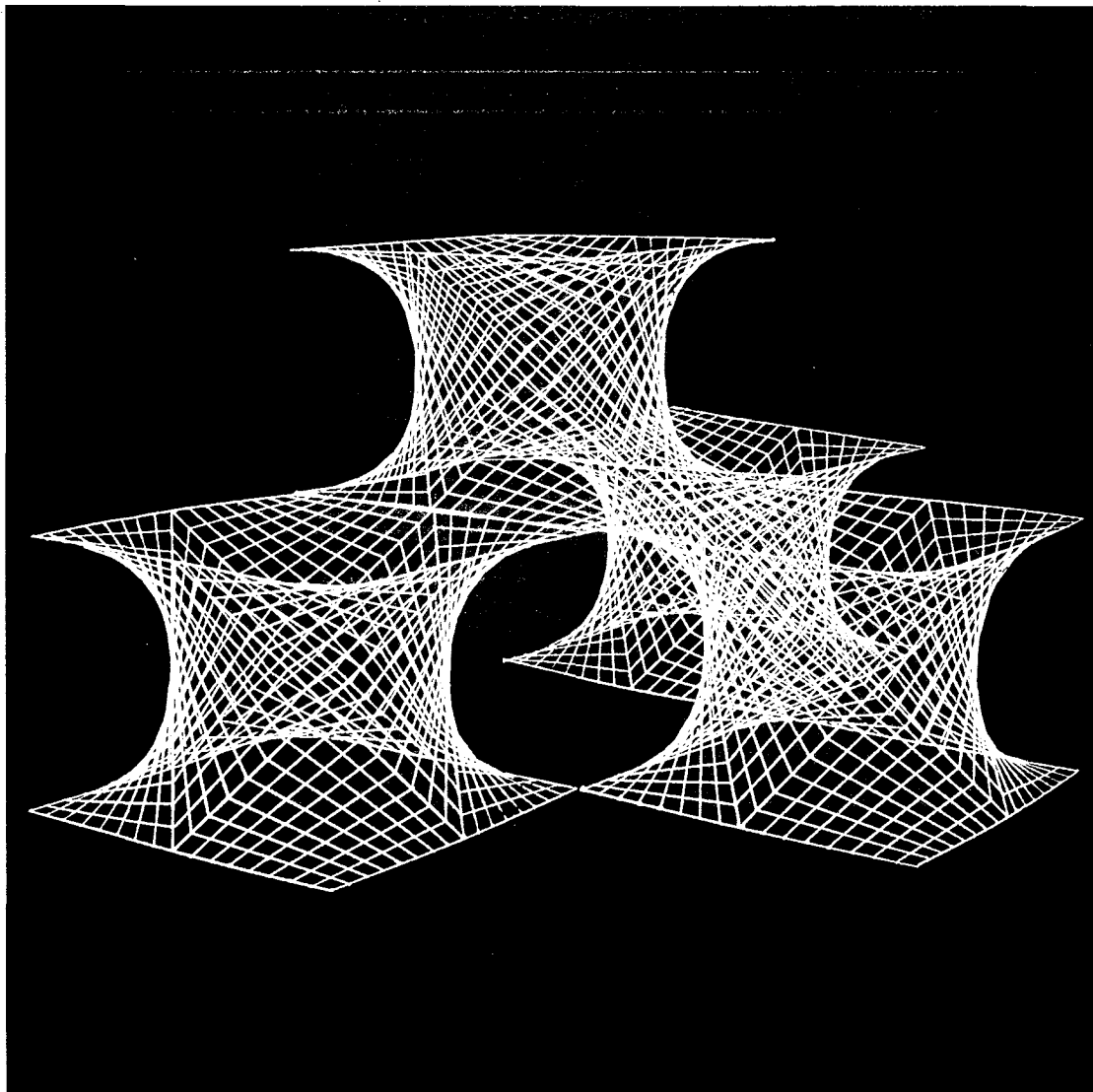


Symmetry: Culture and Science

ORDER / DISORDER
Proceedings, 4th Congress

The Quarterly of the
International Society for the
Interdisciplinary Study of Symmetry
(ISIS-Symmetry)

Volume 9, Numbers 2 - 4, 1998



APPROACHES IN URBAN DESIGN: THE DISORDER THAT RESULTS FROM ORDERING THE DISORDER

Einat Kalisch-Rotem⁽¹⁾ and Iris Aravot⁽²⁾

⁽¹⁾ 1995 - B.Arch., Faculty of Architecture and Town Planning, Technion. I.I.T., Israel. Currently studying for M.Sc. and teaching urban design theory and practice.

Address: Faculty of Architecture and Town Planning, Technion - Israel Institute of Technology, Haifa 32000, Israel *Private address:* 26 Gut Levin St., Haifa 32922, Israel. E-mail: KEB@actcom.co.il.

Fields of interest and research: urban design theories and practice, characteristics of the post-industrial world.



⁽²⁾ Senior Lecturer. 1978 - B.Arch. (cum laude), 1984 - M.Sc.; 1987 - D.Sc., thesis "Toward a Theory of Architectural Knowledge", Faculty of Architecture and Town Planning, Technion. I.I.T., Israel; 1984-88 Philosophy studies at Haifa University. 1988- Postdoctoral studies, A.A., London. Currently head of the center for Architectural Research and Development.

Address: Faculty of Architecture and Town Planning, Technion - Israel Institute of Technology, Haifa 32000, Israel. E-mail: aria@techunix.technion.ac.il.

Fields of interest and research: urban design, architectural philosophy, architectural education.

Publications: Published numerous articles in Hebrew and English. Practices in Urban Design.



Abstract: *Theories in urban design, also known as "approaches", are part of the same category, despite having more differences than similarities. Nevertheless, they all have several denominators in common. This paper will attempt to explain what are urban design approaches in general, describe types of existing approaches, and introduce both their similar and the different characteristics.*

In order to clarify a complex subject appearing in most of the approaches, a process of comparison, which is one of many ways of clarification, can be used. This can be done by a "comparative chart", trying to reorganize an abstract material into a two dimensional study. This paper will illustrate a comparison between five chosen approaches - which are not necessarily typical, common, or more important than others- the approaches of Coop-Himmelblau, Koolhaas, Venturi, Cullen and Rossi.

The process of imposing order has advantages (such as easing comprehension) but also bears its costs: the complex subject becomes simplified, presents a partial picture and leaves a question mark on its reliability. This paper will examine the consequences of the comparison, with its advantages and disadvantages and present the result as a non-perfect order, a term which holds in itself a contradiction.

1. INTRODUCTION

This essay attempts to demonstrate a process of ordering literal material, in order to extract a specific issue. This ordering process, that occurs in the urban design discipline but which can be also identified in others, is a personal experience brought to cognizance. The essay will show that this examination turned out to be not so simple: a complex process on one hand with quite simplified results on the other.

At the beginning, this essay will attempt to explain the complexity of the urban design theoretical domain, define central terms in the field, and introduce their varied contents. After understanding the problematic character of urban design theories, a process of clarifying will gradually emerge but will still try to remain, as far as possible, within the abstract sphere.

Then, five different urban design theories will be introduced, and will illustrate the former argumentation. From this point onwards the complex comparison process will accelerate, and become more concrete with the support of these five approaches. At the end the results of the process will be discussed.

2. THE NATURE OF URBAN DESIGN THEORIES

Understanding the term 'urban design theories' may reveal two different complex terms: *urban design* (which has much in common, in many ways, with the term *architecture*)

and *theory* (which can also be referred to as *approach*, *ideology* and even a *manifesto* in this field).

2.1 The complexity of the urban design theoretical domain

Architecture and urban design are often regarded as a combination of *art and science*. This is possibly one reason for the complexity in the structure and content of theories. Bill Hillier discusses the differences between architectural and scientific theories: the scientific theory is “a rational construct intended to capture the lawfulness of how the world *is*”, help understand phenomena, whereas architectural theory apparently seems to be “a set of guidelines as to how it *should be* [...] and by that express aspirations rather than realities”. Hillier adds that “scientific theories wish to help us act on the world, because they rely on first describing the world independently of any view of how it should be”. The essence of this argument represents the difference between the *analytic* and the *normative* intent - a description how the world is, or a prescription how it ought to be (Hillier 1996, p.57).

Hillier is trying to clarify his distinctions. “Do theories in architecture really only mean creating a formula for architectural success? [...] On a closer examination, this is not the case. Admittedly, architectural theories are normally presented through the normative intent, but at a deeper level they are no less analytic than scientific theories” (Hillier 1996, pp. 57-58). Nevertheless, the problem with most architectural theories is that the normative aspects come to dominate the analytic (p. 68).

The second reason of complexity, derives from the word “*theory*” with its numerous meanings, and from other *analogous terms* used in this field: *approach*, *ideology* and sometimes *manifesto*. Despite the clear linguistic differences between these terms, they are often used to express similar things in the urban design discipline.

The ancient Greek origins reveal that the verb *theoreein* means to be a spectator, and the product of this speculative activity, *theoremata*, were speculations. The word has a long etymological history, but one source of its ambiguity lies in the nature of theories themselves: theories are found in the realm of speculative thought, “because they are at root, speculations” (Hillier 1996, p. 68).

The ambiguity is also a result of the multiple and varied linguistic meanings to the four words, to which 15 relevant meanings were found in the Webster’s dictionary. According to the dictionary, the boundaries of the terms are sometimes vague, therefore

their usage is not obvious. Jencks introduces his own unusual interpretation to these terms, and emphasises especially the nature of the *manifesto*, which he finds unique, in relation to the *theory*, which he describes as something less violent - a “congealed manifesto” - in order to become acceptable in the groves of academy (Jencks 1997, p. 8).

All the four terms mentioned are commonly used in the urban design language. Nevertheless, the term ‘approach’ is used predominantly and is somehow more common than the more epistemologically appropriate term - ‘ideology’. This essay will cling to the prevalent term.

The third and last reason of complexity is a result of the different and *varied contents* found within urban-design approaches, as expressing peoples’ beliefs. They can be opposed to one another in many cases and produce a “varied environment, a maximum choice for society... Eisenman, the master theorist and polemicist, inscribed his tablets in the pages of his magazine *oppositions*.” (Jencks 1996 pp. 8-9.)

2.2 Different classifications in the urban design theoretical domain

The previous part of this essay attempted to demonstrate why urban design theories are complex, first by presenting the inconclusively *origins* of the urban design discipline (art and science), then by clarifying the varied definitions of the term *theory* that represent different theoretical *methods*, and finally, by showing the diverse and colorful possibilities, that cause inconsistent and even opposing *contents*.

This part will introduce different classifications of three experts who suggest their personal order on the urban design theoretical field.

Hillier, an urban design theorist, defines two kinds of typical architectural theories: *The broad and the narrow propositions*. Broad propositions are intended to be universal by attempting to express ideas about architecture which are held to be generally true. The narrow propositions are offered as possible techniques for realizing an abstractly stated aim, by trying to bridge between the abstract and the concrete. According to Hillier, the problem of most architectural theories is that they are over specific where they should be permissive, and vague where they should be precise. (Hillier 1996)

Jencks, an architectural critic, classifies four categories differentiated by the subjects that motivates them (the situations they are responding or reacting to), and by the models they are built on (their ideology - what they wish to change, solve or improve).

He tries to denominate each category or *Tradition*, as he calls it, by the most prevailing definers: *Traditional Architecture*, *Late Modern Architecture*, *New Modern Architecture*, *Post-Modern Architecture*. (Jencks 1997, p. 9.) Jencks indicates that his classification method does not lack problems: although most architects remain loyal to one approach, few architects jump between one tradition to another, and some “do not fit happily into any tradition.”

Broadbent, an architectural educator and researcher, classifies three categories that represent three different ways of thinking, “which developed over the centuries, into coherent - and rival - philosophies: *Empiricism*, which puts its trust in the human senses; *Rationalism* which does not, preferring to work in logical steps from first principles and *Pragmatism* which prefers things which are known to work in practice” (Broadbent 1990, p. 79.) The three basic ways of thinking were known and distinguished from each other by the ancient Greeks.

2.3 The similar characteristics found within urban design approaches

The three attempts to classify urban design approaches, as demonstrated in the previous part, represent personal notions of enforcing order within this field. Despite the differences, these experts share a diagnosis regarding the structure of the theory. This part will try to formulate a shared classification according to these experts.

Post-modern approaches are *positioned alike in the world of theory*: they are connected to the existing reality in a way of a crosscut, and to precedents and traditions in a way of a vertical section, each one, of course, in a different way. Hillier finds that the need for architectural theory arises from the need to formulate principles from our past experiences in order to guide us how to build in the future. (p. 84.) He is definitely applying to the vertical connection (past-present-future) more strongly than to the present realities of the world. Nevertheless, “theorisation begins when we note a certain type of phenomenon and then make a certain type of presupposition. The phenomenon we note is that of *surface regularity* in the world as we experience it”, and by that he refers also to the present reality. (Hillier 1996, p. 70.)

Jencks applies strongly to the present situation as he believes theories are a result and a cause: they are created as a reaction to a special situation (present reality), either spatial or intangible (architectural, political, social, philosophical, etc.), with a wish to change, solve, improve this situation (think about the future). Approaches are “a cause to new built spatial environments”. Le Corbusier and Eisenman proved that theory is “an engine

of architecture... a machine which invents new types of buildings and new responses to the city”, as future oriented theories. (Jencks 1997, p. 8.)

Post-modern approaches have *resembling structure*: according to Hillier, theories contain precepts about what designers should do (the normative intent), and a prior framework which describes *how the world is* (an analytical method). Careful examination will show that this is always the case with architectural theories. Sometimes this framework is explicitly set out, sometimes it is much more implicit. (Hillier 1996, p. 58.)

Resembling structure to that of Hillier's, is diagnosed by Jencks, who describes its two major structural components in a more blatant way: a motive to change the world - a crisis or a feeling of imminent catastrophe, and the pure theory which is based on science and logic. Jencks cites the bible. The first component he names '*The volcano*' (explosion of emotion): "a motive for destruction - to inspire fear in order to create unity and orthodoxy... It is still a tactic of Modernists, Late Modernists, and Prince Charles with his decalogue of ten principles. Those who write manifestos are jealous prophets who call the class to order." (Jencks 1997, pp. 6-7.) Jencks adds that our age is responding to a changing world, to the global economy, ecological crises and cultural confusions. In effect, these are a "second type of volcano." (p. 8.) The second component, '*The tablet*' (the laws and theories) is a metaphor of pure theory, cited also after the Bible.

The last structural similarity is the *theories' constituents* which create the forms of expression: words, and some other formal expression. According to Hillier (1983, 1984) the formal expression is usually mathematical, but this is no doubt his credo. Cullen would have said that formal expressions are drawings and illustrations. (Cullen 1971)

According to Jencks, the manifesto is constructed with two additional elements to those of the approaches: *The personal element*: "the most effective manifestos constantly address the reader as 'you' and reiterates the joint 'we' until an implied pact is built up between the author and reader (Jencks 1997, p. 7. after L.C. 1923), and *the contrast* - a comparison between good and bad. Jencks adds that without the first component, "the volcano", the manifesto would not be written. All four strategies of the manifesto are evident in Coop Himmelblau's *architecture must blaze*, a new modern manifesto of 1980. Here we find the bad (Biedermeier), the good (architecture that 'lights up'), and the two are distinguished in the first person plural ('we are tired of seeing Palladio and other historical masks'). The tablet of virtues is architecture that is 'fiery, smooth, hard,

angular' etc., and the volcanic violence is architecture that 'bleeds, whirl, break' etc. (Jencks 1997, p. 8. after Coop-Himmelblau 1984)

3. DEMONSTRATION BY FIVE APPROACHES

Up to this point, this essay introduced and discussed urban design theoretical field in general, without mentioning any concrete approach, and attempted to demonstrate that the definition of urban design theory is complex, in a way that leaves many open ended possibilities of theoretical variations. From this point onwards, this essay will continue the discussion with reference to five approaches - which are *not* typical, common or more important than others:

Venturi and colleagues identify a new phenomenon - the American commercial strip in its extreme form - the Las-Vegas strip, and believe we should understand it better (Venturi, Brown & Izenour 1979); *Cullen* is drawn to the way people experience a place emotionally through the sense of sight (Cullen 1971). He wishes to make pleasurable places, as a modern version of the old picturesque movement of the 18th century (Broadbent 1990); *Rossi*, a neo-rationalist, is interested in studying the architectural discipline and finding the architectural essence of *artefacts* - historical urban buildings that despite changing their functioning did not change their architectural form (Rossi 1982); *Coop-Himmelblau*, a deconstructive group, are searching after a new improved but not a beatified world (Werner 1989). Their different aesthetics are based on a new personal thinking processes - breaking and reconnecting in an innovative way (Farrelly 1986a); *Koolhaas* is using the phenomena of Manhattan as a model to outline high-density, high-rise metropolis. He believes any ideology will eventually change in the future by a new one - a belief in a pluralist world. (Koolhaas 1994a,b)

3.1 A process of comparison

A need to scan the issue of 'street and square as constituents of the public domain' within urban design approaches arose. It began a process including several phases (and will no doubt include more) until receiving a fairly, satisfactory result. During the process, it was realised, that this scanning can be done only through a comparison between the relevant approaches, because it is the only way to understand the approaches' attitude towards a specific topic *definitively* and *relatively*.

The first topic that seemed relevant to this study was *the attitude of the approaches towards the street and square*, as something that might indicate the relationships between them.

1st topic: *the relationship between the approach and the S&S*

Gordon Cullen	Aldo Rossi	Robert Venturi	Rem Koolhaas	Coop Himmelblau
Urban events take place in the public domain - the street and square. $A = S+S$	Urban events exist in the essence of buildings, and therefore in the public domain artefacts $S+S \in A$	Urban events take place on the American strip in Las Vegas. $S+S \notin A$	Urban events take place inside the blocks, between the street and square system $S+S \neq A$	Urban events take place near the traditional S&S system, and change it. $A+S+S \Rightarrow (S+S)'$

The attitude of the approach towards the street and square (S&S) is a qualitative variant that does not fully succeed in explaining the Street & Square situation. What perhaps can also be tested is the possible future of the street and square according to the approach: *Do they have a future, and of what kind?*

2nd topic: *the future of the S&S according to the approach*

Gordon Cullen	Aldo Rossi	Robert Venturi	Rem Koolhaas	Coop Himmelblau
His approach takes place in the streets and squares. This is the place where his ideas can happen. $S+S$ must have a better future. They are most important.	The architectural artefacts are in search. The street and square are the spaces in between but not less important. $S+S$ will have a future because they are as important as artefacts.	The street & square do not exist, only the commercial strip in its extreme form - in Las Vegas does. $S+S$ might have no future, and are not significant in natural economical processes.	Between the buildings is the street system the only real element even though it has no existence of its own. $S+S$ will have inevitable future as leftover space in the city. The city life will pass to its buildings.	The city buildings have new aesthetic characteristics which will affect the street and square. $S+S$ will exist, but in a new way and with new spatial configuration. The traditional $S+S$ have no future.

The results of the comparison display a partial picture because we can not understand *if these were the desired conclusions or merely the identified and therefore 'reported' conclusions*. Does Koolhaas really wish to leave the streets of Manhattan empty, or is it merely the problem of focusing on other issues which he finds more important or intriguing, and by that neglects the Street & Square? Does Venturi ignore the traditional street because it doesn't exist, or because it is not in his interest? The answer to these questions has to do with *ideology*: *Why* exactly are these the possible futures, *how* are

they intending to happen and *what* will they include- might be better understood through the process of thinking that created this conceptual future.

The following charts try to organize ideological segments that together assemble the basis of the approach - "the platform". This part of the comparison lights up the street & square issue, by explaining the process of reaching conclusions. Without it - the street & square issue can be interpreted in several ways, and not particularly in the way intended by the approach.

Gordon Cullen	Aldo Rossi	Robert Venturi	Rem Koolhaas	Coop Himmelblau
---------------	------------	----------------	--------------	-----------------

3rd topic: *the approach is a reaction to...*

Ill recent past reflected through the implementations of urban design projects (Cullen 1971)	Ill recent past reflected through the implementations of urban design projects (Rossi 1982b)	Emerging new reality in the American post-modern society in general, and in Las-Vegas in particular (Venturi, Brown & Izenour 1979)	New-York as a phenomena of a special metropolis that needs exploration (Koolhaas 1994a)	Ill past reflected in architectural projects and through the sequential theories that did not success either (Werner 1989)
the failure of modernist cities and built environments.	the failure of modernist cities and built environments	Identification of the current phenomena- the "commercial vernacular".	identification of the old phenomena that was never discussed before.	The failure of modernist and post-modernist architectural projects.

4th topic: *aiming to...*

learn and use the art of "townscape" that has proved itself in the past	discover the essence of historical urban architecture in order to (Vidler 1976)	analyze the reality in order to understand and interpret the new phenomena.	interpret this phenomena with exaggeration to make a point and (Jencks and Kropf 1997)	invent new architectural codes of aesthetics and become a neoterist (Farrelly 1986a,b)
Create better built environments that of today's	Create historical built environments	Bring the phenomena to attention.	To encourage pluralism and tolerance towards all theories.	Create new-built architecture and environment.

5th topic: *values, basic premises, world-view*

Sympathy to the picturesque. Planning should be done with a reference to what the eye sees (Broadbent 1990)	Marxism and rationalism - in their 1970s' modern philosophical version (Broadbent 1990)	Understand and interpret the world we live in, because whatever exists - is worthy (Venturi, Brown & Izenour 1979).	A metropolis is a manmade place where all myths and ideologies can co-exist. Every belief is legitimate (Koolhaas 1994a,b)	Everything that has been done is ill. Now is a time for a new start, using the same material but in a new way (Farrelly 1986a)
Neo-empiricist	Neo-rationalist	Pragmatist	Pluralist	Idealist

6th topic: *argumentation for using the values*

Planning only with the aid of scientific research has failed. It is not enough (Cullen 1971)	Architecture should stand for itself and not rely on other disciplines but itself any more (Moneo 1976)	Analysing existed phenomenon has long history - it is a way to look back in order to advance (Venturi, Brown & Izenour 1979).	a belief that the principles of everything external, can be found inside the human mind. (Koolhaas 1994a,b)	Personal ideology, inward processes and insights (Werner 1989, Farrelly 1986a)
Personal ideology	Personal ideology	Personal ideology	Personal ideology	Personal ideology

The self-evident conclusion, naturally, is that all theoretical 'platforms' are, in essence, personal ideologies, and therefore are not suitable for debating. The next three charts discuss the methodological foundation - how the ideology is proven or demonstrated.

Gordon Cullen	Aldo Rossi	Robert Venturi	Rem Koolhaas	Coop Himmelblau
----------------------	-------------------	-----------------------	---------------------	------------------------

7th topic: *references to science/knowledge system*

The relations between objects as seen by the eyes - "art of relationship" (Cullen 1971)	Study of plans, sections elevations of historical buildings that represent (Rossi 1982a)	Las Vegas existing commercial strip as (Venturi, Brown & Izenour 1979)	Manhattan's history and myths, together with psychological understanding is (Koolhaas 1994a,b)	A very inward looking process that searches for knowledge (Farrelly 1986a, Tschum 1987)
the ability of the human sight system to see and consequently, evoke experience and feelings	the essence of the structural physical architecture discipline	a current extreme but representative case study tested through analytical tools	an extreme, exaggerated and a retroactive case study tested mainly through psychology	a self-searching process (part of which rely on Derrida's philosophy .)

8th topic: *method of research*

Drawings, illustrations and sketches that enable	Examination of buildings in order to find their essence, and achieve	Analysis of plans, sections photographs etc., results as	Exploration of Manhattan's historical narratives and myths through	Implementations of personal ideas and personal manifestos by (Libeskind 1988, 1987)
systematic exploration of urban situations.	list of artefacts through a rational typification .	a conventional architectural analysis research .	written material that constitutes Manhattan's retroactive manifesto.	realization of architectonic projects in practice .

9th topic: *a product as a result*

Demonstration of ideas - in a book and in a non realized project (Cullen 1976, Broadbent 1990) implementation by 'do and not do commandments' - "the scanner" (Cullen 1966)	Demonstration of ideas - in a book and in projects (Moneo 1976) implementation by illustrating examples	Demonstration of ideas - in books and in projects (Venturi, Brown & Izenour 1979) implementation by being aware to new phenomena	Demonstration of ideas - in a book and in projects (Koolhaas 1994b) a change in the perception and understandings of any reality (Aravot 1995)	Demonstration of ideas - in manifestos and mainly in projects (Jencks & Kropf 1997) creating a change in conventions.
---	---	--	--	---

The first four topics explained the personal motivation and the process which stimulated the outcome. The next three topics described the outcome itself through the product intended to be left to mankind, in order to help others realize their ideology. The attempt to understand the street & square issue, as demonstrated in the current part, is introducing a process of a question-and-answer cycle, in which an answer to one question raises another question, and its answer raises another, and so on.

The chosen topics introduced in this essay are only part of the possibilities of further investigation. The street & square issue, as a wide subject in itself, can be fragmented once again into further topics, such as *the future spatial structure of the street & square* (containing style, historical references, character of space, etc.), *their future functional character* (activeness, measure of liveliness, social role), etc. Continuing this comparison process is perhaps a matter for another essay. What is relevant to this one, is discussing its results.

4. ADVANTAGES AND DISADVANTAGES OF THE ORDER IMPOSITION

The described comparison process is a sort of classification procedure that extracts the topics of comparison from within the approaches themselves. The method of extracting topics represents a typification process, where - the certain topics are found within one or few approaches, and the other approaches are forced inside into these predetermined topics. It is not always possible to insert them easily, sometimes it demands certain creativity and using different techniques such as skipping over few topics, because naturally, not all approaches relate to all topics. In other cases there are topics that, despite being identified in each approach, are *so* different in content, it seems they have

nothing in common, and therefore are not comparable. But this, of course, is also a kind of comparison's conclusion.

As shown at the beginning of this essay, Jencks defined four types of traditions within the architectural and urban design approaches. He calls it 'capsule definitions' and indicates that "it is always reductive to define growing, complex movements, always foolhardy because it can never be done satisfactorily, and always necessary - in order to clarify the issue at stake. [...] Those definitions, however, are academic, theoretical, bloodless - not something to leave home for (the ultimate aim of a good manifesto). They are necessary for cool ratiocination and comparison, which is why they are included, but I defy you to repeat them verbatim, without looking" (Jencks 1997, pp. 9-10).

5. CONCLUSION

Although the above described theories are not easy to compare, it is somehow possible to force them into order through a comparison process. All comparison charts should be read and understood together, in order to clarify the certain issue wished to be examined in the first place - in this essay, the street & square issue. In many cases, the comparison chart inevitably stays partly empty. This too is a characteristic feature of the comparison. Ironically, this clears the compared issue, and enables us to see and understand the whole picture: the approaches themselves and the relationships between them.

The conclusions of this essay are already known for a long time: the ordering process of verbal material is reductive. There is partial information that either falls out or is forced in throughout the process. These two forcing actions are necessary in order to create a new, simplified arranged material, in a way of comparison charts. Nevertheless, the whole picture is now comprehended, a picture that introduces a non-perfect order, a somewhat self-contradicting term.

The importance of these results is not only in their mere existence and presentation but also and mainly in the methodology by which they emerged. Therefore the innovation of this essay lies in its methodology and its application in the urban design theoretical sphere.

REFERENCES

- Aravot, I (1995) Narrative-Myth and Urban Design, *Journal of Architectural Education* 49, 1, Nov., pp.79-92.
- Broadbent, G. (1990) *Emerging Concepts in Urban Design*, New York: Van Nostrand Reinhold International
- Cullen, G. (1966) *The Scanner*, London: Alcan Industries Ltd.
- Cullen, G. (1971) *The Concise Townscape*, London: The architectural Press.
- Farrelly, E. M. (1986a) Coop Himmelblau, *The Architectural Review*, 8/1986, pp 18-24.
- Farrelly, E. M. (1986b) The New Spirit, *The Architectural Review*, 8/1986, pp. 6-13.
- Hillier, B. (1996) *Space is the Machine*, xiii, 463, Cambridge University Press.
- Hillier, B. (1989) The Architecture of the Urban Object, *Ekistics*, no 334, January-February.
- Hillier, B. (1984) *The Social Logic of Space*, xiii, 281, Cambridge University Press
- Hillier, B. (1983) Space Syntax - A Different Urban Perspective, *Architectural Journal* 178, no 48, pp 47-63.
- Jencks, C. (1977) *The Language of Post Modern Architecture*, pp. 39-52, New York: Rizzoli.
- Jencks, C. and Kropf, K. (1997) *Theories and Manifestos of Contemporary Architecture*, Chichester: Academy Editions.
- Koolhaas, R. (1994a) *Delirios New York - A Retroactive Manifesto for Manhattan*, NY: The Monacelli Press.
- Koolhaas, R. (1994b) Life in the Metropolis, *Architectural Design* 47, no. 5, pp. 315-369.
- Libeskind, D. (1988) City Edge Competition, Berlin, *A&U*, no. 215, August 1988.
- Libeskind, D. (1987) City Edge Competition, Berlin, *AA Files*, no 14, Spring 1987.
- Moneo, R. (1976) Aldo Rossi: The Idea of Architecture and the Modena Cemetery, *Oppositions*, no. 5.
- Rossi, A. (1982a) *The Architecture of the City*, Cambridge, Mass: M.I.T. Press.
- Rossi, A. (1982b) The Analogous City, *Lotus International* 13, pp. 5-9.
- Tschumi, B. (1987) *Cinegramme Folie, Le Parc de la Villette*, Princeton: Princeton Architectural Press.
- Venturi, R., Scott Brown D. and Izenour S. (1979) *Learning from Las Vegas*, Cambridge, Mass. and London: MIT Press
- Vidler, A. (1976) The Third Typology, *Oppositions*, no. 7.
- Webster's Ninth New Collegiate Dictionary* (1991), by Merriam Webster Inc., pp. 98, 597, 724, 1223
- Werner, F. (1989) Coop-Himmelblau, 1968-1989, *A&U*, 226, July 1989, pp. 15-133.