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Semiotics and Aesthetics of Surfaces and Surface Layouts

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1. *Introduction*

1.1. *The Problem*

The problem of the following considerations was the development of a new approach to the semiotic and aesthetic study of what hitherto has been called «space». I shall suggest that an ecological perspective will reflect the reciprocal relationship of the organism and its environment more adequately than the treatment of «space» as an object or a category of perception. In order to solve our problem we shall first define some fundamental concepts of the ecological approach, will try then to sketch an ecological semiotics with special regard to surfaces and surface layouts in the environment and will finally argue for an experimental approach to the aesthetics of surfaces and surface layouts.

1.2. *Background of the Problem*

1.2.1. *Some Fundamental Concepts*

Since I suggest to take an ecological approach to the subject of «space», I should like to clarify first some fundamental concepts of this perspective.

The first and most important concept to be defined is «*ecology*». I shall use it exactly in the sense the biologist Haeckel gave it, when he first introduced the term in his 1866 work on «General Morphology of Orga-

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nisms»: «Ecology is the general science which studies the relationship between the organism and its external environment». Would an ecological approach to the study of «space» be the investigation of the organism's relationships with «space»? But then, what does «space» mean in an ecological perspective? Certainly not the ghost like line grid of the three dimensional coordinate system. That is intellectual space. Ecological «space» (and for reasons of consistence I will as of now stop using the term altogether) is lived-in and moved-through by the organism. Ecologically speaking the organism is continuously moving through a penetrable medium without hitting the surfaces surrounding him. J. J. Gibson on whose work I draw heavily in the following reflections, made this point clear in the introduction to his book «The Ecological Approach to Visual Perception»: «I am ... asking ... to suppose that the concept of space has nothing to do with perception. Geometrical space is a pure abstraction. Outer space can be visualized but cannot be seen. The cues for depth refer only to paintings, nothing more. The visual third dimension is a misapplication of Descartes's notion of three axes for a coordinate system. The doctrine that we could not perceive the world around us unless we already had the concept of space is nonsense. It is quite the other way around: We could not conceive of empty space unless we could see the ground under our feet and the sky above.

Space is a myth, a ghost, a fiction for geometers. All that sounds very strange no doubt, but I urge the reader to entertain the hypothesis. For if you agree to abandon the dogma that "percepts without concepts are blind", as Kant put it, a deep theoretical mass, a genuine quagmire, will dry up» (Gibson 1979, 3).

The next important concept to be defined is *scale*. There are important differences between the scale of the world as described by physics and that of the environment of animals and humans. The physical world ranges from galaxies to atoms. Our lived-in visibile environment is composed of all we must see in order to act successfully. As a matter of fact, we just see what we must see. That is not a tautology but the result of the evolution our visual system has undergone through milleniums. We must see landscapes, mountains, trees, plants, buildings, objects, animals and people. Our environment ranges from textures measurable in millimeters over objects measurable in meters to the visible landscape measurable in kilometres. We cannot see galaxies and atoms. A further concept of importance to the understanding of the ecological approach is the *reciprocity* of organism and environment. Organism and environment form an inseparable whole. No organism can exist without its environment and there is no environment without organism. Hence, what was there before life began on earth was no environment. The

best simile for the organism-environment reciprocity is the well-known Chinese figure of Yin and Yang.

To conclude our survey of fundamental concepts we propose that our terrestrial habitat is best described by its medium, by its substances and by the surfaces which separate the substances from the medium. The gaseous atmosphere on earth is the *medium* of many animals and of humans. It permits locomotion, seeing, smelling and hearing. Water is the medium for fishes. *Substances* are matter in a solid or semi-solid state. They do not permit moving through. They differ in hardness, viscosity, density, elasticity, plasticity, etc. All substances have *surfaces* and these surfaces are layed out in the environment. Surfaces and their layouts tend to resist deformation. Depending on the composition of the substance they delimit, surfaces have different textures and pigments. Surfaces have a shape, they may be more or less lit and absorb and reflect more or less of the illumination falling on them.

1.2.2. *Ecological Semiotics — The Theory of Affordances*

The environment of the organism is meaningful with respect to the organism and its scale. For example, a rock 45 cm high affords seating to the grownup wayfarer, to the accompanying child a table.

The concept of «affordance», the term was coined by Gibson (1979), is the ecological equivalent of meaning. The idea that the meaning of a thing has a physiognomic quality (as the emotions which appear in a person's face) stems from Gestalt Psychology. Koffka writes in his «Principles of Gestalt Psychology»: «Each thing says what it is. ...a fruit says "Eat me"; water says "Drink me"; thunder says "Fear me"; and woman says "Love me"» (Koffka 1935, 7). The handle «wants to be grasped», objects «tell us what to do with them» (Koffka 1935, 353). Koffka called this the «demand character» of things.

Kurt Lewin, considered by many as the founder of ecological psychology, used the term «Aufforderungscharakter», translated into English as «invitation character» or «valence», to express the meaning of things. There is, however, an important difference between the demand character of the Gestaltist's object and the affordance as conceptualized by Gibson. For the Gestaltist the demand character belongs to the phenomenal and behavioral, not to the physical and geographical object. Koffka argues that an object, say a mail box, has its demand character only as long as the beholder needs to mail a letter. On the contrary, Gibson maintains that an affordance is an invariant that is always there to be perceived. «The object offers what it does because it is what it is» (Gibson 1979, 139). Jakob von Uexküll (1913), the precursor of ethology,

described something similar to affordance in what he called the «counter-ability» (Gegenleistung) of manmade things in a passage on a stroll through the town: «It is not without interest to start a stroll through the town if one remains conscious of a certain question while looking at things. Thus we want to ask which meaning have objects striking the eye and for whom do they have a meaning? We pass a tailor's shop, the garments exhibited are not only adapted to the forms of the human body, but change with the different activities of civic life which they serve.

Next there is a watchmaker, exhibiting very different sorts of watches. The time of sun dials has long passed. Sunrise and sunset do not play a role in our civic life as they did formerly. Artificial illumination prolongs the day. And this little machine takes care of the regular distribution of our daily work dividing day and night into time spans of equal length by its course, whereas still with the Romans, depending on the seasons, either night or day had the longer hours. Thus we have corrected the course of the sun, originally the mistress of time and hour, according to our needs. We like to stop in front of the bookseller's display offering that object which is today most important for communication between human beings — the book. We know that between all these big and small covers there are words slumbering, which we can awake any time and which will tell us all about human life.

Now comes a butcher's shop. There we see the meat of animals, serving as our nourishment, ready for further treatment. How few of the passers-by know that this meat is an artful apparatus of unequalled precision which endowed the animal with movement and warmth.

A staircase of stone leads us to the terrace of a café where carefully trimmed trees afford shadow and well cultivated flowers give pleasure to our eye. We sit down on comfortable chairs and let the picture of passing carriages impress us, which roll by now pulled by horses now driven by motors. Everything — indeed everything which we get to see is adapted to our human needs. The height of houses, of doors and windows can be reduced to the size of the human figure. The stair fits our gait and the bannisters the height of our arms. Each single object is endowed with sense and form by some function of human life. We find all over an ability of man which the object sustains by its counter-ability. The chair serves seating, the stair climbing, the vehicle riding, etc. We can talk about something being a chair, a stair, a vehicle without misunderstanding, because it is the counterability of the human products which we really mean by the word which denotes the object. It is not the form of the chair, the vehicle, the house which is denoted by the word, but its counter-ability.

In the counter-ability lies the meaning of the object for our existence. This counter-ability is what the constructor of the vehicle has in mind, what the architect thinks of when designing the plan of the house, what the butcher thinks of who slaughters the ox, as also the writer writing the book, the watchmaker fabricating the watch. The gardener trimming the trees and planting the flowers prepares them for counterability. Everything surrounding us here in town has only its sense and meaning by its relationship to us humans».

To demonstrate how similar the concept of counter-ability is to Gibon's term affordance here a passage which he wrote 66 years after von Uexküll's text appeared: «Civilized people have altered the steep slopes of their habitat by building stairways so as to afford ascent and descent. What we call steps afford stepping, up or down, relative to the size of the person's legs. We are still capable of getting around in an arboreal layout of surfaces, tree branches, and we have ladders that afford this kind of locomotion, but most of us leave that to our children» (Gibson 1979, 132).

As similar as the concepts of von Uexküll's counter-ability and Gibson's affordance may be — there is again a difference between them in the role attributed to the object. For von Uexküll the object — he calls it «Gegengefüge» (counterstructure) — is only an episode in the function cycle («Funktionskreis»). This cycle starts with a counter-structure's perceptual mark («Merkmal») which is transformed into a perceptual sign («Merkzeichen») in the organism. Depending on the organism's need, the perpetual sign triggers a behavioral sign («Wirkzeichen») which in turn inflicts a behavioral mark («Wirkmal») onto the counter-structure. The function cycle ends, because the behavioral mark cancels the perceptual mark, as von Uexküll puts it. It follows that depending on the needs of the organism, the same counter-structure may play quite different roles in the function cycle. For Gibson, these different roles would not depend on the need of the organism but on invariants in the makeup of the counter-structure, on an organism-environment fit.

Whatever the epistemological nuance in the status of the ecological object may be, there must be optical information available to the organism for perceiving counter-abilities or affordances. In fact, perceiving has never to do with value free objects to which meaning is associated in a second phase. According to Gibson at least, all ecological objects are full of meaning to begin with. Surfaces, their layouts and the substances they delimit always exhibit affordances for someone. Affordances may be positive or negative. A stair invites stepping down by

its small height, a cliff warns not to step down because of the abyss at its rim. The information specifying the positive or negative affordances is always accompanied by information specifying the perceiving organism itself, its body, legs, hands, nose, etc. In fact, we cannot perceive the environment without perceiving our self within it. This shows once more the Yin-and-Yang nature of the organism-environment relationship.

In special cases there may be misinformation issuing from certain objects such as large glass windows which appear to birds as the medium to fly through. And many of us have in a hurry bumped their heads against a glass door mistaking it for an opening. As Gibson puts it: When Koffka said that «each thing says what it is» he forgot to mention that it may lie . . .

1.2.3. *Some Important Affordances not Based on Rigid Surface Layouts*

There are some affordances depending less than others on information issuing from rigid surface layouts. Water, for instance, is a necessity for terrestrial organisms which is not recognised by a steady surface. Since body tissues consist to a large extent of water, we must constantly replenish the liquid by drinking. The organism depends, therefore, on recognizing water. Water also affords hygiene. It can be channelled and preserved in containers.

Fire, instead, is an event having a beginning and an end affording warmth and illumination, the cooking of meals, the melting of metals, etc., while consuming fuel substances. But it also has negative affordances if one gets too close to it. Both water and fire have many kinds of uses and therefore many meanings to humans.

Animate objects differ from inanimate ones in that they have no rigid surfaces but actively move by means of their own internal forces. Their affordances result in being prey or predator, mate, rival, old or young. They may afford eating or being devoured, care or aggression. What animals and humans afford each other within (but also sometimes across) the species is also social interaction. Social interaction requires a great deal of coordination and cooperation.

2. *The Semiotics of Surfaces and their Layouts*

2.1. *The Syntactics of the Semiotics of Surfaces and their Layouts*

The affordances we are interested in here are directly specified for the organism by surfaces and their layouts. Gibson (1979) provides a sy-

stematic nomenclature of different kinds of layouts. It results from the syntagmatic combination of the syntactic elements surface and medium. One such combination is the *ground* referring to the terrestrial surface. The ground implies not only bordering with the medium above it but also the effect of gravity, a horizon and the sky. If there was only the ground, the layout would consist of an *open environment*. But this condition is only realized in a flat desert. Generally the environment is full of *convexities* and *concavities* and all kinds of «clutter». An *enclosure* is a layout of surfaces surrounding the medium. The totally enclosed medium is rarelly realized, as for example in the case of an embryo. A *detached object* consists in a layout of surfaces which is entirely surrounded by the medium. Examples of detached objects are all moving animals including humans, but also balloons. Most objects seem to be *attached*, i.e. only partially surrounded by the medium. Most of them are attached to the ground. A *partial enclosure* such as a concavity, a hole or a cave consists of a surface layout that partly encloses the medium. A *hollow object* is an (attached) object from the outside but an enclosure from the inside. Examples are the snail shell, a hut or a pitcher. A *sheet* consists of two surfaces which enclose a substance but are very close together in relation to their dimensions. A *fissure* is a layout of two parallel surfaces which are very close together in relation to their size and enclose the medium in a thin opening, like in a crack of a stone. A *place* is defined by Gibson as a location in the environment, a more or less extended surface or layout. Places have a name but no sharp boundaries. They can be located by inclusion into larger places (the fire place in the living room of the Villa Camaioli in Florence). The habitat of animals and humans consists of places.

There are some more terms given by Gibson for surface layouts, but for our purposes the above catalogue might suffice. These types of surface layouts are the signifiers of our environment, what they afford is the signified.

2.2. *The Semantics of the Semiotics of Surfaces and their Layouts: What Surface Layouts Afford*

There are natural or manmade layouts. The affordances of natural *terrain layouts* either facilitate or prevent locomotion for animals and humans. Paths, i.e. channels not cluttered by objects, afford the locomotion of pedestrians from one place to the other. Obstacles, barriers, water margins and brinks are surface layouts exhibiting negative affordances with respect to locomotion. Slopes may or may not permit locomotion depending on their angle. For thousands of years humans have been changing the terrain by constructing roads, stairways and

bridges, all artifical surface layouts, to facilitate locomotion. They have also constructed walls, fences and other obstacles to prevent access to their enclosures.

Different *places* in the habitat of animals or humans have different positive and negative affordances. Some places serve as a refuge from predators, others, which are partial enclosures, as homes. There are places to hide. Hiding means to position the body in such a way that observers may not see it. Privacy in the design of housing means to provide opaque enclosing surfaces in order to prevent others from looking in. Curtains on windows permit seeing without being seen and let in light.

Since the atmospheric medium changes from warm to cold and from rain to snow humans must have *shelters*. Originally they used caves, partial enclosures adapted to their size, but then they started constructing artificial shelters, socalled huts. Huts are hollow objects attached to the ground. They feature a *roof* affording protection from rain, snow and sunlight. The *walls* from the wind. The *doorway* permits entry and exit.

Objects are of persisting substance with closed or nearly closed surfaces. They can be attached or detached. An attached object such as a tree branch permits climbing. A detached object may be carried and if it is of an appropriate weight it affords throwing. Hollow objects can be used as containers. *Tools* are objects of different affordances which can be considered extensions of human limbs, especially of the hand. Similarly, *clothing* is a part of the human body while being worn.

Humans have developed *display surfaces* such as pictures which afford visual information. This information is «second hand» since it permits the beholder to see as a surrogate what the maker of the picture saw in the original.

A whole set of affordances typical for a given species may be called its ecological niche. Whereas the term habitat refers to the set of places where a species lives, the term niche means how it lives.

2.3. *The Consequences of Human Intervention in the Environment*

Over the last thousand years humans have drastically altered the face of the earth. The layout of its surfaces has been changed by leveling and building. The substances have been converted from natural into artificial materials, the medium of the air and the water serving fishes as a medium have been polluted. Humans have made their lives on earth easier at the expense of other species and, ultimately, of their

own. Today, the changes of the terrestrial surface imposed by man have reached a proportion that human life itself may be endangered by it.

3. *On the Aesthetics of Surfaces and Surface Layouts*

3.1. *Philosophical Semiotic Aesthetics*

3.1.1. *The Period of Enlightenment*

While the concept of environmental semiotics, the study of surface layouts and their affordances, is already to some degree well advanced the idea of an ecological aesthetics is just beginning to emerge. It is difficult to formulate what function the affordance of beauty should have in everyday human life.

A look back into the history of semiotic aesthetics may help to clarify our problem. An important phase of development was the semiotic aesthetics in the 18th century period of enlightenment connected with such names as Vico, Diderot, Baumgarten, Lessing, and Mendelsson. During this phase the theory of the iconicity of art was advanced. Thus painting had to be imitation and poetry was said to transform the arbitrary signs of language into «natural» ones (Nöth 1985). It is difficult to see how this normative approach could be of any help to formulate an aesthetics of natural and manmade surface layouts. They may be considered icons or indices of what they afford but are, by that token, not necessarily «aesthetic».

3.1.2. *The Work of Mukařovský and its Consequences*

One important step in the development of semiotic aesthetics was accomplished by the work of Jan Mukařovský (1978). He based his aesthetics on the sign concept of de Saussure and considered the signifier of the aesthetic sign as the material existence of the work of art, whereas its signified was anchored in the individuality of the artist and the reality of the perceiver — both partners in aesthetic communication. For Mukařovský, the aesthetic function was only one of the manners by which the subject reacts towards the world. He distinguished between immediate functions, i.e. the object oriented practical and subject oriented theoretical ones, and semiotic functions, i.e. the more object oriented symbolic communication and the more subject oriented aesthetic communication. The aesthetic function was considered a complement to the functional multiplicity of the individual. Thus with regard to the functions in architecture, a problem related to that of surface layouts, he distinguished between five functional horizons: first, an immediate purpose of a building having to do with its direct affordan-

ces as a shelter, secondly the historical purpose regarding the building's compatibility with or deviation from historical norms, third the social function which the building served, fourth the individual function manifesting itself in the adherence or negation of the cultural and social norms manifested by the architect, and finally the aesthetic function of the building as an artistic sign.

This concept of architectural multifunctionality has been elaborated further with reference to a linguistic model proposed by Jakobson (1960) in Preziosi (1979 a, b). Preziosi likened the usage or the semantic context of a building to Jakobson's referential function, the code and norms of the building's conception to Jakobson's meta-codal allusory function, the territorial maintenance of contact to Jakobson's phatic function, the architect's individual expression to Jakobson's emotive function, the role of the client as the addressee of the building to Jakobson's conative function, and the architectural formation itself to Jakobson's aesthetic function.

How useful is the semiotic aesthetics as formulated by Mukařovský and his followers for the foundation of an aesthetics of surface layouts? It would seem that the concept of multifunctionality could be extended into a theory of multiple affordances concerning surface layouts. Thus the aesthetic affordance of them would be considered as one among others. The difficulty with Mukařovský's approach consists, however, in the fact that surface layouts would have to be taken as «signs» in artistic communication. This would rule out any possibility to account for an aesthetic affordance of natural surface layouts, not treated by artists, such as a landscape.

Positions similar to that of Mukařovský are found in more recent writings by such authors as Lotman (1972) and Eco (1968). They differ from Mukařovský in that they make entire aesthetic codes, not signs, their unit of reflection. Lotman emphasizes the multiplicity, Eco the openness of artistic codes. Both are interested in the phenomenon of aesthetic innovation which is accomplished, as in the case of Mukařovský, by deviation from current aesthetic rules and norms and by translation from one code into another. There seems, however, in their theories no provision for the aesthetics of natural phenomena.

3.1.3. *The Semiotic Aesthetics of Morris*

Another important line of development in semiotic aesthetics was initiated by Charles Morris (1971). Like the authors of the enlightenment he defined the aesthetic sign as iconic. But this did not seem to differentiate the aesthetic sign sufficiently from other icons such as scientific

models. Thus Morris endowed the aesthetic icon with a particular «designatum» — i.e. it designated a value (e.g. the value to produce pleasure in the beholder). In Morris, however, this value depends on whether the beholder focusses on the object as an aesthetic one and not on intrinsic aesthetic properties of the sign. This subjectivistic behavioral slant of Morris's aesthetic theory would seem to be incompatible with an aesthetics of surface layouts where the aesthetic affordance should reside in the layouts themselves, and not in the beholder.

3.1.4. *Information Aesthetics*

Followers of Peirce such as Morris have taken aesthetics mostly a matter of the sign-object relationship and have given different answers to the question whether the artistic sign was an icon, an index or a symbol. But in the same tradition, from an exclusive focus on the artistic sign as an object the information theory of aesthetics has developed. In Birkhoff's (1933) mathematical theory of aesthetics with its variables O = order and C = complexity the aesthetic measure M had first been defined as M = O/C. This measure was then transformed into information theory terms by substituting redundancy for order and information for complexity. Subsequently different formulas were developed to compare the aesthetic quality of objects (e.g. Moles 1958, Bense 1965, Frank 1959, Gunzenhäuser 1962, Maser 1970).

It would seem that the concentration on the physical composition of the aesthetic object would open up the possibility for describing the aesthetic affordance of manmade and natural surface layouts alike. But a merely objective description would not take into account the ecological reciprocity of the perceiving subject and the object described. Thus it seems to be necessary to look further for ways of dealing with ecological reciprocity.

3.2. *Experimental Aesthetics*

3.2.1. *Gustaf Theodor Fechner*

In our effort to define ecological aesthetics we wound a surprising source of inspiration in Gustaf Theodor Fechner, who is credited not only with being the founder of experimental psychology and psychophysics, but also of experimental aesthetics. The 1987 centenary of Fechner's death has been for many an occasion to recall the work of this important scientist. Fechner opposed to what he called «aesthetics from above», to his thinking a matter of philosophical speculation and artistic aperçu, his own «aesthetics from below». «Aesthetic from below» meant

for him the testing of aesthetical hypotheses by means of experiments. A wellknown example of this approach was his study on the golden section, in which he presented rectangles of different proportions cut out of white carton to several hundred persons asking them which of them they preferred. The result tended to confirm the hypothesis that the rectangle with the proportion of the golden section was the most preferred one. Fechner proposed three methods by which experimental aesthetics should proceed, which are certainly still valid today. One is the method for *choice* by which the subjects of the experiment choose the aesthetically preferred object from a set of alternatives as in the aforementioned study on the golden section. The second method is that of *production* by which the subjects themselves produce the aesthetical solution most valid to them. An example would be the subjects drawing rectangles with the proportions appearing most beautiful to them. The third procedure was called by Fechner the «method of *use*». He applied it when he examined the proportions of book covers, writing paper, bills, postcards, bill folds, tickets, school-slates, chocolate bars, snuff boxes, bricks, etc.

The ecological aesthetics to be developed could certainly profit from Fechner's three methods. The program of such an «aesthetics from below» would be the examinatin of people's preferences and uses of all kinds of surfaces and their layouts, be they natural or manmade. At the same time the aesthetic affordances of these layouts should be described in the objective terms of information aesthetics. Correlations between the two series of measurement could hopefully express the ecological subject-object reciprocity.

3.2.2. *The New Experimental Aesthetics of D. E. Berlyne*

A step on the way to such an ecological view is certainly Berlyne's «New Experimental Aesthetics» (Berlyne 1974). His explanation of the lack of progress in experimental aesthetics is based on two reasons: One is the resistance against recognizing the fact that aesthetic behavior, i.e. creating or exposing oneself to works of art, issues from the same nervous system which provides also for more mundane pursuits. The other reason is the almost exclusive reliance on verbal expressions of preference or evaluation. According to the first of his two criticisms Berlyne defines aesthetic behavior in the more general framework of exploratory behavior. He differentiates between specific and diversive exploration: Specific exploration is bound to particular stimulus sources whereas for diversive exploration to be triggered the source has to be just «interesting». Aesthetic behavior belongs to the latter type of exploration. «Interestingness» of a stimulus source depends on socalled collative varia-

bles, i.e. on stimulus properties depending on the collation (comparison) of information issuing from different areas of the stimulus field or from stimulus fields belonging to the past and to the present. Such collative variables are complexity, incongruity, puzzlingness, ambiguity, uncertainty, indistinctness, conflict, surprisingness, and novelty (Berlyne 1960).

There are three particular connections between diversive exploration and aesthetic behavior:

1. The strength and direction of diversive exploration (and thus of aesthetic behavior) depends on these collative stimulus properties in the aesthetic object, i.e. in its elements of form, structure and composition.

2. The collative variables are related to information theory (e.g. «uncertainty», «surprisingness», «novelty»). They have to do with the expectations which have been previously aroused and with what is experienced presently.

3. The collative variables affect «arousal», i.e. the drive and the emotional state leading to the behavior of exploring something «interesting».

It would seem that over and above the particular affordances of surface layouts connected to specific exploration they may also afford «interestingness» by incorporating collative variables which trigger diversive exploration, and thus aesthetic behavior. This would be true of natural as well as of manmade surface layouts.

I would like to suggest the hypothesis that one of the major sources of interestingness in natural and artifical surface layouts is the conflict between our human scale which is constantly present, because we are perceiving parts of our body in every situation, and the superhuman scale of surface layouts in the natural and artificial environment. The big trees in the forest forming a high vault above us are likely to make us feel small and therefore inspire awe just as the high vault in a Gothic cathedral. Similarly do the enormous surfaces of portals in Renaissance palaces where the specific affordance of entry is guaranteed by a small human scale door opening in the closed superhuman scale door.

4. *Discussion*

At the end, the question is whether dropping the term «space» from the agenda has really brought a clarification to the subject of environmental semiotics and aesthetics. I think it has rendered more concrete and

even existential the question students of semiotics have been asking for many years about the meaning of architecture and the urban environment (Krampen 1979). We are not looking at architecture and the urban environment «objectively» as if we were separated from them, any more. We are forced by the ecological perspective to consider ourselves as part of our human environmental niche. Semiotics has too much insisted on the role of signs in communication, i.e. in the transmission of second hand experience. The first hand experience of meaning in the environment is perhaps a more difficult subject, but also a more fascinating one, especially the direct experience of aesthetic meaning, about which there remains still much to be discovered.

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A	B	C
Semiotica, linguistica, semantica Sémiotique, linguistique, sémantique Semiotics, Linguistics, Semantics	Semiotica narrativa e discorsiva. Retorica Sémiotique narrative et discursive. Rhétorique. Semiotics of narrative and discourse. Rhetoric	Socio-semiotica (socio- ed etno-linguistica) Socio-sémiotique (socio- et ethno-linguistique) Socio-Semiotics (Socio- and Ethno-Linguistics)
D	**E**	**F**
Semiotica letteraria; mitologia e folklore; poetica Sémiotique litteraire; mythologie et folklore; poétique. Literary Semiotics; Mythology and Folkloristics; Poetics	Semiotiche auditive. Sémiotiques auditives. Audio Semiotics.	Semiotiche visive e audio-visive Sémiotiques visuelles et audio-visuelles Visual and audio-visual Semiotics