Cumulus – Dialogue of Art and Design in education

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Abstract

The relation between art, design and research in the context of design and art education is the core issue of this paper. Three exemplifying projects will be presented. Each integrates artistic experimentation, sociological or historical explorations into the design process.

1. Raum–Körper–Objekt (Space–Body–Object):

An integrated foundations workshop between foundation courses from Theater, Photography and Industrial Design, using methodologies of experimental explorations to enable students to discover synergies and similarities in basic principles from each of these disciplines and to open them to later cross-disciplinary "Folkwang-Lab-Projects".

Die Ruhrlautsonate (the "Ruhr-Sound Sonata", homage to Kurt Schwitter's "Ursonate")

A Cross-disciplinary Lab-Project with students from different Art and Design departments, developed from an anthropological problem as the vantage of the ideation research, ultimately into a Dadaistic Opera.

3. City Vibrations (mixed media)

A workshop at Pratt Institute of Technology in Brooklyn NY, visualizes my research results on the Bauhaus Heritage in the United States, its influence on art- and design education, the development of a pedagogy for basic design and its applicability towards future demands on design in the 21st century. The workshop takes the didactics of Lázló Moholy-Nagy towards contemporary and future applications.

Art as a source or result of experimental, social and historical research and its application to the design process will be evaluated as the conclusion of the paper.

Introduction

The relation between art, design and research in the context of design and art education is the core issue of this paper. Four exemplifying projects will be presented. Each integrates artistic experimentation, sociological or historical explorations into the design process. The discussion of how art, technology, science and research should be related in design education is a permanent one in design education. When Walter Gropius proclaimed the triangle of Art, Technology and Science in the 1920ies* at the Bauhaus in Weimar¹ this was a forming concept for Design Education in the 20th century, in Europe as well as for Design Education in the United States.

Current and future demands on design, through cultural, political, social and media developments, along with an immense increase of speed in communication are the dominant issues within the profession and require redefinition of topics and structure in design education.

The main issues of discussion in design education I have followed since the beginning of the 21st century are:

- » _Inter-, Cross- or non disciplinary Design Education
- » _Biomemetrics, Biomimicry Looking at nature as a model for design concepts
- » _Ethical Design/Design with Responsibility
- » (Design Matters, Sustainability in Design, Universal Design etc...)
- » _Experience Design/Interactive Design
- » _Design education towards the demands of Industry, the "Market"

When we follow the discussions about the state of design education and its responsibility at design schools today, most of them carry similar headlines proclaiming variations of the issues above. As tasks, tools and responsibilities of designers increase in range and complexity, the profile of the design profession becomes less distinct and it is hard to pinpoint its core definition, especially for outsiders and for students. At the Cumulus conference in Paris last year we brought an outsider along as a guest. After visiting a few lectures and keynotes, he was perplexed and said: This is a Profession in crisis – a profession with an identity problem! I catch myself sitting through more and more conferences: Thinking: "Sustainability, responsibility, Universal Design... Designers today have to be a mixture of engineers, social anthropologists, CAD specialists and entrepreneurs. The conceptual part seems to dominate the aspects of the making in the design process. The discussion seems to have moved from the: How do we design? To the: Why do we design? Should we even design?

Of course, we all want our students to be sensitive to the problems worldwide and we do not want to educate designers to be slaves to consumerism but to creative and critical thinkers. But what happens to the "how" in design when design becomes more and more immaterial, what about form? What about training the senses in the BAUHAUS-heritage of hands on experience with materials? Especially in Industrial Design we witness students having more and more difficulties to move from the visualization of great concepts to their realization. The burden of justification of the production of more "things" seems to inhibit.

¹ Költzsch, Georg W. & Tupitsyn, Margarita (Eds.). (2000). Bauhaus: Dessau - Chicago - New York (published in conjunction with the exhibition Bauhaus: Dessau - Chicago - New York, Museum Folkwang Essen, 12. August bis 12. November 2000). Köln: DuMont.

As the questions of the "why" seem to dominate design education, the "how" is something rarely talked about at these conferences. If design moves from the making of things to the immaterial, where does that leave our conception of form, how do we train the senses? Where does this leave esthetics? What is the role of Art in Design Education?

In interviews with design educators in the United States, I have learned that many of them are questioning the art related foundation year.² In Europe where our design curricula BA and MA are limited to 5 years through the Bologna Process, they seem to be brimming with many related fields, new technologies and processes, so there is less room for art in Design education (with the exception of a few Art Universities).

Whereas design education seems to be moving away from art, art on the other hand seems to be moving towards design. Artists, such as Olafur Eliasson³, Tobias Rehberger⁴, Attilla Csörgö⁵, Amish Kapoor, Didier Courbot⁶ and Takashi Murakami use design-tools and processes for their work. Being free of the pressure to create meaningful applications, they seem to be able to do just that by raising issues and interacting with the public through their (sometimes very material) work. But were not artists and architects the ones to coin design education in the first place? At Folkwang University of the Arts the integration of Art and design is part of the philosophy.

"Folkwang ist die Einheit aller Künste und aller künstlerischer Erziehung"

This is the original idea of Folkwang founder and supporter Karl Ernst Osthaus, which means "Folkwang is the unity of all arts and arts education". Folkwang is not just a name, but it reflects the Folkwang idea: The name derives from North mythology and means "The Hall of Freya", which was the meeting place of the muses, the bringing together of all the arts. So, when Osthaus had this Idea in 1902, he wanted to create a center for art and design in the west of Europe, which lead to the foundation of Folkwang School for Arts and Crafts, the Folkwang School for Speech and Performance, the Folkwang Museum and the Folkwang Publishing House in 1907.

Today, the Folkwang University of the Arts is built on this heritage. "Without art the questions of life can't be solved!" But how does Folkwang University of the Arts live up to this concept today? There are five main fields of study at Folkwang: Music, Theater, Dance, Design and the Sciences connected to all of these. Folkwang is a small University with 1500 students altogether, of which the School of Design with 550 students is the largest.

We believe in the holistic idea of Art and Design and in the power and synergies from integration of art and design, so we developed a specific Folkwang form of cross disciplinary highly credited laboratories, tied into the curriculum: The so called "Folkwang Labs". Those "Folkwang Labs" are projects with overall topics of cultural or social relevance bringing together at least two or more disciplines and external research institutions or corporate partners to work on one subject for a semester or even a year. They lead into a public

² Interview Marion Digel talks to Steve Diskin, Chairperson Industrial Design, Pratt Institute, Jan. 26th 2012

³ Birnbaum, Daniel (Ed.). (2010) Olafur Eliasson. Innen Stadt Außen. Köln: Walther König

⁴ Birnbaum, Daniel & Volz, Jochen. (2009). 53rd International Art Exhibition. Fare Mondi Making Worlds. Venice: Marsilio Editori

⁵ Podnar, Gregor & Simon, Kati. (2010). Attila Csörgö. Archimedean Point. Ljubljana: gurgur editions

⁶ www.didier-courbot.com/texts/needs-interview-with-hanna-alkema, [Accessed 25.10.2011]

presentation in form of an exhibit or stage- or other event and they are documented in form of a publication.

"The Ruhrsound Sonata"

I would like to show you an example: The first Folkwang Lab, which was part of the activities when Essen was "Cultural Capitol of Europe in 2010 was called "Kulturelles Handeln im transkulturellen Raum" meaning cultural action in a cross-cultural society.

This Lab project was headed by Dr. Jacob professor for musical sciences. It involved students and faculty from all Folkwang departments and the Industrial Design students were part of a Dadaistic opera called "The Ruhrsound Sonata" an hommage to Kurt Schwitters "Urlautsonate" (transl. Primeval sonata).

So how does Dada relate to that anthropological topic?

Students and faculty were meeting during "Jour fixes" on a regular basis to discuss the state of the cross-cultural community in the Ruhr-Melting Pot and what brings it together and how could there be cultural understanding and communication?

According to the Philosopher Wolfgang Welsch cultural differences can be blurred by a trans-cultural event. "Trans-cultural action can, when encountering different or even contradicting cultures, lead to a crossing of the boundaries or maybe even to their abolishment." (Deutscher Musikrat. (Ed.). Musikforum 1/2012: Digitales Paradies – Jeder Mensch ein Künstler? p. 8. Berlin 2012. Translated from German by Prof. Marion Digel) But what could that be in case of the Ruhr-area? And what are the bridges that have to be burnt?

The industrial design students headed out into the community and did the kind of "handson" research that they learned during their design methodological processes. They sampled their surroundings in collages. They found Turkish literature, Slowanien pop-artists, a train for poetry slam, every wagon with poets from different national origins. But they also found: Soccer, cafés, teams and organizations and food that brought together the various cultures. One student thought the unifying thing in the Ruhr-area that everyone liked was the Döner Kebab.

It was finally decided, that so much cultural diversity could have only one universal language: "Dada"! The Dadaistic movement brought together expressionist artists in Europe in the beginning of the 20th century who developed seemingly non-sensical forms of expression. According to the first Dadaistic Manifesto by Hugo Ball Dada is a unifying universal language.

"How can we deal with anything journalistic, royal, anything nice and pretty or stubborn, anything moralistic, european or annoying? By saying Dada. Dada is world soul, Dada is the Clou, Dada is the best lily soap of the world." (Ball, Hugo: Eröffnungsmanifest, 1. Dada-Abend, Zürich 14. Juli 1916. Translated from German by Prof. Marion Digel)

As consequence of that, the idea of an hommage to Schwitters "Ursonate" was born. The "Ruhrlautsonate" (the "Ruhr-Sound Sonata") was developed from an anthropological problem of cultural integration into a Dadaistic Opera, written by Professor Bruno Klimek but realized by students from all Folkwang departments. For a German audience in the Ruhr area this was humoristic as well as provocative since the language played with Ruhr-slang expressions and the lyrics addressed typical expressions of a language tainted by the daily hardships of coalmining but also with expressions that tie the Ruhr-people many different backgrounds together, since they are the only ones that know their meaning. For instance one act played with the abbreviations from license plates of the area.

The Industrial Design Students developed the stage setting with the lettering landscape made from moving boxes and they were also part of the stage act forming and building the landscape, which eventually hid all the singers and completely filled the stage. For this they had to be able to use their logistical skills since the timing of appearance was quite complicated and it was the first time they had to deal with the concept of "time" in design. Up to that they only considered time in their projects in terms of deadlines, but now they had to use time as an instrument for designing a sequence of a story, which required dramatic structuring: the beginning – the main thread of action and a climax at the end.

The discovery of time being an important element in design opened their minds for the use of sequences, stories and choreography in their field of Industrial Design. They realized that a product also tells a story that it interacts with people or other objects and a concept also benefits from a good dramaturgy. They realized that time is an important factor in design.

The Mixed Media Project

The Mixed Media Project last winter semester was another seminar, in which students had to integrate time based elements and a sense of rhythm into the design process. Students had to choose one piece of music from five musical-segments such as rock, pop, classic, electro and hip-hop. They had to visualize this piece, first 2-dimensionally, then 3-dimensionally using only black and white. This exercise was modeled after the work of Heinrich Neugeboren, who visualized "Das wohltemperierte Klavier" / "The Well tempered Clavier" by J. S. Bach also first 2-dimensionally as a musical score, then 3-dimensionally as a rhythmic object.

The open, experimental approach of the Mixed Media Project allowed students to concentrate on the "how" and not the "why" in the design-process. Instead of questioning the reason for their design, they were confronted with the question of how they could express musical emotions by the means of graphical and 3-dimensional elements. They had to use visual structure sensitively, in order to grasp the theme, the dynamic and the rhythm of the chosen songs. Here, their interest was mainly in the process of turning sound and emotions evoked by music into a visual sensation.

Students were introduced to the origins of the "Mixed Media" movement in Futurism in this seminar and they were inspired by artists such as John Whitney, Fernand Leger and by musicians Alexander Skrjabin and Alexander Lászlò. The objective of this seminar was to search for depth in the experience how music, 3-dimensional and 2-dimensional form could melt into a "Gesamtkunstwerk".

Space-Body-Object

The next project I would like to introduce, Raum–Körper–Objekt (Space–Body–Object) deals with the integration of arts and design at a very early level of design education, in the first year:

The integration of various disciplines in complex projects requires of the students from each participating field to be equipped with its basic principles, tools, methodologies and processes. On the other hand they also have to have some idea of how other people work in their respective fields before they actually collaborate in a sophisticated Lab-project.

Therefore Folkwang University of the Arts offers once a year a cross-disciplinary studyworkshop on the foundation level in the second semester. This enables students to discover synergies and similarities in their methodologies and opens them for the later crossdisciplinary "Folkwang-Lab-Projects". Space-Body-Object was an integrated foundations workshop between the foundation courses from Theater, Photography and Industrial Design⁷. Here students learned through experimental explorations in a compact one-week workshop about the processes and basic principles of each of these disciplines. One thing the students of Photography and Industrial Design had to learn in the first week, was, that unlike themselves the theater students did not work with an external medium like a camera, models or computers, but that their body was their medium. That an actor is not so different from a designer, except that it is his body he or she designs with. Acting, just like design, is driven by some purpose, by some issue. Like a photograph or a product it causes communication and interaction.

So in the beginning of the workshop it was imminent for all participants to get to know that tool "body" and to experience body-awareness in a way that we do not experience it in our everyday lives. The training of the use of our senses and the sensitizing of the whole body were the objectives of various exercises concerning:

- » _ the (own) body in relation to space
- » _ the body in relation to other bodies
- » _ the body as an instrument
- » _ the body as part of a machine
- » _ the body interacting with objects and so on...

In the next step the designers and photographers reflected about what they had learned through these bodily experiments and jotted down their collective experiences in a brainstorming session. Then the designers brainstormed in a second session, how one could give the actors objects as their instruments as an extension of their bodies. In the next two weeks they played and experimented with mock-up, small-scale models.

The research for this study was basically a very experimental, physical exploration. The hypothesis was that there are methods and study practices in an artistic discipline, in this case Theatre, that one can apply to ones own field, in this case Industrial Design and Photography. The research method was the experimentation with the own body and the synthesis was the exchange about the experiences with one another. The application of the results was realized in objects and photographs for the actors to interact and communicate with and with the audience.

City Vibrations

The fourth example of art and design in design education "City Vibrations" is based on historical research and the attempt to apply historical elements of the Bauhaus education, its influence on art- and design education, towards future demands on design in the 21st century.

Here we took a closer look at the work of artist and designer László Moholy-Nagy, who developed his ideas for design education as a master at the Bauhaus in Dessau as well as at the "New Bauhaus" in Chicago from his own practice, which constantly integrated art and design.

Moholy-Nagy was one of the leading Constructivist artists. Constructivism regarded artists as active agents who could improve society. He was convinced that by expressing fundamental

⁷ Prof. Marina Busse, Prof. Gisela Bullacher, and Prof. Marion Digel

validities and common problems art could produce a feeling of coherence and that its social function would lead to a cultural synthesis, as well as to a continuation of human civilization. In his opinion art should be more about exploration than about individual expression. He almost experimented with elements in a scientific way. In his paintings he was interested in the relations of basic elements such as line, plane, shape and their constructive relations. More than on color he focused on contrast in size, light and dark and in transparencies to create depth. Moholy-Nagy never limited himself to one media. From the beginning he explored the relations of basic elements in space in a variety of media and dimensions. Whereas his early work shows his fascination with mechanical constructions and technology, his later art is a more organic abstraction of physical phenomena. Moholy-Nagy's holistic idea of a total vision culminates in the design of kinetic sculptures, in the beginning as light requisites for an electric stage.

The "Light-space Modulator" integrates almost every element of expression: Lines, planes, volumes, surface structure, proportion, light, motion, and even sound. By projecting light onto the modulator it forms light into a painting of moving color and patterns. Nagy set space in relation to time and thus created movement in space. His preoccupation with light and its power to modulate space and time was central to his work. Moholy-Nagy's work renounced the static form.

In the publication "The Bauhaus Stage" Moholy-Nagy expresses his ideas on light, time, space and movement for new forms of theatre. He presents the score for the "Mechanical Excentric" as a synthesis of form, motion, sound, light (color) and smell". Developed for the stage, the "Mechanical Excentric" stimulates visual, auditive and olfactory sensations and thus reminds the Futurists who manifested the sensitization of the senses with "the painting of sound and smell in 1913.

At the Bauhaus, as well as later at the New Bauhaus, Moholy-Nagy developed pedagogy for design education under the premise of the unity of art, science and technology, "an experiment in totality" (Moholy-Nagy, Sibyl. (1950) Experiment in Totality. New York: Harper and Brothers) – the education for the whole human being. He wanted to establish fundamental knowledge of the basic elements of art and design by using the various media. He wanted the students to be able to start from a broad holistic background to be able to solve complex design problems at a later stage. He extended the curriculum to the more technological arts such as photography, film, and kinetic- and light-sculpture, and to non-visual arts such as music and poetry. There was also a large emphasis on the tactile expression through material and surfaces.

To the two basic elements "Art and Technology" of the formula that Gropius made famous, Moholy-Nagy added a third element: Science. As a consequence, the curriculum included a series of courses in physical-, life-, human-, and social sciences. Introduced to biotechnique through the book "The Plants as Inventors," written by the Hungarian biologist and theosopher Raoul France, Moholy-Nagy added lessons in organic design inspired by nature to the curriculum. He was fascinated by Frances ideas:

"There is for everything, be it a concrete thing or a thought, only one form that corresponds to the nature of that thing;" "Every event has its necessary form;" "Every process produces for itself its technical form.". These are ideas that are of interest for us even today, when we introduce biomemetric design-projects to our students. Moholy published his didactic ideas in The New Vision in 1947, which offered pedagogy of visual fundamentals and was also a report on the current avant-garde practices. He wrote: "Designing is a complex and intricate task. It is integration of technological, social and economic requirements, biological necessities, and the psychophysical effects of materials, shape, color, volume, and space: thinking in relationships." (Moholy-Nagy, László. (1928). The New Vision. Mineola: Dover Publications, Inc.)

Moholy-Nagy was never able to fully manifest his perception of the "New Vision" in American Design education. For one, this was due to his early death, but also he was too much ahead of his times. In the forties and the fifties in the United States there was a large demand for designers to serve the large growing industries to make products desirable and be conductive to the increase of consumption and economic growth. Vocational training of industrial designers was favored over the education of the whole human being.

Today however, in light of the current growth of digital and social media, we can view Moholy-Nagy's achievements from a different perspective. Their communicative value to a society, moving from material to nonmaterial consumption and perception, becomes more obvious. Our development from designers for "hardware" to designers for experiences should inspire us to take a second look at Moholys "New Vision" and some of its elements. And this brings us back to the fourth workshop that is introduced here: "City Vibrations".

This workshop at Pratt Institute of Technology in Brooklyn NY is the attempt to prototype a method of combining historical with experimental research in design and visualizes my research on the Bauhaus Heritage in the United States, its influence on art- and design education, the development of a pedagogy for basic design and its applicability towards future demands on design in the 21st century. The workshop takes the didactics of László Moholy-Nagy towards contemporary and future applications. Here students had to develop and use a visual vocabulary for the relations between object, space and time and to visualize a story or the "feeling" of a city location through the design of a kinetic object. They should communicate ideas by multiple means of expression, mostly through visual and spatial relationships: motion, light and sound. However, they also practiced how to address concern for the human condition by the means of art, as it was Moholy-Nagy's ideal.

One of Nagy's fascinations was technology and its multiple stimulation of the senses in modern cities. Especially when he first came to Chicago in 1937 he was overwhelmed by the visual impact of light, motion and sound. Therefore I chose the topic of "City Vibrations" for this study.

The city was the inspirational source for the students to express the "Vibration" or energy, the story and the emotions of a location of their choice through a sculpture. Students first had to train their perception, by watching their location over a period of time to grasp its energy, the emotions, light and the rhythms of the place. They had to choose a location in the city meaningful to them and spend at least an hour there, watching what is happening. They identified shapes and structures, the dominant directions, movements, rhythms, sounds or other sensations. Also the colors, materials and surface structures and most important, the sense of light were objects to observation. It was the students' task to deliver the story of their chosen place in the shape of a kinetic sculpture.

They sampled the place in their sketchbooks by drawing, making collages, collecting materials and scraps of any visual information, trying to capture the shapes, structures, contrasts and directions in their drawings or collages. They had to vary, minimize, abstract their findings and develop storyboards for the "states of being" relevant to the tale of the place. The documentation was presented in form of a "leporello, showing the most important stages of the development of their kinetic object, starting with the city-sampling, the sketches, the 3D- studies up to the photographs of the final model. The format of the

"Leporello" was chosen to emphasize the fact that the project was about sequential realization of an object, about telling a story with "art".

This study was not only the visualization of non-visual sensations; it was also an example of how students could express the meaning of relevant issues through interactive, abstract objects. For instance the object "Base of the Manhattan Bridge" expressed concern about people trying to make a living at a market under the bridge, being overpowered by the flow and noise of the traffic above their heads. The students Teddy Atuluku and Jesse English wanted to create awareness for that, by staging the action of their sculpture on the level of the people, not on the level of the traffic.

Conclusion

So what is the definition of art in this context? How much of these three projects is art, how much of it design? Is it interesting to even draw the line between the two? Or is it more interesting to ask the question, how we can answer our future questions by the integration of both art?

Maybe the way Moholy-Nagy viewed art- and design education as a dynamic, ever changing field of experimentation and discovery, conductive to the development of the whole human condition is worth reconsidering. His holistic point of view enabled him to become one of the first Multi Media Artists who used all known media of his times, from drawings and paintings, to collage, sculpture, black and white photography, photogram, photoplastics (photomontage), stage design, motion pictures, advertising design, color photography and kinetic sculptures... Undoubtedly, if he were alive today he would experiment with the possibilities of digital design and with generative and interactive processes. He might be programming to produce sequences of experiences. Moholy-Nagy envisioned and communicated ways to perceive values and structures, means of creative and communicative expression in a world that is in flux – this makes his ideas still seem vivid and future-oriented today.

One important aspect about all of these examples of projects integrating the arts and design, and the use of art as a form of experimental research platform, is that none of them had the objective to make artists out of design students, or vice versa. However, the benefit of learning the use of time based methodologies, by expanding the use their own senses, by slipping into the role of another, by making abstract objects with the sole purpose of the stimulation of the senses was so immense for the designers.

By not having to follow the classical design process and being limited by "design thinking" instead of doing, with the purpose or justification of their project being their first objective, they experienced an open creative process, free to use their imagination and sensitized to the use of all means of perception. Concentration on the "how" instead of on the "why" in design made it possible for students to discover individual approaches, methods and processes. They were able to make them their own through experience, and from there they will be able to apply them to any complex design-problem around the relevant topics and questions that I had mentioned at the beginning...

The presented projects show a shift of the relations between art, science, and technology, from the present practice in design education towards art, the integration of theory and practice and how abstraction can be a powerful form of expression, even to the point of serving the purpose of generating awareness for the human condition through art in design.

So to go back to the concern of our Cumulus visitor I quoted in the beginning: Our profession is redefining its identity, however this is not a problem, but it is a sign that artand design education is as dynamic and in flux as the world we live in. And in that respect, for me the integration of Art and Design should not be questioned, but seen as a great chance. I agree with Philipp Ursprung of the ETH Zurich who, according to Friedrich von Borries⁸ said that the question is less, if Art, Architecture and Design should blend, but if the trend is such that Art and Architecture will live through Design.⁹

⁸ www.stylepark.com/de/news/warum-ist-die-banane-krumm-oder-was-ist-design/330196,

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⁹ translation Marion Digel 22.02.2012

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