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A SEMIOTIC ANALYSIS OF SEMIOTIC APPROACHES TO ARCHITECTURE

There is a tendency of increasing applications of semiotics to architecture.
This tendency may be accompanied with different approaches to the applications.
The following is a semiotic analysis of these different approaches, based on
Peirce's semiotics. This analysis will render it possible to discern the
different semiotic approaches to architecture and the different ways of appli-
cations of semiotics to architecture.

Generally speaking, it will be a very elementary semiotic approach to archi-
tecture to interpret it by means of semiotics. In this case we have a semiosis
in which the terminology of semiotics as a Sign represents architecture as its
Object, and the meaning of architecture as its Interpretant (Semiosis 1). This
way of application means only that the semiotic terminology has been used to
explain architecture as a number of signs or to find out signs of architecture,
for every architectural thing can be devided in certain elements (i.e. 'corner',
'wall', 'window', 'door', 'stairs', etc.) which function as representing real
things in respect to the architectural whole[1]. But this Semiosis supposes that
architecture itself is a sign. That is why we can speak of a second semiosis
(Semiosis 2). In this Semiosis many things may be regarded as an Object: if
we are interpeting architecture as the reflection of culture, the culture will
be the related Object; if we are interpeting architecture as the representa-
tion of a concept of an architect, the concept is the related Object. For
convenience sake all these objects might be collectively called objects of
architecture, so we can say that the Interpretant of this Semiosis is identi-
cal with the architectural interpretation of those objects. But this Semiosis
does not necessarily mean that the architectural practice itself is a semiosis.
This will be the case in the Semiosis 2, in which we regard the Sign and its
Object as the subject of designing and planning. In this way the interpreter is
an architect. It is obvious that we are to describe such a semiosis in many
ways according to the architectural practice. However I will describe it as
representing generally the architect's thinking as follows: there is an
'architectural language' (representation system) as the Sign, the design ob-
ject as its Object, and designing and planning as its Interpetant (Semiosis 3).
Anyhow it is important that the interpreter of the Semiosis 1 and 2 is merely
an analyst of architecture, but on the other hand that of the Semiosis 3 is
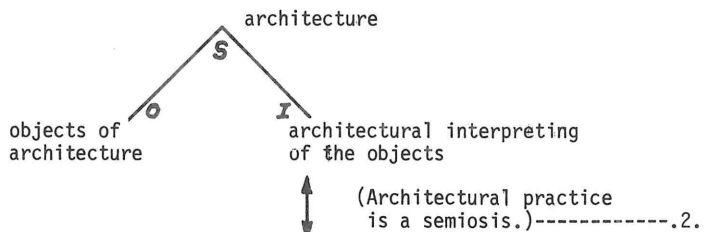an architect.

After these three Semioses we can easily suppose (or go ahead to) another semiosis in which we can analyze architecture with the developed architectural semiotics. Such a semiosis could be represented by going back to the Semiosis 1 through the Semiosis 2: that is by Retrosemiosis. This Retrosemiosis represents the consideration of what is meant by the semiosis of architecture, for the Semiosis 3 *produces* an architectural semiotics better than the semiotics *applied* to architecture. In other words, in the Semiosis 3 there is a risk to spoiling the standards ·of semiotics by means of the standards of architecture. We can say that the Retrosemiosis works as the verification of the architectural semiotics developed in the Semiosis 3. On the contrary there is a risk of spoiling the standards of architecture by means of the standards of semiotics in the Semiosis 1 and 2.

These three Semioses are different ways of application of semiotics to architecture. The connection of these Semioses is also a semiotic operation because the three factors of joining - architecture as a sign, architectural practice as a semiosis and architectural semiotics based on practices - correspond to the conception of Firstness, Secondness and Thirdness respectively.
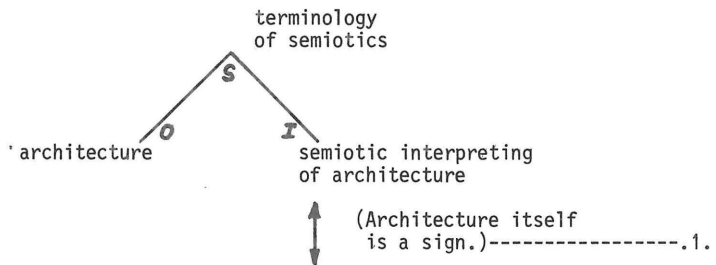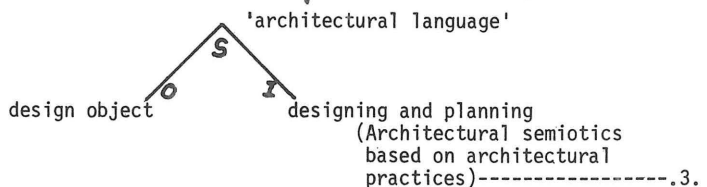

Fig. 1: The relation of the three ways of semiotic approach to architecture, which are explained as semioses.

These reflections give rise to a critique of Umberto Eco's architectural semiotics. In his book 'Einführung in die Semiotik" he summarizes the role of semiotics as follows: 'Die Semiotik untersucht alle kulturellen Prozesse als Kommunikationsprozesse'[2]. And basing on the analysis of architecture as communication, he asserts the usefullness of the application of the semiotic schemata to architecture[3]. This approach corresponds to the Semiosis 1. He continues with a 'Bestimmung des architektonischen Zeichens'. Yet this doesn't correspond to the Semiosis 2, but also to the Semiosis 1. This is clear according to the following sentence: 'Unser semiotischer Ansatz erkennt so im architektonischen Zeichen die Anwesenheit eines Signifikans, dessen Signifikat die Funktion ist, welche es ermöglicht'[4]. By this approach Eco's main interest is to interpret architectural functions as communication. In his book "A Theory of Semiotics" he also develops the 'Theory of Sign Production'[5]. This looks like an approach to the Semiosis 3, but it is only an approach to the Semiosis 1, because it is not a theory *developed of* architectural practices, while it must be *applied to* architecture.

Next I will turn towards Geoffrey Broadbent's theory, in his article "A Plain Man's Guide to the Theory of Signs in Architecture"[6]. At first Broadbent asserts that (as a sign) architecture carries meaning. He admits semiotics as the most promising method to understand architecture. This corresponds to the Semiosis 1, too. He often refers to the problems of the two other Semioses, however, it results essentially in the Semiosis 1, because it ends with the introduction of the nine elementary terms into architecture: pragmatic, syntactic, semantic; signifier, signified, referent; icon, index, symbol.

The difference between the above two theories are grounded on the same Semiosis, that is between the adapted semiotics and the application of the semiotic terminology to architecture. This may be a point of variation of the Semiosis 1 and 2. But at the same time it is an elementary problem which one of the semiotic processes should be applied.

In contrast to these theories the Semiosis 3 is necessary for 'eine semiotische Architekturanalyse und -synthese auf der Grundlage einer allgemeinen und abstrakten Semiotik und nicht auf der Basis soziologisch und linguistisch nur interpretierender Strukturtheorien'[7]. But how can we realize the Semiosis 3? I now will show the Semiosis 3 more specifically to found my research in 'design semiotics'[8].

As far as I know, such a research has been started with the technical term 'architectural language', which was developed in the 18th and 19th century [9].

The research which has been directed to architectural practice, has also
produced a new concept of 'method' which was added to 'architectural language'.
The research of scientific methods for design practices was synthetically
developed in the 1960's to the research of design methods of architecture,
which was further developed in the 1970's to the research of planning methods
because of the tendency of participations and technology assessments. With the
new term 'method' architects formulate and solve architectural problems. De-
signing is related to design objects. As opposed to that planning is related to
general problems. The cumulation of designing and planning produces (or, is
dominated by) a certain criterion. It is also a semiotic research which belongs
to the Semiosis 3, to regard such kinds of activity based on methods as a
semiosis. To this approach we are able to point on a semiosis which is a
specific variation of the Semiosis 3, in which the following trichotomies are
to be found: 'method' as the Sign, 'design object' as its Object, 'designing'
as its Immediate Object, 'planning' as its Immediate Interpretant, 'problem
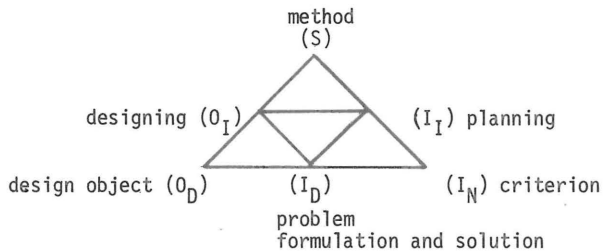formulation and solution' as its Dynamical Interpretant:

Fig. 2: A specific variation of the Semiosis 3 (The arrangement of the elements
follows M. Schmalriede's presentation)10

I also must refer to another semiosis related to methods. That is, we cannot
forget that the development of methods made by architects should be regarded
as a semiosis too, in which a method itself is to be considered as the Sign,
while the Object is the design and planning activity, not the design object.
We extract or formulate tools (Immediate Objects) from activity (Dynamical
Objects) as elements of a method (Sign), of which we constitute processes
(Immediate Interpretants). We can get information (Dynamical Interpretants)
with these tools, by means of these processes.

Such methods grow to (or, promise) a system (Normal Interpretant). Accordingly
we can get a Semiosis like figure 3 which is another variation of the Semiosis 3:
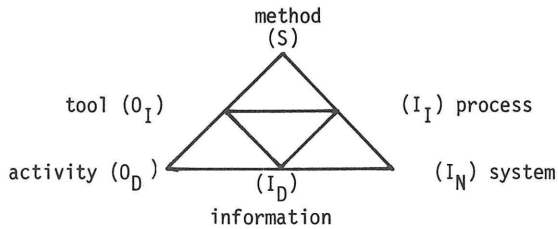
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                        method
                         (S)
        tool (O_I)        /\        (I_I) process
                         /__\
     activity (O_D) /_____\  (I_N) system
                       (I_D)
                    information
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Fig. 3: Another variation of the Semiosis 3: a semiosis constracting methods

From these Semioses of architectural practices we still can develop some other semioses to analyze semiotically the architectural practices or to make clear signs and semioses which could or should mediate in architectural phenomena. I will show three examples of the semiosis on figure 3: a scientific procedure as an example of tools, a design process model as an example of process concepts and participation as an example of information. Each of these examples is analyzed of the three points as follows: 1) which sign it is, or how it functions as a sign; 2) what role it has in the semiosis whose sign is a method; 3) how it works accordingly to architectural practice. I use Peirce's Sign Classes and Bense's Realitätsthematiken (trichotomies) which mean the conditions of a sign's reality.

1. scientific procedure:

as a Sign:	formula of information processing (its Object is design information) Sign Class: 3.3 2.3 1.3 corresponding trichotomy (Realitätsthematik): 3.1 3.2 3.3 (the reality of the Sign is imputed only to its Interpretant).
in practice:	A scientific procedure needs some kind of replica which directly designates a design object. For this purpose a design information is needed. The problem is whether it can form exactly such a replica or not. If it cannot form such a replica, the procedure cannot work. A scientific procedure itself cannot constitute the process. It has inherent apprehensions to fall into the habit of interpretation.

2. design process model:

    as a Sign: standards of design activities
                         (its Object is design activities)
                         Sign Class: 3.1 2.3 1.3
                         corresponding trichotomy (Realitätsthematik):
                                   3.1 3.2 1.3
                         (the reality of the Sign is imputed to
                         the Sign by its Interpretant).

    in practice: A design process model needs some kind of replica
                         which directly designates a design activity.
                         For this purpose design activities are
                         needed. Only such activities lead the
                         hypothetical character of a design process
                         model to the reality. But it has inherent
                         apprehensions dominated by the standards.

3. participation:

    as a Sign: reconstruction of information and activities
                         (its Object are information and activities)
                         Sign Class: 3.2 2.2 1.2
                         corresponding trichotomy (Realtiätsthematik):
                                     2.1 2.2 2.3
                         (the reality of the Sign is imputed to the
                         Sign by its Object).

    in practice: The participation is the practice. It has
                         the possibility to develop itself to a form
                         or a standard. The problem is on which way
                         one can produce a sign system or a sign
                         process by means of the reconstruction of
                         information and activities. When it becomes
                         familiar, it has the same character as a
                         process model.

The first description of each example in the analysis was given to determine
the Sign Class. The second was given to show the practical meaning of the
Sign Class. These analyses are not yet completed. Here I wish only to display
the difference of the Semiosis 3 from the Semiosis 1 and 2. The further
analysis could be developed to work of design semiotics. At the present time
I intend to do it mainly on participations which are not yet developed to the

theory of architectural design and planning method. For this sake I should refer that it is also possible and important to realize that the Semiosis 3 has an inhabitant as its interpreter. Such works will elucidate the efficiency of Peirce's Categories and Sign Classes and Bense's Realitätsthematiken to architectural semiotics.

Now, why can we use the same diagram of the triadic relation of a sign which is used for the representation of explanation or of description (i.e. to the Semiosis 1 and 2), for the representation of creative activities (i.e. to the Semiosis 3)? Is it an exact application of Peirce's semiotics? Such problems have been already generally argued by Bense[11]. Those are problems of the Retrosemioses. To construct the exact architectural semiotics we necessarily need such Retrosemioses.

But it is not easy to distinguish between the three approaches. For example, if we regard an architectural phenomenon, how do we decide to which Semiosis it belongs? It depends on the determination of the Sign Class which corresponds to the architectural phenomenon, and on the intention that we regard it as a semiosis. The task of the design semiotics is to make clear signs and sign systems which could or should mediate in architectural practices, is the intention of architects in a broad sense. But it is often indeterminable in the mere application of an established semiotics to architecture, or in approaches of the Semiosis 1 and 2 which is not yet developed to the Semiosis 3. This is also the reason why I think that we should preferably regard these three approaches as gradually deepened stages. In fact I had also used the Semiosis 1 and 2 to reach the Semiosis 3[12].

References:

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SUMMARY

The application of semiotics to architecture has the following three different possibilities as semioses:

1) explanation of architecture by semiotics,

2) consideration of architecture as a sign (system),

3) description of architectural practices as semioses; and Retrosemioses.

In these semioses,

1) architecture itself is a sign - Firstness,

2) architectural practice is a semiosis - Secondness,

3) architectural semiotics is based on architectural practices - Thirdness.

Accordingly these approaches are gradually deepened stages of architectural semiotics which constitute a semiosis.

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