

ARCHITECTURAL COMMUNICATION: INTRA AND EXTRA ACTIVITY OF ARCHITECTURE

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Apart from a brief overview of architectural communication viewed from the standpoint of theory of information and semiotics, this paper contains two forms of dualistically viewed architectural communication. The duality denotation/connotation ("primary" and "secondary" architectural communication) is one of semiotic postulates taken from Umberto Eco who viewed architectural communication as a semiotic phenomenon. In addition, architectural communication can be viewed as an intra and an extra activity of architecture where the overall activity of the edifice performed through its spatial manifestation may be understood as an act of communication. In that respect, the activity may be perceived as the "behavior of architecture", which corresponds to Lefebvre's production of space.

Key words: Architectural communication, denotation, connotation, intra activity, extra activity.

INTRODUCTION

The cultural anthropology interprets culture as the man's each and every intervention against a natural phenomenon, which has been modified to such an extent that it can be included into a social relation (Eco, 1973:23). The overall history of culture can be seen, in fact, as an evolution of the communication media (McLuhan, 1971). As a cultural phenomenon architecture is a communication phenomenon in its own right (Hollein, 2009:162). Vitruvius noted that architecture lends itself to different interpretations: "In all matters, but particularly in architecture, there are these two points – the thing signified, and that which gives it its significance" (Vitruvius, 2007:34). The term „speaking architecture“ („architecture parlante“) appears for the first time in 1852 in a text by an unknown author dealing with the Ledoux's approach (Radović, 1998: 327).

ARCHITECTURAL COMMUNICATION – THEORY OF INFORMATION AND SEMIOTICS

In order to understand architectural communication, linear and circular models of mathematical theories of information may be used (e.g. Shannon-Weaver's linear and Wiener's

circular models), which indicate that architecture may be interpreted as a means (medium) for conveying messages, although patterns of art tend to give shapes rather than data (Arnheim, 1977:81) (Figure 1).

The information technology term "recipient"

becomes a "reader" in semiotics, as reading includes a higher level of activity and is directly influenced by cultural context. This makes it possible to view the phenomenon of architecture as a readable text of culture. In semiotic theories architecture is understood as a sign, or sign

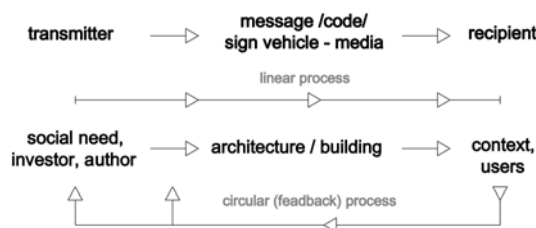


Figure 1. Linear and circular model from the theories of information - architecture has been recognized as a means (medium) for conveying information. (S.S.Vučković)

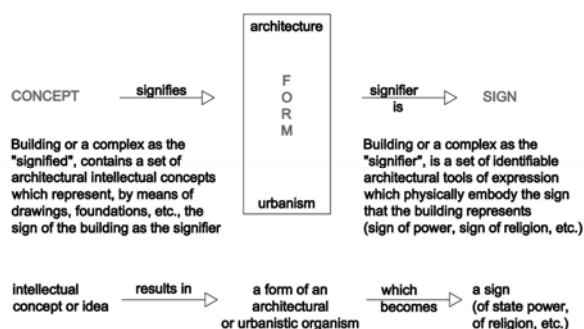


Figure 2. Form within the signifier and signified. Form is a communication medium between the concept and the sign (Neidhardt, 1997: 66)

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system which creates and transmits meaning: architectural edifice is at the same time the signified, as a result of concepts or ideas, and the signifier of a sign, namely the form is the communication medium between the concept and the sign (Neidhardt, 1997:66)¹⁾ (Figure 2).

Barthes (1971) applies semiotics as a system analysis to each aspect of communication as a kind of "collective idea-myth" encouraging creative involvement of a critical reader (Barthes, 1971:263-314). Umberto Eco defines semiotics as a research program dealing with all cultural processes as communication processes in the role of a reader. Starting with philosophical texts and afterwards in literary and juridical ones, Jacques Derrida overturned the binary oppositions of semiotic – his theory of Deconstruction created new notions and concepts, marking differences and eternal interplay between polarities (Culler, 2007).

THE LANGUAGE OF ARCHITECTURE

In a study of architectural communication it is necessary to consider the relationship between language and architecture. The use of linguistic instruments in understanding architecture as a text poses a question, can images become texts and is there a language of architecture (Vasilski, 2011). Lotman sees art as a second level modeling system (the first level is the natural language) and interprets the work of art (and thus the architecture) as a communication relation (Lotman, 1976:39).

Jencks's use of the term *architectural language, architectural grammar, words, phrases, syntax, semantics, metaphor, code* (Jencks, 2007:24) has been criticized as a verbatim and one-way application of linguistic analogy (Gandelsonas, 1998). Architecture may be interpreted as a "knowledge production area" while the description of architecture by means of linguistic instruments is possible only at the level of a metaphor (Agrest, 1998). Looking at architecture as a readable surface and form, Venturi differentiates, on the one hand, a "graphical sign" (billboard, application of a conventional element) which uses architecture as a carrier of such information ("decorative shed") and on the other hand, architectural edifices where the form and function concur, where the construction, structure and volume have become a "duck" with symbolic meaning (Venturi, Scott Brown, Izenour, 1990). In a structural and conceptual way, architectural language is unique and universal in its "geometric truth" regardless of the changes to the form of the edifice. It is unacceptable to compare one architectural

element (for example, "windows") with "words" (Milenković, 2003:16).

Non-linguistic context defines language as a system consisting of signs coded in a particular way. In a wider sense, the design of edifices for every day use has, as a public service, become a language which gives form to edifices and models messages. The design "speaks", it communicates through messages (Sudjic, 2008:16). In the language of non-verbal communication Hall defines the term "proxemics" which implies a person's subconscious structuring of space, from organizing space at home to organizing cities (Janićijević, 2000:295–300; Hall, 1976)²⁾. The term "artifact code" is related to fixed traits of edifices around us such as space, size, volume, or those which are semi-fixed such as light, colors, furniture, etc., which help impose a certain kind of communication, i.e. "...elements of our environment convey messages about us, they determine the nature of communication which is yet to happen" (Janićijević, 2000: 302; Ekman, Friesen, 1969).

DENOTATION AND CONNOTATION – "PRIMARY" AND "SECONDARY" ARCHITECTURAL COMMUNICATION

Architecture, like any other usable object, gives certain information to its user; it conveys the manner in which this information should be used – *denotation*, "primary" architectural communication. Through its spatial and visual presence it offers a set of information, depending on the particular context, social and cultural, technological, geographical, economic and other conditions – *connotation*, secondary architectural communication. Here the terms "primary" and "secondary" are not axiologically discriminative, like in whether one is more important than the other, but are mentioned in the context of semiological mechanics meaning that secondary functions rely on the denotation of primary functions

(Eco, 2003:187–188). The term denotation is used to define the first, main or the only meaning, as opposed to connotation which implies multiple meanings. According to Barthes, denotation is an obvious, literal meaning of a sign, primary or unique meaning, "what" that has come into being while connotation is the "how" it came into being (Janićijević, 2000:176–180). Dorfles noticed "double articulation", functional meaning he calls "normal" (pillars, doors, etc.) and "figurative meaning", aware of the fact that the systems of signs in architecture are constantly being renewed and thus continually repeated (Radović, 1998:327–328). Lawson, for example, in the context of spatial meaning, related to the process of interpretation, speaks about internal and external meaning (Lawson, 2001: 13) (Figure 3).

"Primary" communication - denotation is primarily related to the communication of a function or as Barthes claims "...as soon as there is a society, every usage is converted into a sign of itself" (Barthes, 1971:343), hence the functions can be interpreted as an aspect of communication. This enables their better understanding and reveals other, equally important, types of functionality which have remained hidden due to their unilateral functionalistic perception (Eco, 2003:182). The difference between architecture and other cultural phenomena consists in its spatial functioning, people enter into it; architecture is utilized primarily on the inside. The factors which enable the application of architecture (passing through, entering, stopping, climbing, lying down, leaning against, gazing through the window, holding to something, etc.) are not merely potential functions, but mainly, connected meanings which direct us to the application of those functions. In fact, primary communication implies interpretation of "directions and courses" (Norberg-Schulz, 2006:36) which are characteristic of every place, decoding architecture through a certain system of signs which cause different

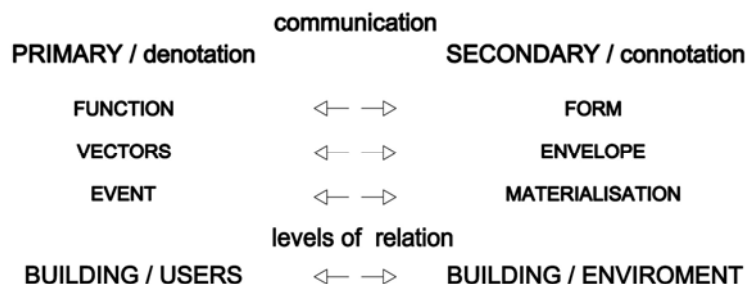


Figure 3. Primary and secondary architectural communication and levels of relations of users/environment (S.S. Vučković)

behaviors. "Primary" communication consists of a system of primary architectural codes which become "iconic codes" (for example, the principle of stairs becomes the subject of communication exchange) which we have unconsciously adopted through the repetition of space utilization (Eco, 2003:183). Denotative meanings have been defined by means of a code and they are prescribed in a certain way. The edifices conveys how it should be utilized by means of information that we receive through space organization, lines of movement, alteration of movement and stopping, dynamics and static quality of space, etc. Therefore, the architecture communicates the function which needs to be performed and gives us information as to how to perform that function, even when such function is not performed. By articulating the space, architecture communicates the ways in which the space has been articulated (Figure 4).

"Secondary" communication-connotation pertains to the reading of complex types of messages which the architecture communicates as a product of complex cultural relations. In that respect, architecture is, without a doubt, a mass communication medium, and as such, it communicates in a multilayered and polysemic manner, leaving possibility for different interpretations and meanings (Stevanovic, 2011). Secondary communication is manifested through different aspects of connotation which show that there is an ideology behind each and every architectural edifice, which preceded architect's activity itself (Argan, 1989:12). The shape of windows on the facade, type, number, mutual relations do not denote only the function ("primary" communication) but also point to a certain concept of living and edifice utilization, they connote a particular ideological idea of living which the architect communicates (Eco, 2003:185). This shows that connotation is also a message about different concepts of function. At the same time, it claims that comparing different architectural edifice in a "formal" way is almost unnecessary. It is possible to compare them only with respect to relations they establish in a social context they are in (Agrest, 1998:201).

In that sense, the interesting thing is the overlapping of codes from different cultural systems through a metaphoric transposition. This is the case with the Le Corbusier's Savoye Villa, where "the code of the nave" and "the code of the house" are in an analogous relation, while the new linear form of the windows yields new meaning, or a new architectural ideology (Agrest, 1998:203). According to Barthes connotation is the "other significance", secondary or multiple meaning. He even considers denotation of a sign as one of

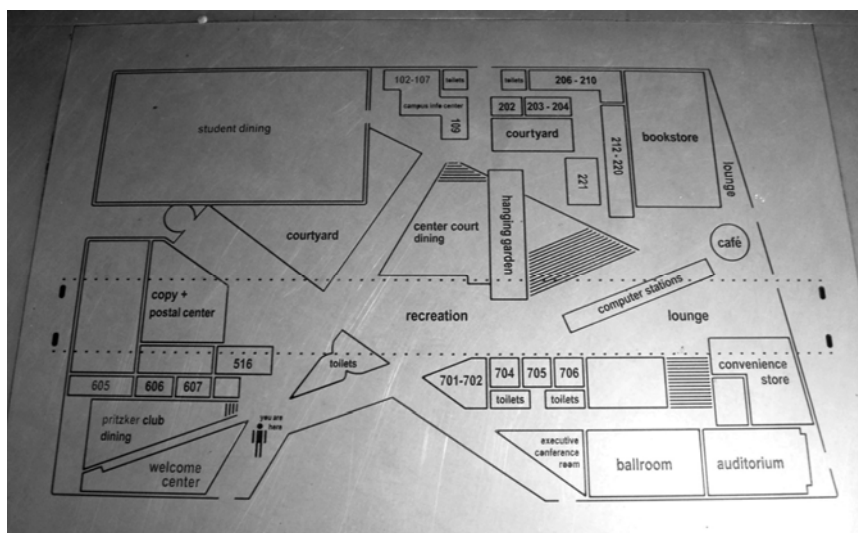


Figure 4. Doormat at the entrance of McCormick Tribune Campus Center (Rem Koolhaas, IIT, Chicago): the base of the edifice – applied function – "primary" communication (S.S. Vučković)

its connotations (Barthes, 1971:383–385). When Zumthor speaks about the atmosphere which the architect creates (Zumthor, 2006), he too is in the field of "secondary" communication as well as the form which "follows fear, beauty, funding" (Elin, 2002).

Viewed from the perspective of a modern myth, connotation has all the characteristics of an ideology as the culture is not found in denotations but rather in connotations (Janičijević, 2000:179). It has already been said that the "primary" communication is more linked to function while the "secondary" communication is linked to everything else which is not only a function, a sum of cultural units which create meaning. Translated into the basic architectural duality "function – form", it would be safe to say that connotation is more connected to the form of the edifice. If architecture is perceived as a materialization of ideas (concepts) then this materialization (envelope, material, manner of material application, detail, etc.) is the part of a social, cultural, political, economic and geographic context and as such it conveys certain information – it communicates.

Tschumi, in the light of deconstruction, goes beyond the dichotomy of function – form and recognizes that complementarity in architecture and space as a relation between vector and envelope i.e. edifices consist of vectors and envelopes. Entering and moving through a building creates lines of movement – vectors, while the envelope is the protection against external influences – vectors activate and envelopes define the space (Tschumi, 2003:64). Easy way of following lines of movement through space and messages as to how certain activities are performed (reading

vectors) are all indicators of "primary" communication. The manner in which we receive messages of architecture as a generated space is certainly directly linked to the function, but is also inseparable from the materialization (form) of the edifice. It is clear that vectors which define movement within and around the edifice, thus activating the space, are in certain relation to the envelope. This relation may be indifferent, reciprocal and conflicting (Tschumi, 2003) and it is possible to view the relation between architectural denotation and connotation through these three levels.

Architecture, as the art of space articulation, is the art of setting limits in space. The "envelope-border", especially in architectural deconstructivist concepts, is the most reflexive plane of architectural connotation. The envelope as a border establishes different types of relations: from the aspect of approach to space – open versus closed; from the aspect of ownership – state owned versus privately owned; from the social aspect – commercial versus domestic; from the legal aspect, etc. Architectural connotation is related to architecture as an image, as mass media (Colomina, 2008), to the envelope as the mediator (Hays, 2003:66), as a spectacle, as a transposed demonstration of complex economic and technological relations. Hal Foster, adding to the definition of Guy Debord of spectacle as a "capital accumulated to the point where it becomes an image", says that the spectacle has become "an image accumulated to the point where it becomes capital" (Vidler, 2008:vii). Colomina points out the significance of the discovery of X-rays and CAT scans for making a "see-through edifice" a mass phenomenon and giving access to the

public to what is considered private (Colomina, 2003). Koolhaas researches this special relation between the private and the public through the meaning of the envelope as a social interface (Koolhaas, 2003). Rakatansky understands the role of edifice envelope as a map, graph, diagram, table in social dynamics of architecture where the relation between the social sphere and the envelope reveals how architecture can express these relations in much more complex and articulated ways (Rakatansky, 2003:76). The envelope is a map which creates a dialogue between the outside and the inside; it defines the inclusion and exclusion of programs and contexts. Hence, for example, double envelope of the Concert Hall and Exhibition Complex in Ruen in France (designed by Tschumi), is not merely a sound buffer between the inside and the outside (which permits noise of up to 105 dB inside and 35 dB on the outside), but is also an "in-between" (Tschumi and Walker, 2006:114), social space, place for meeting and interacting. This space is activated by movement of users when entering and exiting, a place where "primary" and "secondary" communication overlap.

The manner in which the user decodes space, namely how the user reads the conveyed "messages" in order to master the space is directly linked to "primary" communication. Interpretation of the edifice on a wider, basically ever contextual level (neighbors, street, block, city, society, etc.), implies a set of connected connotations – "secondary" communication.

BEHAVIOR OF ARCHITECTURE - INTRA AND EXTRA ACTIVITY

Deconstructivist criticism of semiotics offers opportunity to understand the architectural communication outside of semiotic duality denotation/connotation, as spatial interaction or "interpenetration" (Norberg-Schulz, 2009: 155–156), and accordingly as a response to the context. If the architecture is understood beyond function and form, beyond lines of movement (vectors) and envelopes, then it would be possible to speak about *activity* - *action* that an architectural edifice causes in space. Architectural edifice has certain impact on spatial context which results in re-semiotization of the context. In that sense, it is possible to speak about *architectural behavior* which could be placed midway between the function and the form, which corresponds to Lefebvre's production of space. It is possible to draw a parallel between Lefebvre's "a conceptual triad" (Lefebvre, 1991: 33): *space of representation* – *representation of space* – *utilization of space* and representation of

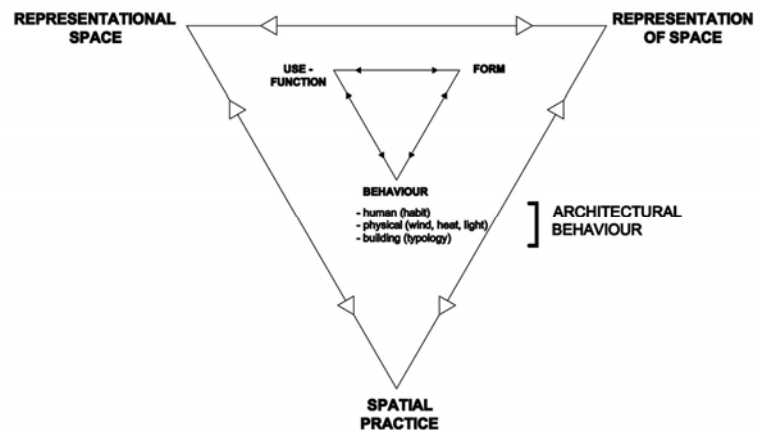


Figure 5. Comparison between the representation of Lefebvre's „production of space“ and architectural definition: „form-function-behavior“. Architectural communication is in the domain of behavior of architecture/space utilization. (Atelier Bow-Wow, 2008: 12)

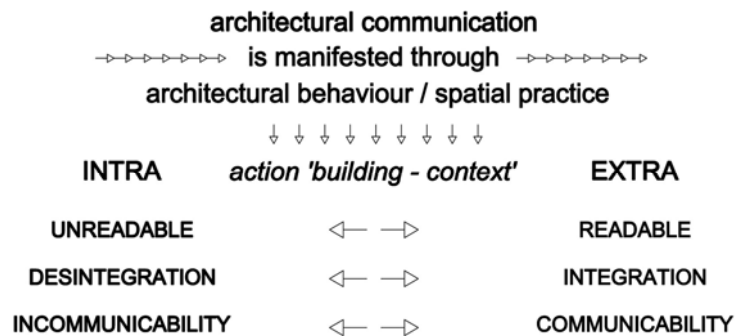


Figure 6. Forms of architectural communication – intra and extra activity of architecture (S.S.Vučković)

architecture through the relation: *function* – *form* – *behavior* (Atelier Bow-Wow, 2008:11–13). This comparison shows that between the *function/space* of *representation* and *form/representation of space* there is a field of particular importance for accepting architectural communication: *space utilization/behavior of architecture*, which is an equal participant in the final product of architecture (Figure 5).

Each *activity* - *action* causes reaction (users, environment, city, society, etc.). The relation between action and reaction indicates that certain kind of communication exists. *Activity* is a wider term than function of the edifice and implies at the same time everything that is happening in the space through the relation between the form and environment, materialization, atmosphere that the edifice creates, etc. Depending on the manner in which this activity evolves, as well as the manner in which it is interpreted, architectural communication can be viewed through *INTRA* and *EXTRA* activity of edifices (Figure 6).

INTRA Activity

Intra (lat. *intra*, *interus*) *in*, *inside*, *from inside*, *within*, *within limits* (Vujaklija, 1996/97:350) implies a concept of edifices which are "closed on the inside", introvert, disintegrated in relation to the environment, uncommunicative, non-interpretable, inert, illegible, difficult to use, having "hard" boundaries completely separating the outside from the inside, blocking the flow and continuity of space in the process of movement and access to the edifice. The connection which such an edifice establishes with its surrounding is hard, almost violent, it tries to impose itself on the surrounding and the context in an attempt to dominate which often implies a dominant, emphasized form. This is, in one aspect, a type of project which Monaco called "progetto forte" (Monaco, 2004:57–63), a stable, strong project, which is characterized as being rational, strictly defined, closed, un-transformable, inflexible, implying totalitarianism, predictability, logic, rationality, stable and structural spatial organization which creates resistant architecture.

In its interior such edifices may have a highly transformable concept but they maintain poor communication with its context.

Throughout history of architecture all the way to Renaissance and Baroque, the "closed" concept dominated. Renaissance adhered to the idea of producing "clean" edifices, immune to any contact with the environment and focused on its self-sufficiency and perfection. Unlike Renaissance, Baroque worked on developing a concept which goes from a closed towards an open form, from static towards dynamic, thus establishing spatial integration and dialogue with the context (Monaco, 2004:32). "Classical" language of architecture (Samerson, 2002) which is closed and repetition-based transitioned into a "modern" language prone to openness and novelties. With the loss of the traditional wall following the advent of modern architecture, the envelope of the edifice has, through the introduction of large glass surfaces, become transparent and the link between the external and the internal has become more direct. But, the form, with its desire for a totalitarian transformation of space, has the propensity to impose itself rather than establish a dialogue with its environment on an equal footing. A strong project ("progetto forte") in its concept is not transformable, but in much the same way as any other spatial intervention, it too is subject to changes through time, in particular in cases where its structure remained incomplete.

EXTRA Activity

Extra (lat. *extra*) outside, out, particular, characteristic, extraordinary, outstanding; something that is done more or better than required and asked for (Vujaklija, 1996/97: 262) implies the concept of edifice which is "outwardly open", extrovert, which establishes an interactive relation with its environment, which is communicative, readable, integrated into the environment. Its border (envelope) is not a barrier from the outside towards the inside and vice versa, but rather its logical continuation, where the continuity of space is achieved in the process of movement and approach to the edifice. This is the type of edifice which Michel Serres and Bruno Latour call "quasi edifice" (Hirsch, 2006:18) which is neither "hard" nor "soft", an edifice which develops a new holistic model of comprehension in which the edifice is viewed as a fact or value, as a physical form and social function. "Quasi edifice" comprehends facts and values as a whole. The problem of architecture does not consist in how it is viewed from the outside, nor how it is lived on the inside, but rather a dialectical relation between the inside and the outside, both on

urbanistic and architectural scale. This is precisely that special value which characterizes edifices designed with such concept in mind. Deconstructivist theories contributed to the fact that contemporary envelope is increasingly becoming a mediator – it establishes a relationship with the social and cultural milieu of their environment, it is becoming softer. The new envelope is not only made up of semiotic material taken from popular culture, it does not detach the outside from the inside, private from public as is the case with modern architecture, it becomes soft, a "gelatinous fluid" with digital messages (Hays, 2003:67). The line between the private and the public does not correspond to the edifice's envelope. The envelope could rather be understood as a "separatrix", a term taken from Derrida, which is defined as "a curve, even if straight", which brings together and pulls apart two different systems (Lynn, 2003:72). Envelope is a special type of space – it is a borderland not a borderline. The envelope activates public space, it is not merely a border between the outside and the inside, between an edifice and the terrain, but the edifice is an integral part of the terrain. The border is a link between the duality of space: inside/outside, private/public, interaction with space surrounding the edifice, however not as a form of dilution but allowing each of them to maintain their own specificity (Sassen, 2006). "Progetto debole" (Monaco, 2004:57–63), a weak, instable project, is characterized by the easiness of transformation, narration, flexibility, by chance not predictability, openness to changes, transformability, lack of definition, polyvalence, interactivity with the environment. That is new experience of being based on "weakness" ("pensiero debole"), on Vattimo's not so much "being" as "coming into being" (Monaco, 2004: 53). That is a "live" project, and it is precisely the "weakness" which makes it alive and keeps it changing. Tschumi defines this as SEM – space, event, movement (Tschumi and Walker,

2006:42) – an event in space which cannot be strictly controlled and predicted, there must be an opportunity for a change and acceptance of such changes. The aim of such approach is not "predicting" but rather "expecting", which results in a dynamic architecture dependent on different external conditions.

Each and every type of open architecture which Monaco distinguishes (*continuous architecture*, having the ability to continue, extend and expand, horizontally or vertically; *flexible architecture*, which almost pulsates and adapts to the conditions of the context and users and *moving architecture*, which is partially or completely mobile and alters the quality of space through its mobility) (Monaco, 2004:136–190), are all types of extra activities.

INTRA VERSUS EXTRA – MIES VERSUS KOOLHAAS

The established concept of *intra* and *extra activity* as a types of architectural communication can be seen in comparative analysis of two architectural edifices from the XX century: *Mies versus Koolhaas*, a dialogue which Koolhaas establishes with "classical" ideas of modern architecture. Mies's Crown Hall from 1956 and Koolhaas's The McCormick Tribune Campus Center (competition in 1997) are both located on the Campus of Illinois Institute of Technology (IIT) in Chicago, only several hundred yards apart.

A strong, stable orthogonal form and prismatic geometry of the Crown Hall detached from the terrain, holds the edifice with a strong steel construction visible from the outside, leaving it open and flexible in its interior which remains adaptable for different uses. In this way a space which functions as a school (a laboratory for students of architecture) is formed. McCormick Center presents "hybridization of functions" an idea Koolhaas adheres to, an edifice which is

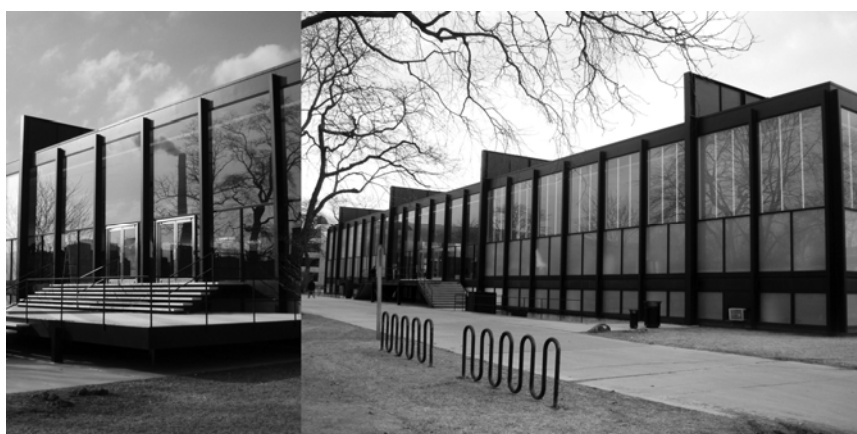


Figure 7. Intra versus extra activity of architecture (closed versus open, modern versus contemporary): Crown Hall (Mies van der Rohe, 1950–56), intra activity – rigid, "strong" form and flexibility of internal space (S.S.Vučković)

absolutely free on the inside, crisscrossed with lines of movement and different contents which have made a transition from a previously undeveloped, vacant space into an edifice. An open, "external space with lines of movement" is transposed in adequate form and content.

Thus integration with the context, as well as the weak, porous relation from the outside to the inside and vice versa, represents a basic concept on which the edifice is activated. This edifice determines "the forms of instability of a functional program", where the spatial heterogeneity at the same time causes the disarticulation of the form and the concept of "flexible accumulation" (Monaco, 2004:169) which is the next closest thing to the idea of "open work" in the architecture (Eco, 1965; Monaco, 2004:129). Although this too is one of Koolhaas's projects which is a kind of critique of the basic principles of modern architecture, nevertheless he relies on it and deems it as the starting point, enabling it to transform itself into a "weak" structure which allows for a spontaneous evolution. (Figures 7, 8). Adapting to the ever-changing conditions of the context and needs of users, this example primarily shows the evolution of architectural expression.

CONCLUSION

Architectural communication, as it is viewed here through intra and extra activity, has gradually evolved throughout the history of architecture, from closeness, disintegration and lack of communicability to openness, fluidity and communicability of space and form. Modernist architecture partially made a better contact with environment, whereas Postmodernism once again brought up the "closed" concept into architecture. However, both architectural movements can be seen as intra activity of architecture. Through deconstructivist concepts which imply, among other things, creating form without meaning, fragmentation and understanding of space as event, architecture achieved a stronger interaction with context, extra activity of architecture.

The communication ability of each edifice, or space it creates, is an important trait of its qualitative characteristic. The fact that design process and architecture may be seen and analyzed from communicational point of view can contribute to creating of high-quality space in complete interaction with context. The quality of "primary" and "secondary" communication, in particular of intra and extra activity, shows in fact the quality of architectural behavior, or architecture as a means of communication between people and nature.



Figure 8. Intra versus extra activity of architecture (closed versus open, modern versus contemporary): McCormick Tribune Campus Center (Rem Koolhaas, 1997-2003), extra activity - openness, integration of external and internal space, lines of movement generate form and space (S.S.Vučković)

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- ¹⁾ Neidhardt applies Peirce's triad of *icon – index – symbol* as an indicator of the unity of methods. He groups it with the Broadbent's classification of approaches to shaping the form (pragmatic, analogous, canonical (syntactic), typological approach), thus demonstrating the manner of interpretation of an architectural edifice or the viewer's reaction (Neidhardt, 1997: 65). Unlike De Saussure dichotomy of meaning *signified-signifier*, Charles Sanders Peirce creates a semiotic triangle – trichotomy: *sign – object – interpreter*, where the object, as the carrier of a sign, is divided into a trichotomy: *index – icon – symbol*. For more information see: Janićijević (2000); Eco (1973); Guiraud (2001).
- ²⁾ *Proxemics* differentiates between three types of space: *fixed space* whose boundaries are not measurable; *semi-fixed space* whose boundaries can be shifted and *informal space* which is the personal space around a person's body, whose size tends to define physical and social distance between people. (Janićijević, 2000: 295 – 300; Hall, 1976).