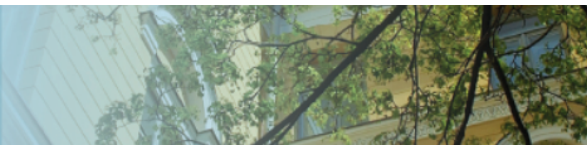


Language and the Scientific Imagination
The 11th International Conference of ISSEI
Language Centre, University of Helsinki (Finland)
28 July – 2 August 2008



Composition and Improvisation in the Search for Architectural Form

Case Study: Art speech-fragments of Alvar Aalto

Introduction

The aim of this paper is to shed light into the character of architect's work from the viewpoint of the processes of generation and creation. Firstly, the concepts of synthesis, analysis and architecture are specified. Secondly, architecture is discussed as a dynamic process rather than in its static forms of distinct products. The complexity of concepts and living work lead us to many problems in patterning out the essentials in architect's work. In this consideration the possibility of surprise and improvisation belong as central factors. The standard conceptual analysis renders it possible to open insights into architect's creative work and to present even a vision showing that we understand our target at least in certain extent. The fact that the vision created is well-argued and is based on coherence between our notions and speeches or deeds of many famous practitioners.

Synthesis and analysis have been traditionally bound with the formation of architecture. According to Alvar Aalto: "...architecture is not a science, but still the same synthetic process, which it has always been..."^{1 2}. Strictly speaking architecture is not a science, but may be supported by scientific methods. In geometry the original method of analysis vs. synthesis is well known^{3 4}.

1. Formal composition and resolution in relation to the concept of architecture

Composition and synthesis or similarly resolution and analysis correspond each other in Latin and in Greek. The classical descriptions and definitions of architecture contain terms: ordination, disposition, harmony and the like, symmetry, décor, distribution. In case we forget the prefixes we find a more abstract picture in the question resulting to the general form:

Ordination, position, harmony

Metric, thematization, tribution

Now we are able to think that instead of certain prefix to every base (adjective, substantive or verb) there is associated the dimension-type con-dis, syn-dia. For example, we have forms like co-ordination, dis-ordination; composition, disposition etc.

The result is natural, because composition is a basic concept in any art (architecture/Baukunst). Ålander⁵ compares architecture and music as “art of composition par excellence”.

2. Architecture in a product, performance and process

After we have stated that composition is an essential constitutive part of architecture, our problem still remains to characterize architecture as a process (of synthesis etc.).

3. Varying meanings of composition and resolution

If we would exactly know, what is composition and resolution, we might also start to plan and design. Unfortunately the thing is not that simple. The terms mentioned may have many meanings depending on case in the large map of planning and design. We have at least three ways to think:

Analysis (resolution) may mean to differentiate conjunctive parts in a target. The synthesis (composition) means to put parts together to form again the principal result. The word result is here clearly a relative fact. Analysis may mean in a disjunctive situation the finding out of alternatives under a certain general conception or abstraction.

In the case of causality analysis means conduction starting from consequences to reasons and synthesis conduct from reasons to consequences⁴.

4. Mathematical analysis and synthesis

The term analysis has special meanings in mathematics as related to calculus or in analytical geometry. Originally geometry contained clear methodological similarity with architecture and they were strongly related. It is maybe worthwhile to take besides architecture now a clear example concerning our problem in mathematics.

5. Composition and resolution in art

As said above, it is not any miracle to notice, that the theory of art is in many cases dark, even in the case of composition only.

A successful exception when using the term composition in connection to art can be found in the theory of Edgar Allan Poe^{4 6}. It is illuminating also for the sentence of Alvar Aalto in quite the beginning of our text. The theory of Poe discussing composition is mainly coherent with the mathematical content of our key concepts and that is just clarifying.

According to Poe an artist, especially a writer of detective stories, sees the solution ready, but represents the causes and factors of the problem like the way, they happen in "real life", slowly forward. Piece by piece the detective or the reader may solve finally the problem by using intuition or by using analytic-systemic grip.

The transition from writing a detective novel to poetry is in any case an easy task. The poet intuitively in his work a certain desired result concerning the realm to arouse feelings.

"Art is feeling transmission and art work is a weapon for that"^{7 8 1}. By means of his professional skill an artist can mainly proceed towards his goal to transmit the feeling and use different themes in analysing and applying them.

6. Artistic composition and resolution in architecture

After having got a certain picture of how composition in detective stories and art resonates, we may try to resolve, how our terminology is located to the original and age old creation made by an architect in his profession. The problem is made easier, if we remember what Auguste Perret has said. In the doctoral promotion at Helsinki University of Technology (1948) Perret, among others, realized: "Structures are

architect's language. An architect is a poet who thinks and expresses himself by structures.”

On the other hand Sigfried Giedion in his time realized and stated to Alvar Aalto concerning Villa Mairea: “...Alvar, this work is not a building, but rather a love poem.” Be it as it may, in any case our ideas above could be generalized instead of to solve structures to all kinds of forms and form languages (^{7 2}).

A typical example of such a composition-based design is Sydney Opera Hall. It is a well known story how difficult the final phase of analysis was, which led to the famous tragedy.

7. Improvisation in architecture around composition – The contribution of Alvar Aalto

In the Sydney case the vision of an architect showed to be difficult to realize independent of the aesthetic qualities but partly as a consequence of these.

Architecture as a working process may well go differently like the late phase concerning the developments of Sydney Opera Hall. An architect may play (¹, Moholy-Nagy etc.) with the words of form language and abduct the fact that something good has appeared (“the weapon flied long, but not too far”). Our poet in architecture is thus invited to improvise in the shadow of play. To speak about improvisation rather than innovation is fair, because certain themes should be fixed in advance (Compare Jazz).

Alvar Aalto, a master of improvisation, said often to us his younger colleagues (e.g. 1969): “Do not Compose, solve the problem.” (compare⁹) Thus, he kept composition and synthesis in great lines in his own hands. It was his architecture. In his Experiment-house 1963) when I asked, “what is best in your work”, Alvar Aalto answered: ”Best in my work is that what Georges Braque once said to me: When I begin, I never know, how it ends.” (Compare also¹⁰).

Conclusion

We have above shown, that in the theory of art the so-called rhetoric-architectural definitions of concepts are welcome. This way of thinking is especially needed in the case of basics. Architecture in general and concept architecture especially means just the definition of principles. For Aristotle architecture was an art defining other arts. The analysis above concerning concepts like synthesis, analysis and architecture itself, opens a new view to planning and design as search for form in exact and even mathematically relevant terms. This information process¹¹ is a dual one leading to find new artefacts or new principles hand by hand. Moreover the question is concerning the breaking of rules and in one word the question concerns improvisation – it means the ability to find new things and new interpretations.

Tarkko Oksala

HUT, IIAS

Helsinki, Finland

Acknowledgements

This article has been born in dialogues with Jyrki Tyrkkö in the Society For Natural Philosophy in Finland, what concerns scientific analysis. The discussions with Alvar Aalto in his atelier (1968) and his Experiment-house (1963) can of course not be forgotten, but gratefully acknowledged. The same holds true concerning a short discussion with Siegfried Giedion concerning the value of Sydney opera hall. Some years later I was also able to discuss with my philosophy teacher Jaakko Hintikka -so many times- problems concerning artistic creation (1967-1974)

¹ Aalto, A., *Luonnoksia* (Otava 1972).

² Oksala, T. K., *Homeroksesta Alvar Aaltoon* (W+G 1986).

³ Hintikka J. and Remes, U., *The Method of Analysis, Its Geometrical Origin & Its General Significance* (D. Reidel, Dordrecht 1974).

⁴ Niiniluoto, I., *Edgar Allan Poe ja geometrinen analyysi, In "Maailma, minä ja kulttuuri"* (Otava, 1990), 154

⁵ Ålander, K., *Rakennustaide renessanssista funktionalismiin* (WSOY 1954).

⁶ Eskola, T., *Arkkitehtuuri käsitteenä* (Väitöskirja, HUT-A 2005).

⁷ Saarinen, E., *The Search for Form* (New York 1948).

⁸ Langer, S. K., *Feeling and Form* (Routledge 1953).

⁹ Koskela, L. J. and Kagiglou, M., *The Proto-Type of Design: The Method of Analysis of the Ancient Geometers*, Design 2006, Dubrovnik – Croatia, (2006), 1

¹⁰ Hintikka, J., *Kieli ja mieli* (Otava 1986).

¹¹ Oksala, T., *Logical Aspects of Architectural Experience and Planning* (Research Papers 66, Otaniemi 1981).