level”) and ahead-behind (forward, backward) and their linguistic representations. Taking the psychological characteristics of the distinguished spatial directions into account we can differentiate objective, ego and immanent spaces (Beck 1967/1970). Objective space is the actual space that can be physically-mathematically described, having characteristics like distance, shape, volume. As its name shows, the ego space is defined by the self, when it separates objective space with psychological operations; it is a psychological-physical world that serves as the actual scene of the accommodation behaviour of the individual; in fact the research of objective/

environmental perception reveals this space. The immanent space is the internal, subjective space, the unconscious world of representations (which, however can be made conscious), meaning personal spatial orientation, mapping dimensions, but can also appear in dreams or as imaginary object and space manifestations. Manifesting behaviour in the above sense means a complex accommodation to a complicated world that is mapped along both physical and psychological characteristics.

It follows from the above that one of the most important, general objectives of environmental psychology is to describe behaviour in a way that is specific for the place where it occurs (Russell–Ward 1982; Genereux et al. 1983). This means that "people always situate their actions in a specifiable place and the nature of the place, so specified, is an important ingredient in the understanding of human actions and experience" (Canter 1977: 8.). The notion of "place" had already been used in a specific way[6] before the development of environmental psychology [by architects and geographers, insofar as they had realised and used in their work the principle that generally speaking there are no environments, only "homes", "hospitals", "towns" etc. – in other word, people map the "world", i.e. space in countless personal experiences, which also carry physical features: these are the places.

"Place refers not only to geographical location but also to the essential character of the site which makes it different from other locations. Place, in this sense, is the way in which dimensions of landscape come together in location to produce a distinct environment and particular sense of locality." (Seamon 1979: 130.).

Thus the meaning of place also includes its physical features and the emotions, experiences connected to them, i.e. the affective component (cf. Russell–Pratt 1980). Environmental psychological place theory (Canter 1977) adds to this the psychological process of interpretation, the cognitive meaning component, the essence of which is exactly the meaning attribution to the place. Similarly to the space/place distinction the object/thing distinction can also be introduced: in this sense objects are physical reality, while things are psychologically defined, meaningful entities (Dúll 2003).

The meanings of environment and objects can be examined from several viewpoints (Dúll–Urbán 1997): we can speak about the (1) denotative-cognitive, (2) connotative, (3) symbolic-aesthetic and (4) behavioural meanings of places. The essence of places and objects are exactly that – as it has been mentioned above – these dimensions are strongly connected, due to the complexity of the environment/object. The different environmental psychological meaning levels have been discussed earlier (Dúll–Urbán 1997), in this chapter we rather underline their interconnectedness, their patterns.

The denotative-cognitive meaning of the place/object[7] denotes in fact what the environment/object is according to its lexical meaning (a chair or a living room) and to what degree it can be recognized, how one can find one's bearings in/on it, how legible it is. Lang (1987; 1992) elaborated a detailed "environmental semiology" based on the well-known linguistic system of Charles Morris. According to that, the

evolution of environmental symbols (places and things, according to our present interpretation) is the result of cognitive processes, such as comprehension, categorisation,

linguistic formulation. During these acts of interpretation an environment/object gains additional meaning beyond its proper use, which has got three levels: (1) syntactic, which means the contextual relationships of the environmental elements: for instance in homes that belong to the Western cultures, living rooms, as public spaces are located in the front, while bedrooms in the back of the house (cf. Dúll 1995; Money 2007). (2) The semantic meaning refers to the rules and norms related to the environmental elements: what kind of objects we place in our living rooms, how these are organised, and it also defines the rules guests must follow on these premises. For instance, if chairs are placed facing each other, then this sociopetal arrangement favouring social interaction will most likely encourage conversation, while if all chairs face the television, than people will very likely watch the screen, rather than talk to each other. (3) The pragmatic meaning links the environment/object to the user: in our example the arrangement of the furniture in the living room as a tool meant to create an impression will tell the visitor a lot about the owner of the flat. The essence of the connotative meaning is that feelings, personal, individual associations (see e.g. Crozier 1994/2001) could be connected to all meanings discussed so far – we judge along emotional dimensions all the spaces/objects that we encounter: beautiful–ugly, dangerous–safe etc. This obviously can also help us in direct survival, and the affective evaluation can be carried out even without the comprehension of the cognitive content: we do not have to know about a narrow, dark, foul place what it exactly is – the adaptive manifestation will urge us to avoid it, because "it may be dangerous". The situation is further complicated by the fact that – exactly functionally entwined with psychological interpretation processes, in a transactional relationship with them (see Dúll 2002c) – almost all the elements and characteristics of the built environment carries/may carry some meaning (Lang 1987): the shape, structure, size, material, colour, smell, style, designation of the place/thing – and we could go on. It can be seen therefore that (a) these meaning forms, in an organic connection, give the meaning of the place (e.g. a living room) or of the thing together, and (b) thus meanings consciously end/or unconsciously may influence the knowledge and the feelings of the people about places and things, just as their behaviour in connection with them.

We must not forget however, that environmental stimulation itself also plays an important role in environmental meaning, exactly due to its transactional nature.

According to Berlyne (1960; 1971/1997) environmental stimulation can be described by so-called collative variables, such as the novelty, complexity, unexpectedness and incongruity of the stimulation. Meaning thus is emerging when the perceiver compares the given, current stimulus with other stimuli, alongside these variables, and according to general experience he/she perceives the environmental stimuli as pleasant, acceptable, meaningful mostly in the mid-range area. Using the example of a town: the visitor will judge the given place as cognizable (cognitive component) and thus beautiful, lovable (emotional component), he or she will be more likely to

visit it frequently (behavioural factor), if the town offers him/her interesting personal experiences, because it is original, complex, surprising, containing unexpected scenes when one turns around the corner, for instance, but the experience for the visitor is neither too little (to make him/her bored), nor too much (to make him/her overwhelmed with stimuli, become tired or even aggressive), but exactly enough, i.e. optimal. It is worthwhile to remember the "object" aspects, as well, like in the earlier example with the lady of the house and the kitchen gadget: if the meaning of an object is "exaggerated" or "too limited" in any respect, that can produce the limited or even the total lack of use of that unenjoyed thing (perhaps even its waste and destruction). In such processes the psychological characteristics of the person partaking in the object/environment-person interaction (his/her temperament, current emotional state, experiences etc.) are certainly also important – however, the detailed discussion of these go beyond the scope of this chapter (for more on that see Little 1987; Dúll–Urbán 1997). In the present outline we emphasise that the development of the meaning of the physical environment, environment evaluation are interactive in nature: in it the person with his/her own psychological traits and the object/space with its characteristics play a simultaneous and equal role. Thus, what environmental psychology researches consistently prove, becomes possible: the psychological meanings of places/things create a much greater effect than their objective characteristics, and this effect can even be a very long-term one, in fact it can still hold true even if the given environment or its objective elements physically change to a significant degree, or even disappear from our lives.

A female acquaintance kept a small, empty medicine ampoule with an almost completely faded label on her book-shelf for years, at a visible place. When I asked her why she kept that small object at such a visible place, she told me, that about three decades before she had fallen madly in love with a boy, who had barely noticed her. Once, in the school-yard, the boy accidentally hit her with a snow-ball. She happily collected the snow from her coat and put that in a small medicine ampoule that she happened to have in her pocket. The small bottle from then on served magical purposes: she often kept it in the palm of her hand, trying to influence the boy by suggestion to observe her. But the "object-magic" was unsuccessful. Snow-broth has long disappeared from the little bottle – yet the bottle reminds her of many things: when an idea or an undertaking seems hopeless, by quickly casting a glance on the bottle, it is easier to give up the attempts.

The emotional conditions of the person in the example, her experiences, and the characteristics, affordances of the object have been and still are simultaneously producing a changing psychological meaning: an object originally created for a certain use can gain many symbolic meanings during the object-person transaction. In a similar way it is possible that a suitably designed object/environment becomes non-functional in time – almost all the towns have parks or public spaces that are no longer functioning because people do not use them, or conversely, and the list could be continued (cf. Dúll 2003).

OBJECTS AS ENVIRONMENTAL TRACES

We have already seen above how important contexts were in shaping the meanings of things/places. Yet the process of conferring meanings does not only help present and future orientation in the world, but also functions "backwards", namely that from environmental stages – exactly based on our objective/environmental representations, knowledge of meanings – we are able to infer conclusions about what had happened in the past at the given place with the given things (and persons, of course). Environmental/objective traces (Zeisel 1993) are "expressive", they provide us with sharp environmental communication[8] (Ruesch–Kees 1964/1970) about the events: with their help we can draw conclusions about the facts/ways of using places/things or even the lack or unusual ways of their use etc., which of course, further enrich their mental meaning. Such physical traces are e.g. the things "left behind" – garbage is especially interesting among these[9]: exciting analyses of environmental psychology were made about what sort of environments are more likely to produce garbage (Meeker 1997). But a kitchen is also worth to be examined from the perspective of what is left there, where exactly (and for how long!) after a feast... The opposite of things left behind is their lack of use, something that had already been mentioned in connection with deserted resting places in towns, or uselessly complicated household appliances. Further environmental traces are bridges-connections, where spatial/physical elements are vertically or horizontally united by users; and their opposite, isolation-separation, where a unified space is divided onto several parts. A good example for the former could be a plank leant to a container to permit a loaded wheel-barrow to be pushed up to the opening of the container, or the continuous deterioration at the same spot of sports ground fences in order to make a direct "entrance". Otherwise, if deterioration is always done at the same spot, that could also be expressive from an environmental psychology perspective: it could mean that the original entrance had been badly placed from the perspective of the practical common sense of human behaviour (e.g. a long way has to be made from every direction to enter), but also that the dilapidators consider the place their own territory, do not tolerate repair, i.e. intervention etc. This example is a further evidence for the fact that without context analysis the meaning of environmental/objective traces can never be entirely comprehended, their meaning is not absolute, there is no dictionary-like list of solutions to solve them. Commonplace examples of isolation-separation are fences and other elements of boundary, but the same function can be fulfilled by a "No trespassing" or a "Private property"sign, the differences in level of the surfaces, or a plant on the two sides of a desk. A next environmental trace is wear and tear - erosion, which provides good information about intense or even proper use: in a museum, for example, "the best" possible arrangement of the exhibited objects was examined with environmental psychology trace analysis (Thomson 1986): from the wear and tear of the carpets it could be established which were the most visited objects in the museum. Environmental trace analysis also revealed the phenomenon called "keep right" or "exit gradient" (Melton 1933, quoted by Thomson 1986), which is worth to be taken into account when designing exhibitions: people are more inclined to walk to the right, open doors

on the right more frequently etc. Identification as environmental/objective trace leaving means that the user makes the object/space meaningful for him/herself and the others by connecting it psychologically to him/herself: puts his/her name on it, paints it a certain colour etc. An example for that is graffiti, quite controversial also from an environmental psychology perspective; yet for competent experts the style, colours of a work of art or a building tell a lot, too, and based on them sometimes even the creator can be identified.

By all the discussed transformations the psychological meaning of the places/things are also altered in most of the cases, which – as we have mentioned before – influence their use even on the long run, and naturally, further change their meaning, and so on.

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NOTES

1.Excerpt from the book of Dúll, Andrea: Helyek, tárgyak, behaviour. L'Harmattan, 2009

2. See also Dúll (2001b)

3. The notions of sensation and perception were distinguished for the first time by the Scottish philosopher Thomas Reid (1710–1796), and this separation is also at the basis of modern conceptions. For a more detailed description of the physiological and general psychological processes of sensation and perception, see e.g. Sekuler–Blake (1994/2000).

4. Word-wit: ÓRÁS = "watchmaker" and ÓRIÁS = "giant" in Hungarian.

5. See also: Szokolszky–Kádár (1999); Szokolszky–Dúll (2006).

6. We do not deal here with the phenomenological antecedents of the notions of place and thing, e.g. the works of Husserl, Heidegger and others – see e.g. Bacsó (2003).

7. The issue of cognitive meaning is generally the classical area of analysis of general psychology and environmental psychology; therefore it has got extensive literature. The subject is treated from a general psychological point of view by Baddeley (1997/2001), Eysenck–Keane (1990/1997), for instance, from the perspective of ecological psychology by Szokolszky (1998), and from the perspective of environmental psychology by e.g. Downs–Stea (1973).

8. Due to reasons of extent, the present chapter does not deal with the issues of non-verbal communication, related to objects. From an explicitly architectural or environmental psychological point of view the issue is treated by e.g. Ankerl (1991), Csíkszentmihályi–Rochberg-Halton (1981).

9. An interesting study was published on the subject by Losonczi (2003).