

De-schooling Product Design Education, an Experimental Physical Approach.

Tommaso Maggio

PhD Candidate, Planetary Collegium, Plymouth University, UK;
Montfort del Rosario School of Architecture and Design, Assumption University of Thailand
tmaggio@au.edu

Abstract

Nowadays we are living in a fluid geo-politic landscape, the emergence arts and educational movements are playing between material and immaterial, this can be read as a symptom of unstable situation. Consciousness and perception of reality are related to internal and external factors as the sum of collective and social interactions. On the other hand, awareness and consciousness have an epicentre through our body as internal milieu or interoception and from outside/inside as proprioception, the awareness of body in space. The ancient Aristotle's peripatetic School and the context of Zen Buddhism highlighted the senses and the experimental knowledge as the first important tool in order to cultivate intellect. We might assume that each of us perceive the world differently according to the culture where we live in. To be able to perceive again we need, as Ivan Illich suggested in 1971 in "Deschooling Society", de-institutionalize the society and perhaps the first step could be de-institutionalizing education. The article will describe an experimental blend between physical theatre and design education in a non-tactile society (Thailand). Moreover the article will explore and underline how a physical theatre approach could be an important stimulus for a product design education especially in Southeast-Asia.

Introduction

In 1971 Ivan Illich wrote that "the current search for new educational funnels must be reversed into the search for their institutional inverse: educational webs which heighten the opportunity for each one to transform each moment of his living into one of learning, sharing, and caring." [1]

Notably the field of Design Thinking according to Beacham and Shambaugh (2011) is organized in four levels "... design and society, organization, education, and the designer" (p. 338). [2]

It is vital to discuss the term 'social design' as expressed by Margolin Victor & Sylvia (2002): "The primary purpose of design for the market is creating products for sale. Conversely, the foremost intent of social design is the satisfaction of human needs" (p.25). [3]

In the same direction, stage designer Ming Cho Lee once said, "designing for the theater was not just a question of design but of the play's relationship to history, society, politics, religion — to life itself". [4]

With the term of de-schooling the author means reframing the process of learning. If we assume that the most important thing of design is how it effects the society then the tentative of reframing design education could lead to a progressive de-institutionalization of society.

Thanks to the analysis of the current curriculum in product design used in Thailand the author has noticed that between the first and final year the requested skills such as interpersonal and psychomotor are decreased and vice versa the request of technical expertise is rapidly increased. Through the approbation of school committee he has tried then to encapsulate a physical approach to design institutional education. The first program in industrial design, established by the oldest public university in the country, has already fifty years of history. Industrial design in Thailand is based on Bauhaus school of Art (Germany, 1919-1933) educational model and underlines the craft practice. Moreover, in the last ten years several private institutions have opened product design programs. At the moment for the bachelor level there are only two international programs (conducted in english language) founded by private universities.

Design and Theatre

Design especially product design is often related to industrial and social discipline, its aim is to create a conscious relation between user-products and their impact into the context. Attila Grandpierre, in his "The Physics of Collective Consciousness", underlined the prime role of performing arts, quoting the words of Vekerdy, he said that theatrical artists, especially in the ancient Japanese Noh Theatre, have a great effect on audience in three ways: using words, hearing, by movements, through seeing and the use of intense emotion. [5]

In 1970, choreographer Mary Overlie started to work on an improvisation method called 'six-viewpoints' which has been developed furthermore by the directors and physical theatre practitioner Anne Bogart with Tina Landau into 'nine-viewpoints'. [6]

Likewise to the design universal principles, human body, time and their spatial relationship are considered

as key elements for the physical theatrical approach. Since the Bauhaus era through the experiment such as Triadisches ballet developed by Oskar Schelemeller, design and theatre are recognized as a prolific and inspiring blend. [7]

Generally in the design field the relation between user and the product is stressed, but on the other hand in theatre field the important aspect is the ability to explore, underlining the social impact of a specific object or action. We might assume that each of us can perceive the world differently according to the culture where we live in. The combination of the two disciplines could activate alternative scenarios. In the comparative study between the key elements of design developed since the Bauhaus art school (1919-1933) and theatre based on Six Viewpoints by M. Overlie (1970), there are many similarities. For instance shape and rhythm are considered as key elements and in both cases the body is the center of the study. Nevertheless emotion is totally absent in the design side. The aim of this research is to understand and eventually suggest how to fill the design gap in term of emotion and how to express it thanks to the physical theatre approach. Cultivate consciousness, through the senses is the proposed outcome of this experiments.

Body Culture, Between Senses and Function

Since the beginning of heavy industrialization the quality of the products was improved thanks to physical, cognitive and ergonomics studies. For example Frank and Lillian Gilbreth expanded Taylor's methods to produce a management efficiency technique called the "time and motion study". [8]

In 1906 Charles Scott Sherrington developed Julius Scaliger "studies of the sense of locomotion" as Jerosch and Heisel (2010, p.107), introducing the terms "proprioception" about movement, "interoception", and "exteroception" related to organs such as eyes, ears, mouth, and skin. In addition early industrial and social modernity brought a new entertainment era trough theatrical extravaganza productions as Tiller Girls in England and Ziegfeld Folies in United States of America. Efficiency and power was highlighted by the modern father of body-building Sandow Trocadero Vaudevilles, produced by F. Ziegfeld Jr. and the "soul expression" by dancers as Isadora Duncan. [9]

Furthermore "Form follow function" by L. Sullivan (1896) was the mantra among architects and designers and therefore a focal point for educators. Notably at the Bauhaus in Germany the experiments between space and body leaded the designer and choreographer Oskar Schelemeller to develop the performance called Triadisches ballet (1922). The Americans Delsarte and Mensendieck formulated and analyzed motions and positions. In 1926 Dr. Mensendieck co-founded with the designer Frederick Kiesler and princess-actress Norina Matchabelli the Brooklyn International Theatre Arts

Institute, as highlight by Phillips, "a laboratory of the modern stage" (2010, p.93). [10]

Frederick Kiesler, subsequently in his article Pseudo-Functionalism in Modern Architecture, emphasized in 1949 his principles as following: "function follows vision. Vision follows reality". Farther Wolfgang Jonas (2001) in his paper A Scenario for Design identified the value of observation in two main levels. He suggested, "Any observation is based on the dualism of self-reference and external reference". To sum up: there is a "real world" which we cannot perceive as it "really" is (p.70). [11]

Correalism was Kiesler neologism for correlation, "an investigation into the laws of the inter-relationships of natural and man-made organisms". "Gesamtkunstwerk" became then the outcome of his peculiar approach.

Notably, the Ecological Systems Theory of Human Development (1979) defined by the psychologist Urie Bronfenbrenner expanded the idea of reality and the value of time 'Chronosystem' as part of the environmental systems that every individual interact. [12]

Meanwhile, in the theatre practice, time became by the directors Bogart and Landau, another key element to the early coined six-viewpoints (2004, p.6). [13]

Recently Clare J. Fowler (2003) explained how the system of "interoception" as a whole, it constitutes the material me and it relates to how we perceive feelings from our bodies that determine our mood, sense of wellbeing and emotions (p.1505). [14]

This has led the author of this study to develop a methodology within a framework of design education in South-East Asia. This study aims to explore how product design education through a physical theatre approach can open new opportunities to improve the quality of culture-related to design practice. Due to the mentioned study and experiments conducted in and out the classroom, the author developed a deep consciousness about the relation between the design practice and the importance of the body. Furthermore, while operating as lecturer in a non-tactile society he started to develop concepts about how to enact body action and reaction to help students to embed new 'theoretic' knowledge (examples: dot, line, plane). Meanwhile the collaborations between the author and physical theatre production enacted the idea to bring the performance into the classroom. Moreover the practice of physicality of the theatre blended with the design way of operating it seems the most suitable way to enact consciousness.

The framework

As this article proposes to cultivate the collective consciousness, the physical theatre has become an experimental approach to de-schooling product design education and this section will discuss the framework of this supposition. Thanks to the collaborations with physical theatre production, the topic of education started to be examined under the perspective of skills with firstly the clear separation between episteme and tekne as

expressed by Bernard Stiegler on *Technics and Time*, 1(1994), and secondly regarding the relation between the called network effect and human body (Stiegler, 2015). [15]

As previously mentioned, the study is based in Thailand; according to Richard D. Lewis (1996) "Thailand is non-tactile society." (p.472). [16]

This is referred to the physical personal space. This can stand close but they are not comfortable to have any body contact with strangers.

Consequently, the educational approach to product design seems to have two main directions, firstly the Sullivan "Form Follow Function" that aims to empower efficiency, secondly Kiesler "function follow vision" as expression of inner sensations and emotions. Lockton (2010) offered in "Design for Intent", four ways to deliver a behaviour change as "Motivating behaviour", "Enabling behaviour" and "Constraining behaviour": He describes education as an incentive to change attitudes. [17]

In addition, as underlined by Phillips (2010) Brooklyn International Theatre Arts Institute in 1926, the associate actress Norina Matchabelli (aka Maria Carmi) believed that acting is an art of "co-relation" between the brain, soul, and body modelled through the art of training where "inborn unconscious talent" can be studied and enacted "consciously". [18]

In 1999, Hertz, in his published work called "Synesthetic Art: An Imaginary Number?" quoted the neurologist Richard Cytowic who explained that "Synesthesia Greek, syn = together + aisthesis = perception is the involuntary physical experience of a cross-modal association. That is, the stimulation of one sensory modality reliably causes a perception in one or more different senses (p.400)". [19]

Furthermore, A. R. Luria underlines that the 'synaesthetic sensations' is a state within an individual where 'there is no real borderline between perceptions and emotions (Luria, 1969, pp.28-80). [20]

Josephine Machon, (2011) in her book explains the three key performance strategies peculiar to the (syn) aesthetic performance style; the "(syn) aesthetic hybrid", which is a special manipulation of the *gesamtkunstwerk*, a predominance of the actual body as text in performance and an unusual rendering of writerly speech to establish a visceral-verbal play-text (p.4). [21]

In 2000 "Punckdrunk a theatre company" brought synesthetic approach to theatre and they called it "immersive" or "promenade". The physical theatre approach to product design education aims to create a *gesamtkunstwerk*, an art composed by multiple senses. From the author understanding Synaesthetic art might refer to either art created by synaesthetes as Carol Steen and Wassily Kandinsky or art created to convey the synaesthetic experience as some contemporary arts performance based on the work of Jerzy Grotowski. The limbo area between consciousness and unconsciousness became perhaps the area where

alternative ways of education should focus their effort in order to gain access and motivating a behaviour change.

Freshmen, First Blended Approach.

As mentioned previously in the chapter *Body Culture, Between Senses and Function*, while operating as lecturer in a non-tactile society, the author started to analyze several ways to help first year students to familiarize with new theoretical concepts such as dot, line, plane, etc. Free hand drawings and brainstorming had a short effect into students memories, on the other hand after an encounter with theatre directors it was clear that the concept expressed by Jacques Lecoq, 'the body knows things about which the mind is ignorant' *The Moving Body* (2000, p.9). [22]

The first experimental approach was done in the oldest public university in Thailand, for a group of communication design freshmen between the ages of 17 and 19. The group was composed by a number of students from different education backgrounds such public, private and international schools. Objective of the session was to welcome the new students into the academic design studies context; a soft approach was requested. In order to initiate the students to theoretical concepts as time, space and the relation, enjoyment was the key element for the class. Therefore the choice to usability such as the human senses underlined the need to collaborate with a not industrial designer mind. As preventative measure, a physical theatre practitioner was invited to join the class. Students and lecturers reactions were surprisingly positive; the initial hesitation was quickly moderate thanks to the presence and full participation of instructors and students. There was no separation between audience and the performance, this because the author wanted to lead the students towards a physical and practical approach, where the students were free to express their emotions and fully understand, step by step each exercise. After several weeks all freshmen remembered and completely digested the first approach to design principles. Their mock-ups and concepts were realized trough all semesters and after such experience they understood and assimilated this approach.



Fig 1. *Self Confidence - Body Consciousness*, 2012, Author: Tommaso Maggio, Activity photo archive.

Academics and Practitioners, Icebreaking approach.

Two years later another experiment to blend performing arts and design was done. This time the context was an academic design and architecture conference held by a private university in Thailand. The author of this article was part of the team who organized the event. In order to open a debate, due to the audience diversity in term of age, research and expertise, a common language was needed. The author together with the coordination event team proposed a theatre approach as opening of the conference. As previously mentioned similar key concepts are shared between design and theater field. For this experimental approach the role of theater was to motivate behaviour from observer to participant. With reference of the theatre approach of nine-viewpoints by A. Bogart and T. Landau, a physical theatre company was invited to perform. Following the symposium topic the performers prepared a script that was shared between the participants at the conference. All participants were divided into groups and each of them had to read aloud the script and act accordingly. No stage was set; all participants were sitting in a 'Socratic circle'. Performers acted independently from the script in response to gestures and spatial relations created time to time by and with the acting audience. Performance perhaps helped to shape a positive social climate that persuaded people to be a participative conference guest.



Fig 2. *Observer to Participant*, 2015, Author: Tommaso Maggio, Activity photo archive.

Moulding an International Product Design Curriculum

This experiment involves the fourth year students of an undergraduate international product design program as active participants of this study. Alternatively from the previous exercises this third experiment has been set up to introduce a major change into the product design curriculum. Specifically addressed to enlarge senior students' critical vision and expand their capacity of communication and social consciousness. A physical theatre approach became the key factor to encourage students to explore while thinking and making new concept. The course was planned according to three main objectives; firstly enforce students consciousness about human body and the relations with the space, secondly

inspire them with alternative point of views, and third understanding the theoretical common ground between disciplines. Classes ended up with a Socratic Circle, a conversation about experiences, feelings and how to express themselves. In order to achieve objectives, several backgrounds and various skills are needed; this has lead to a process of cooperation with a theatre director and a motion designer with a background in archaeology. Consequentially feedbacks became a structural part of the experiment; in order to let the students express their feelings and emotions, instructors tested several approaches as following:

1. Written statement.
2. Physical conceptual mock-up.
3. Socratic Circle in a small groups
4. 'Yes and', 'yes but' as key elements to lead a debate and explore the topic.
5. Physical Theatre reversal approach.
6. Creation of an "immersive space".

Those approaches could be reviewed as an expanded framework of the called Reciprocal Maieutic Approach, defined by Danilo Dolci, the Italian sociologist and popular educator, as a "collective exploration process that considers individuals' experience and intuition as a reference point" (Dolci, 1996). [23]

Therefore, senses of responsibility in individual and community, build a trust into the group are considered the activities core.



Fig 3. *Physical Theatre Approach*, 2015, Author: Tommaso Maggio, Activity photo archive.

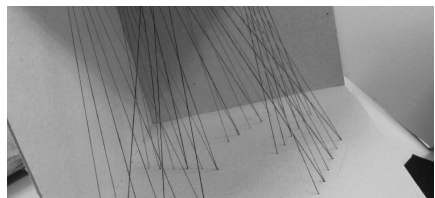


Fig 4. *Physical Conceptual Mock-Up*, 2015, Author: Tommaso Maggio, Activity photo archive.

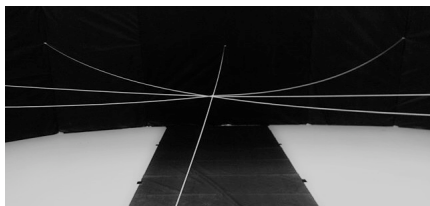


Fig 5. *Immersive Space*, 2015, Author: Paper Author, Activity photo archive.

Findings

The three attempts to create an alternative stimulus in the context of design education in Thailand underlined the value to lead the students in an inner exploration of their feelings and emotions. Beside that the exercises, borrowed from the physical theatre practice, have highlighted the peculiar behaviour attitude of design students. Some extract from the author's observation (field note) underlines how, especially in the third case, the theoretical gap between disciplines bring most of the students out of their comfort zone, consequentially they first action was a non-reaction. Their main concern was how and why the request of blending theatre and design were made and on the other hand, students were wondering about what was the expectation of instructors. Therefore, through a one by one tutorial, students start to express their feeling. Notably, instructor team by professionals with different backgrounds allowed students to build an empathetic relation that lead to a collective self-confidence. One object-two people exercise showed how product design students can interact with physical elements with the objective to find new way to use it without the search of new meaning of it. With the exercise of filling an empty space through human body the students started to search for rhythm, visual pattern to balance the physical gap. First attempt to represent feelings and emotions with the use of three-dimensional model ended-up with physical ideas for theatrical space, subsequently the change of scale, from micro to macro, helped student to express their own feeling.

Weakness identified: Students were not sure about the instructor's method to evaluate their outcomes. Fourth year undergraduates often act and react (in term of designing) less spontaneously compared to freshmen. Alternative approach could be perceived as deterrent for overachievers' students.

Strength identified: Alternative approach is considered positive boost for low profile and average students. A lecturer's team holding different professional backgrounds, encourage students to perceive other realities. Designing the physical approach stimulated students to consider the full spectrum of senses, then the physical theatre approach stressed students to concern and be conscious about the social impact of their actions, therefore about their way of design.

Due to the author experience in order to enact consciousness the use of physical theatre should be combined within the umbrella of design. If we assume 'body is the mind' then this approach could be used in different kind of educations. It is also important to underline how this approach might be able to enact different reaction in different cultures.

The following diagram (figure 6) represents the three main areas of this paper such as: design, education and body, the consciousness aspect could be positioned as below.

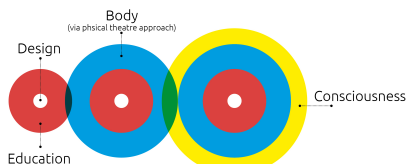


Fig 6. *Diagram*, 2016, Author: Tommaso Maggio, Activity photo archive.

Conclusions

The *designerly* way of thinking in order to be able to maintain spontaneity it has to be constantly reframed. De-schooling institutional of design education through micro-operations became equivalent to play at interstitial level. The main goal of this physical approach is to increase consciousness through micro-actions that change the behaviour. Students of communication and product design are accustomed to reply to any brief with a careful observation of the market. Their fictional target often became an unrealistic character. The blend of physical theatre with design education emphasizes the uses of the five senses and it increases and develops the dimension of self and collective consciousness. The motto "function follow vision. Vision follow reality" could be substituted with the "emotions create vision". Visions follow experience. The discovery and acceptance of personal emotion is the first step to lead the group towards a collective consciousness. Due to the fact that these attempts are conducted in a non-tactile society, a somatosensory approach need to be careful experimented. Through these experimental approaches perhaps students are expanding their learning process behind the product itself. The aim is to motivate behaviour, to originate the trust inside the group. Further research will be done in order to build a way to lead design education to explore and reframing consciousness.

References

1. Ivan Illich, Deschooling Society (UK: Calder and Boyers Ltd, 1971), 2.
2. Cindy Beacham and Neal Shambaugh, Contemporary uses of design thinking across society, work, and the individual, *Design Principles & Practices*, 5(5), (2011): 338.

3. Victor Margolin and Sylvia Margolin, A "Social" Model of Design: Issues of Practice and Research, *Design Issues* 18:4, (2002), 24-30.
4. Jane L. Levere, "The Set and Its Designer, Ming Cho Lee, Take Center Stage," *New York Times*, January 16, 2014, accessed July 8, 2015, <http://goo.gl/nYdsjv>
5. Attila Grandpierre, "World Futures. The Physics of Collective Consciousness." *The Journal of general Evolution*, 48(1-4), (1997) 23-56.
6. Anne Bogart and Tina Landau, *The Viewpoints Book: A Practical Guide to Viewpoints and Composition* (US: Theatre Communications Group) 2004.
7. Gropius Walter and Arthur S. Wensinger, *The Theater of the Bauhaus* (US: Wesleyan) 1971.
8. Fariss-Terry Mousa and David J. Lemak, "The Gilbreths' quality system stands the test of time," *Journal of Management History*, Vol. 15 Iss: 2, (2009), 198 – 215.
9. Jörg Jerosch and Heisel, Jürgen, "Management der Arthrose: Innovative Therapiekonzepte," *Deutscher Ärzteverlag* (2010), 107.
10. Phillips Stephen, "Toward a Research Practice: Frederick Kiesler's Design-Correlation Laboratory," *Grey Room*, 38 (1), (2010), 90-120.
11. Jonas Wolfgang, "A Scenario for Design," *Design Issues* Volume 17, Number 2, Spring (2001), 70.
12. Urie Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design*, (Cambridge, MA: Harvard University Press), 1979.
13. Anne Bogart and Tina Landau, *The Viewpoints Book: A Practical Guide to Viewpoints and Composition* (US: Theatre Communications Group) 2004.
14. Clare J. Fowler, "Visceral Sensory Neuroscience: Interoception," *Brain*, 126 (6), (2003), 1505-1506, DOI: 10.1093/brain/awg120.
15. Anaïs Nony, Bernard Stiegler on Automatic Society. As told to Anaïs Nony. *The Third Rail Quarterly* 5 (2015): 16-17.
16. Lewis D. Richard, *When Cultures Collide: Leading across Cultures*, (US: Nicholas Brealey International, 1996), 472.
17. Harrison Lockton, D., D.J., Stanton, N.A, "The Design with Intent Method: a design tool for influencing user behavior," *Applied Ergonomics* Vol.41 No.3, (2010), 382-392.
18. Stephen Phillips. "Toward a Research Practice: Frederick Kiesler's Design-Correlation Laboratory," *Grey Room*, 38 (1). (2010), 90-120.
19. Paul Hertz, "Synesthetic Art-An Imaginary Number?" *Leonardo Journal* Vol.32 (5), (1999), 399-404.
20. Alexander R. Luria, *The Mind of a Mnemonist*, trans. Lynn Solotaroff, (London: Jonathan Cape Ltd. 1969).
21. Josephine Machon, (Syn)aesthetic: Redefining Visceral Performance, (UK: Palgrave Macmillan, 2011), 4.
22. Jacques Lecoq. *The Moving Body*, trans. By David Bradby (London: Methuen, 2000), 9.
23. Dolci, Danilo, *La struttura maieutica e l'evolverci*, La nuova Italia, (Italy, Florence, 1996).