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**ICT and Architectural Theory and History:
from Literary Discourse to Design Paradigms?**

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Abstract

Design Studio Practice in the ICT – Google Era

As a jury on Architectural projects we all recognise the unpleasant feeling when we hear a too highly polished student ICT-presentation: the plan does not correspond with the literary plea.

Strong Literary Tradition

Architectural Theory and History have a strong literary tradition.

Starting from the present ICT developments and out of here resulting social trends the literary approach gets more and more under pressure.

With help from Google it almost seems possible to link all concepts in random order, to randomize pro and contra arguments and to compose and decompose them in an almost endless way.

The literary plea loses its strength and can only be judged as an essay on its literary significance.

Realistic working Design Paradigms are missing.

Issue

Due to this it will be more and more problematic to frame young architects into Architectural History and Architectural Theory in an academic reliable way.

Therefore the 'white spots' will be filled up in one way or the other, if necessary by other disciplines.

Especially the literary branch of Architectural History and Theory may run a serious risk to degenerate to the Regional Chamber of Rhetoricians in the local University Pub?

Paper

With help of some 'old and cold Theories' from the past:

- Edmund Burke on the meaningless enjoyment of literary prose
- Jacques Derrida on the - already in the past – existing gap between a word and the different meanings of that word
- Arthur Danto on the Philosophic-Theoretical Ending of Arts true Technology

This paper situates the gigantic opportunities of ICT and the attractive force of poetry against other new trends:

- The 'explosion in Architectural Styles' true the economic growth of the nineties
- Reduction in actual instruction time for Architecture in new Bachelors – Masters Structure
- The basic Black Box Character of Architectural Design Studio Education

Based on this theoretic, educational and pragmatic analyses the Paper makes a plea for a third approach: realistic working Design Paradigms, next to the two main lines of Architectural History and Architectural Theory.

And next to it: a plea for a separate category in Design Studio Critics: The Archi-Formance (a contradiction of Architecture and Performance) for literary, visual and conceptual prose in Architecture.

For in the new ICT – Google Era we can not deny the new methodological context of Archi-Formance: (International) design competitions are also flooded with it.

We should make a separate category of it and next to it we should look through the highly metaphoric design to more meaningful aspects of the design.

Paper

Design Studio Practice

As a Jury on Architectural projects we all recognise the unpleasant feeling when we hear a too highly polished student presentation: the text is sublime and the pictures are smashing. But does the text correspond with the pictures? And corresponds this all with the future reality of the building?

The Gap between what ought to be in the plan and really is

Already Vitruvius places the Architect in the Centre of the Universe. The Architect has to have knowledge of almost all the existing Sciences of those days: writing of Treatises, Drawing, Sketching, Geometry, Optics, Arithmetic, Architectural History, Philosophy, Music, Acoustics, Medicine and Metrology, Astronomy, Law, Economics, and Earth Sciences.

In this way Vitruvius paved the way for the uneasy and ever lasting gap between what ought to be in the plan and what really is.

Vitruvius in Book I chapter 1: The Education of the Architect verse 1: “The Architect should be equipped with knowledge of many branches of study and varied kinds of learning, for it is by his judgement that all work done by the other Arts is put to test. This knowledge is the child of practice and theory. Practice is the continuous and regular exercise of employment where manual work is done with any necessary material according to the design of a drawing. Theory, on the other hand, is the ability to demonstrate and explain the productions of dexterity on the principles of proportion.”

Verse 2: “It follows, therefore, that Architects who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority to correspond to their pains, while those who relies only upon theories and scholarship were obviously hunting the shadow, not the substance. But those who have a thorough knowledge of both, like men armed at all points, have the sooner attained their object and carried authority with them.”

Regarding to Pytheos, who said that the Architect should be leading top-class on all those different Arts and Sciences (Vitruvius, Book 1, prologue, verse 12) Vitruvius comments that that is virtual impossible. Vitruvius points out to Pytheos that all Arts and Sciences are composed of two things: the actual craft work and the Theory of it (ibid, verse 15)

“The actual undertaking of works which are brought to perfection by the hand and its manipulation is the function of those who have been specially trained to deal with a single art” (ibid, verse 16).

“The Theory is shared with other scholars” (ibid, verse 15), because “in all Sciences many points, perhaps all, are common so far as the discussion of them is concerned” (ibid, verse 16) (logic and methodology)

“It appears, therefore, that he has done enough and to spare who in each subject possesses a fairly good knowledge of those parts, with their principles, which are indispensable for Architecture that he is capable to pass judgement and to express approval in the case of those things or Arts” (ibid verse 16).

Strong Literary Tradition in Architectural Theory

Architectural Theory has a strong literary tradition. The literary prose is an essential part of the Design Concept.

The ten Books of Vitruvius are well known for there strong Technical Theoretical Fundamentals and for his introduction of the human proportions as a frame to the whole: the famous Icon of men standing in the centre of both and square and outer circle.

But, to point out some origin, perception and cultural meaning to Architecture, he also uses a kind of literary prose with partly historicized, partly theological, partly mythical origins. For example the mythical origin of Society, living together and building (book 2, chapter 1) and the origins of the ‘classic orders’ in warriors, gods and goddesses (book 4, chapter 1)

The literary prose has a very important bridging role between what is in the plan and what could be. The literary prose has obviously a very important artistic role as cultural enjoyment as well. The sublime texts from Adolf Loos and the powerful language of the numerous manifesto's. The pulses of the rhythm. The creative imagination of the metaphors. The instinctive floating away on the waves of the literary plea

The well-known conservative Philosopher Edmund Burke as well as the post-structuralism Philosopher Jacques Derrida pose that there is a gap between words and meaning.

Edmund Burke, who bases his theory on the rational-empirical Philosopher John Locke, makes a distinction in the sound of a word, in the image what the word creates in our minds and in the feeling what the word creates in our hearts.

Not all types of words create those three effects together.

The distinguished ‘composite abstract words’ (as honour, justice, freedom, et cetera) only pro-

duce sound and feeling and no image.

Only the types of words called 'simple abstract words' (blue, green, hot, cold) and the types of words called 'joined words' (castle, horse) give all: sound, image and feeling. But not when these words are a part of a large text. Then there is no room for an image.

So Edmund Burke concludes that there is text what creates feelings without the creation of images. In this way he explains the pure – meaningless – cultural enjoyment of literary prose (Burke, 1757).

The post-structuralism Philosopher Jacques Derrida poses that no linguistic expression is bounded to a well-defined context. Every text belongs to an original and real context. The more frequent certain words are used in a certain context, the less ambiguous the – temporary – bond between the acoustic 'signifier' (for example the word 'tree') and the 'signifies' (the understanding 'tree').

So has the Dutch word 'boom' (English word 'beam') in maritime conventions a quite different meaning than in housing construction conventions.

In for example Politics, Architecture, Economics, et cetera, there is a continuous creative use of words, which lets to a continuous shift in meaning in gradual stages.

The relation between 'signifier' and 'signified' is stretched continuous which leads constant to 'something new', whereas written language presupposes a continuation in meaning. This dynamic tension in language between a fixed meaning and a shifting in meaning characterizes Derrida with the French expression 'différance', what means 'delay' (in this case: delay of a new meaning for that particular word) as well as 'difference' (in this case: a new meaning for that particular word).

With the practice of metaphors one conscious and on purpose uses the stretched shift in meaning. And, in terms of Edmund Burke, a stretched shift in – likely available - accompanying images and feelings. So: a stretched shift in 'context'.

Back to our Architectural Design Studio Critics

There are three possibilities to react on our literary broad talented student:

1. *A conscious restriction of the literary prose: the outcome of philosophic theory of Jacques Derrida is that in scientific use one has to secure the relation between text and context in more than one way.*
2. *A conscious and on purpose use of metaphors (words which have a very free relation between 'signifier' and 'signified' and evoke images and feelings) to stimulate creative processes (Segers, 2004).*
3. *A conscious and on purpose creation of pure cultural artistic literary prose, as the Philosopher Edmund Burke stated.*

ICT Developments and resulting trends

With help from internet dictionaries and treasurers it is relatively simple to create rich texts with a lot of metaphors with gradual shifts in context, meaning, images and feeling.

With help of all kinds of Photoshop-programmes you can also use a kind of 'imaging metaphors' in your Architectural models and drawings as well.

With the help of the internet search machines as Google it almost seems possible to link all Theoretical Concepts to your Architectural Design. In random order you can randomize pro and contra arguments and compose them in an endless way.

Nowadays you can make a 'Gesamt Kunstwerk' with only a fraction on insight and scientific knowledge what was needed for it some 20 years ago: 'you can make a 'Gesamt Kunstwerk' on a lazy afternoon in summertime'

A PhD study named: 'Incorporating Cognitive/Learning Styles in a General-Purpose adaptive Hypermedia System' (Stash, 2007) confirms the relatively simplicity of that kind of use of internet search machines. The nowadays Adaptive Hypermedia give already user support true 'adaptive navigation support'(also called: 'link adaptation') as well as 'adaptive presentation'(also called: 'content adaptation'). The PhD study adds new possibilities for 'automatic customisation' of personal related cognitive styles, through the development of a meta-model for a corresponding computer language.

The social trends in using the benefits of the ICT-developments are also rapidly changing. Some 5 years ago it still was not done for a Scientific Researcher to make openly and extensive use of the internet search machines.

Now at the moment the majority of Researchers use the internet for research and for publishing. Thus creating a new Scientific Environment in a Methodological and Philosophic way.

Once again we can go to the Philosophic contributions of Edmund Burke and Jacques Derrida. And also to work of the American Philosopher and Art Critic Arthur Danto and his Theory about the Philosophic-Theoretical Ending of Arts (Danto, 1986).

Arthur Danto goes beyond the much-discussed proposition of the end of Avant-Garde and Modernism. He sees this as the end of a longer development: namely as the end of Philosophic-Theoretical Progress in Arts.

He distinguishes three models to describe the History of Arts.

The first model is Art as Representation of reality and the Historical-Theoretical development of an increasingly superior representation of the world. This ends with the rise of photo and film. Danto sees the Abstract Arts as a blind alley and as no real solution in terms of continuous progress in arts.

The second model is Art as Expression. He sees this also as an escape route, because there is no 'Mediating Technology of Expression' and therefore also no continuous progress in Arts. There is no coherence and Art History is only a 'pack of cards'.

Danto's third model sees Art History as a kind of Philosophic-Theoretical Understanding. Autonomous concepts, comments, references and self-references rules over and Art becomes a synonym for Philosophy. Art becomes a statement of its own without any progress. Its accumulation is the Brillo Box of Andy Warhol (Danto 1992).

Danto marks the beginning of the End of Arts at the technological innovation of photo and film. Meant slight ironically, he sees it only as the Historic-Theoretical End of Arts. He states that Art, Art History and Art Critics will last for ever. It will give 'access to all' and it will be continued as a kind of hedonistic playing.

This fits exactly in the Philosophy of Edmund Burke, who stated that literary prose can produce pure meaningless cultural enjoyment.

Probably Danto could not realize that within a period of 15 years ICT-technology would develop so heavily that is also hits very hard in the sphere of Art Expression (meaning: imaging, feeling) and the sphere of Philosophical-Theoretical conceptual underpinning. All of a sudden there is not only one but three technological innovations which mark Arthur Danto's End of Arts! (photo and film imaging, computer graphics photo and film manipulation and internet search machines).

The Google search machine would have created the ultimate nightmare for Jacques Derrida as well, or – on the contrary – it proves his being right ? The computer search machine automates the placing of all text outside its original context. More than ever there is room for a plea for multiple coupling between text and context. In this case: realistic working Design Paradigms, which couples design features and representation (meaning: image, feeling) in a multiple way.

Demand for realistic working Design Paradigms

The usual method for teaching Architectural Building Design in the first year of study is that of the Design Studio. It is a kind of Master Class Teaching, which can be described as a Black Box Approach. This Black Box nature disguises the lack of Methodology, Transparency and Continuity. The main effect of the Black Box nature tends that the most social intelligent student – who can guess the intentions of the Master as best – will be the best Design-student.

This Black Box Design Teaching ignores Cognitive Psychological Research on Professional Architects, what claims that there are quite different Professional Design Strategies, which depend on Personality Temperaments (Van Bakel, 1995).

Some Schools of Architecture deal with this problem by focusing on only one main Design Approach and only one main Design Strategy. So for the incoming students it can be clear what kind of Architectural Style they will be educated in.

Inside the pluralistic Dutch Architectural Design Schools several Design Approaches and sev-

eral Design Strategies coexisting with each other at the same time inside one School. Inside those Pluralistic Architectural Design Schools teaching problems due to Multiple Design Approaches and Design Strategies became very apparent at the end of the 20th century, when Architecture was booming.

The PhD study 'Learning to Create' (Proveniers, 2005) provides a Core Strategy to facilitate the students creative voyage of discovery into several parallel Design Approaches and several Design Strategies.

It makes active use of realistic working 'Design Paradigms' in offering the students the facility to discover ones own – personality dependent – creative affinities and develop these as well.

These Design Paradigms are Design Principles related to specific effects, so as the asymmetrical balance propagated by the Dutch movement 'De Stijl'.

They are called Paradigms because they form a closed set of rules and that set of rules is competing with other – opposite – sets of rules. For example the asymmetrical balance of 'De Stijl' against the symmetrical balance of Palladio.

You have to make a choice: you can not follow both sets of rules in one Design. Also it is useless to deny one of those sets of rules.

In the 'Learning to Create Educational Strategy' Design Paradigms are translated to very open and broadly formulated Design Problems and scaffolding exercises. So students can become acquainted with and experiment with several Paradigms at the same time simultaneously.

The new BaMa Structure

As part of a management reorganisation the Eindhoven University of Technology in the Netherlands already started to implement the Bachelor Master System in the year 2000. So already some tendencies become evident.

Preceding the BaMa Structure the Department of Architecture and Building had a 5 year study programme in a relatively autonomous 'management surrounding'.

As part of the implementation of the BaMa Structure the National Government, National Pressure Groups and the Government of the University tends to tighten their grip on the Study Programmes and want to control 'supply and demand' of Study Programmes and student choices.

This seems to result in a kind of 'tsunami-effect'. First the withdrawal: there are less Bachelor Study Programmes than there were in the 5 year Programmes before. Then the flooding: there are far more Master Study Programmes than there were 5 year programmes before.

Universities and Schools of notion and standing may disappear in the flood wave of hundreds European small Master institutes, with also all kinds of Major and Minor variants.

Concerning the content of the Study Programmes there might be less educational connections between the new Bachelor Programme and the new Master Programmes (one Bachelor Pro-

gramme prepares for much more Master Programmes than before).

Concerning the Formal Juristic Entry Requirements there might be a lot more connections between one new Master Programme and all kind of Bachelor Programmes ('all' Bachelor programmes give access to the Architecture Master programme: so the start of the Master Programme has to be very basic).

This tends to a reduction of the actual instruction time for the Architecture Study Programme. Pure formal: only 2 years of Masters will rest.

This might let to all kinds of juristic very interesting cases in European Court. If you have formal access to a School on basis of a degree of several different Bachelors, than the School programme has to be 'doable' for a certain percentage of the students of those different Bachelors. If students need very specialised knowledge skills, which only can be learnt at a one and only particular Bachelor Programme, it will hinder the formal free access to that school. The perception of this problem will of course be different in the cultural different European countries.

An other possible Future Trend in the BaMa Structure could be an American infill of the BaMa: most students do only a three years Bachelors and only the most talented do directly a PhD and no Masters. The Masters is only an 'end-station' for the semi-talented. Because these Bachelors all have extended 'Minors' with relatively small 'Majors', a comparable situation will occur.

Reduction in actual instruction time for Architecture is in conflict with the Black Box Model in the Architectural Design Studio. The adage is that 'Architecture quality takes a lot of time'.

In the 5 year Programme a student could compensate the lack of Methodology, Transparency and Continuity of the Black Box Approach by choosing a particular Architectural Teaching Group with an own Design Approach and own Design Strategy at the end of the first year of study. So the student 'buys himself 4 years time' to learn the particular habits of the Architectural Teaching Group and so reach a certain quality level within these group standards.

In the new Master Programme there is less time left. So it is obvious that the teachers will observe 'a regression in Architectural quality amongst the youngest student generations' and the young Architects will be thrown back to their own capabilities more and more: their advantage of their sublime 'verbal en graphical use' off all kinds of ICT-extensions.

A plea for a Third Approach: realistic working Design Paradigms, next to the two main lines of Architectural History and Architectural Theory

As a likely and on some Theoretical en some Historic origins of Architecture oriented replay to the problems around ICT-technology and the new BaMa Structure, I plea for a Third Approach: realistic working Design Paradigms: Design Principles related to specific – 'researched' - effects.

The realistic working Design Paradigms could offer a concrete answer to the new occurrence of the Philosophy of the End of Arts from Arthur Danto, what new occurrence substantially gains

strength through the possibilities of ICT-Technology - and simultaneously - the intensifying conflict between the actual reduction in instruction time for Architecture inside the BaMa Structure and the dominant Black Box Design Education Model.

Earlier formulated answers to the Philosophy of the End of Arts already vague indicated in the direction of a Cognitive Approach (Doorman, 1994, who refers to Gablik, 1976 and to Goodman, 1969).

The Third Approach of realistic working Design Paradigms is no substitute for the two main lines of Architectural History and Architectural Theory.

Also, the paradigms are no 'Closed Architectural System' (as were developed in the sixties and seventies) but can include all possible opposite concepts.

Also the specific effects which the Design Rule (ought to) have on the users are included and also the learning effect on the Designer Community (the Cognitive Character of the Paradigms).

That is why they are characterized as Paradigms: relatively closed sets of rules including their specific effects, which are conflicting with other sets of rules and their specific effects.

Young Architects: 'Children of their Time'

Arthur Danto foresees in his End of Arts only a Philosophic-Theoretical End of Arts. Not the End of Arts as such. Quite the reverse: there will be 'access for all' and it will grow to the configuration of a hedonistic play. As I – metaphorical – described it as: 'the making of a 'Gezamt Kunstwerk' on a lazy afternoon in summertime'

In his well-known book: 'the Rise of the Creative Class; and how it is transforming work, leisure, community and everyday live' Richard Florida refers to the new Creative Class which combines a hard working labour ethos with a pleasure seeking hedonistic life fulfilment.

Other, more Scientific Human Researchers say that nowadays youth have only weak bonds to a field of study and will see it as a challenge to continually prove themselves in new domains (Bras-Klapwijk, 2005).

In terms of the famous Human Career and Organisation Expert Edgar Schein, nowadays youth has much weaker carrier anchors than older generations. They are more extravert and want to work on their own multi-personality growth (Bras-Klapwijk, 2005). Not as a kind of mental sickness (no multi personality syndrome). Not as a kind of provocation like the Avant-Garde from the days before. But pure as a form of Creative Expression. Due to this they are more pragmatic - and have to be to reach their goals – then the older generations which had more confidence in Theoretical and Philosophical Dogma's and Ideologies. So they will be less interested in heavy Philosophical-Theoretical Architectural History and Theory.

Back to our student:

He does not only look alike the New Hedonistic Creative Generation of Richard Florida and more scientific counterparts, he is the New Hedonistic Creative Generation: Using photo, film, computer graphics, Google and ICT.

The Design is totally build up out of metaphors. And as Edmund Burke stated: all to create feelings without meaning:

- *Metaphorical drawing techniques.*
- *Metaphorical use of scale and materials for models (not to represent but to affect).*
- *Metaphorical use of colouring, imaging and lighting, possible through ICT.*
- *Metaphorical pseudo-Philosophical-Theoretical Concepts, made by the Google search machine.*

Architectural History and Theory can not deny these trends and (international) design competitions are flooded with it.

We should make a separate category of it, next to the three Arthur Danto categories: Archi-Formance (as a contraction from Architecture and Performance). So we can give it a separate critique and a separate note and do the strictly necessary research on it .

Next to it, it is useful to try to look through the Metaphoric Design and give separate critiques to the more meaningful aspects of the Design related to Architectural Design Paradigms grounded in Architectural History and Theory.

- *The power and force of attraction of the Poetry;*
- *The Multi-Paradigm character of Architecture;*
- *The gigantic opportunities of ICT;*

bring along site the responsibilities to act and to create a 'base-line', in order that the 'Fleets of Architecture' do not strand on the cliffs of the unbridled use of verbal, graphic and theoretical metaphors, while attracted to the new Sirens of the Odyssey : Google, Hypermedia and Computer Graphics.

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