

BODY PERCEPTION IMPORTANCE FOR WELLBEING DESIGN

Bente Dahl THOMSEN

Department of Architecture, Design and Media Technology, Aalborg University

ABSTRACT

Training of the bodily receptivity and the sensibility is more or less absent from the universities' design education, this is a problem in wellbeing design which is based on the fact that all human senses are stimulated in a positive or varied manner. The communication of the body's recognition can be supported by using the triangular method, which makes use of the nonverbal language of drawings. The study reveals that design education can learn from the experiences of Billedskolen of restoring body perception and developing the generation of terms that make possible transformation of non-verbal language to verbal language.

Keywords: Body perception, wellness, nonverbal language, generation of concept, triangular method

1 INTRODUCTION

Wellbeing, which involves all human senses, is used in the design of products and spaces which are included in or support our experience of wellness. Our study of two wellness centres, as mentioned in Section 3, showed that the stimulation of the body is in focus, often in combination with one or more senses. The growing interest in establishing and using wellness centres has not yet been matched by an increased awareness of the fact that body perception or comprehension is a key tool in the design process analysis and assessment phases. It is a problem when the products used must be camouflaged with sheets, supplied with sleeping mats or though covered with terry cloth towels it is not possible to keep a massage chair free from skin surfaces, just to mention a few less risky solutions. Pointy towel racks, sharp edged handrails and sharp seating steps near the soft bodies that move about on partially wet jet burned granite is not a safe combination, the pool attendants testified. This is a number of the issues which derive from the fact that the study and assessment methods of architects and designers often only involve the sense of sight. The sense of hearing may also be challenged by mood-supporting sound effects, but without really being connected with the design object.

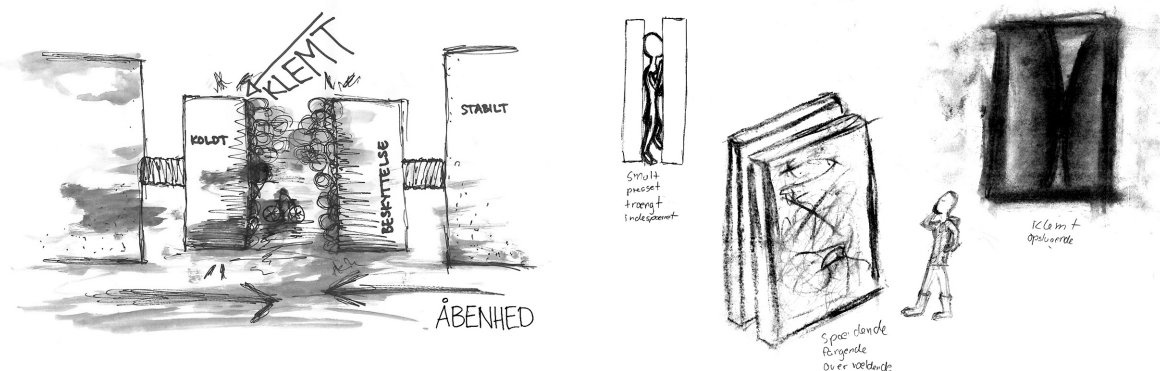


Figure 1. Triangular indicate of body perception of urban space and fixture

The receptivity and in particular the body perception as a tool in formgiving, however, have been brought into focus at Billedskolen in Copenhagen along with the training of the students' sensibility. Therefore, we have examined how the teaching of body perception and sensibility is accomplished. The goal of the body perception training is to bring the body's realizations of the effects of space and products into the design process and thereby achieve a more nuanced recording of the experiences. The familiar problem of communicating recognition of mind comprehension by means of loan terms is

actualized further when recognition of body comprehension must be communicated. The study of Billedskolen's training of body perception gave an answer this problem as well. Pivotal elements of the study are interviews with Billedskolen's leader Bjørn Helge Bråten, surviving notes from architect Erik Lynge, who taught at the school from 1976 to 1995, interviews with the leader of the Royal Academy Art Schools metal workshop Torben Ziska [1] as well as a conversation with designer Nina Ganneskov, a former student [2] and teacher at the Vidar School. Marketing manager Frank Thybo at NSF Innovation Centre in Kolding contributed to clarifying the connection between the body resonance and degree of creativity [3].

1.1 The Study Questions

Studies of Lynge's surviving notes on archive at KUNSTEN, Museum of Modern Art Aalborg, conversation with designer Nina Ganneskov and experiences from teaching at Aalborg University raised the following questions:

- How can teaching support the recovery of body perception?
- How is the connection between the nonverbal and verbal language trained?
- How are nuances of bodily realisations operationalised in the design process?
- Which sensations support wellness design today, and is the body the focus of the experience?
- Does an increased activation of the body also contribute to an increase in creativity?

1.2 Clarification of Concepts

Design borrows concepts from all sciences and art forms in order to articulate experiences and expressions. The problem with the borrowing of concepts is that there is not a common understanding of the meaning of the concepts. To birth a concept takes a long time, as a concept has to gain wider acceptance in the design field. Although body perception been a pivotal instrument in the design disciplines for over 40 years, the emphasis on the mental side of training of recent years, has led to situation in which a clarification of meaning of body perception and related concepts is appropriate:

- Body perception or body comprehension: the body's sensations of surfaces, shape and space, and the relation between the inner and outer forms or spaces. The ability of bodies to decode entities and perceive relationships in a wordless language.
- Body memory: the body's store system that by association form meaning, sense of time, sense of place and thus motion. The association helps to create direction in the more or less condensed impression that arises from the perception [4].
- Mind comprehension: the mental syntheses of sensory impressions so that the individual can process the impressions, can draw conclusions, can resonate from experience, can be creative, etc. [5].
- Background awareness: an information line in the nervous system and brain containing knowledge about human evolutionary development. This knowledge is built up increasingly by the interaction between the inherent development possibilities and the environment we are in. It gives us the development opportunity that lies in the fact that we are not only confined individuals, but our consciousness, our biological knowledge and wisdom belongs to a greater human community [6].

2 THE BODY AS A RECOGNITION TOOL

What is it we have to train, to develop body awareness? Designer Bjørn Helge Bråten has worked with this question for many years. Bråten's background for answer the question is a career that begins with designing coffee presses and drinking glasses for Jørgen Bodum, together with Carsten Jørgensen, who is the chief designer at Bodum, Switzerland today. At approximately the same time they began to teach students who wanted to apply for admission to a design or art school. Bråten prioritized teaching and in 1971 he established Billedskolen which he directed until 2011, when the school change the concept and changed its name Københavns Kunstscole (The Copenhagen Art School) [7]

The clarification of how body awareness can be trained will be considered on the basis of the experience of Billedskolen:

1. About training the students' expression power, one can also say to train the need to express themselves, that is the exposing part where the students want express something - create designs.
2. Training the student's receptivity, that is almost the opposite of the expressive power like the Jing

Jang. It is about the ability to receive, to listen, to sense and it is on this sensuous receptivity that body awareness is based.

3. Training the student's reflection based on practice and not just theoretical reflection, but a reflection that is associated with design practice, which indicate that you cannot just involve a lot of abstract concepts or literature about the design considerations, but that you simply ask about the process.

The three areas were the very backbone in Billedskolen's teaching methods and the students had to work with all actions in a sort of reciprocal action. The school conducted a six-year experiment where they put the emphasis on the receptivity in order to support the development of students' sensibility. This was based on the thesis that an increase in receptivity would foster a greater expressive power and thus an increased productivity. The thesis did not hold, because the students' productivity decreased in comparison to when they were alternating between the three training activities.

2.1 Experiences with Communicating the Non-verbal and Verbal

When it comes to aesthetic insight, verbalizing experiences is a special problem, because it is based on a verbal language which use a number of concepts borrowed from other sciences and arts such as philosophy and music. The fact that we do not have a terminology for formal or spacious concepts, make it difficult to unambiguously communicate meanings to others in the design field as well as in interdisciplinary collaborations. Dealing with this problem, the individual design programs have attempted to develop a terminology which is contained in the 'Conceptual Explanations' [8] and which is incorporated in the sub-culture represented by the education and its collaborative partners. In continuation of the Billedskolen's reflection training, the students were involved in the continuous terminology development conducted by the teaching staff. Billedskolen developed its own conceptual understanding and interpretation through after-work discussions, where people from art and design educations also participated. The discussions helped birth concepts, but more often than not they did not succeed in finding an entirely adequate concept. Therefore, the teaching staff came to the realization that the concepts had to be more precisely defined through practice.

Billedskolen chose to include the development of more precise concepts in the training as well. In reflection dialogues the students were asked: How would you describe what you have done or created? Which concepts would you use to describe it? Which concepts would you use to describe your experience in relation to it? Some students used a very inadequate concept to describe the experience or gave a very subjective interpretation. Such a dialogue was followed by a joint interpretation, which may not have resulted in an entirely adequate verbalization. The student was then invited to look for a more suitable concept. Billedskolen recommended that the students read certain literature, but the staff learned that if students worked too much with the mental side early, then their expressive power closed down quickly. Therefore these recommendations should be used with caution. Bråten's observations about conceptual learning through the practical process versus lectures and literature studies were confirmed in an elective course in aesthetics for almost 60 students at Architecture and Design in their third to fifth year. The students in their final year were clearly able to use concepts from the literature, whereas the students halfway through their studies had a hard time applying the abstract concepts in the analytical task that completed the course.

The triangular method/Triangulær terapi ® was developed by MSc in Psychology Lise May Jensen [9] to promote communication of impressions stored in the bodily memory. The method is in this context used to transform the nonverbal experience that people get by staying in a given context or by interacting with a product. The sketching process of the method is used as a nonverbal means of expressing the body's realizations or experiences in connection with the initial registration in order to solve a design task. The triangular method can also be used for testing whether the interior of a room or a product support the experience of, for instance, well-being. Our students have tested the method in a street fixture project about creating a bus shelter; see figure 1.

Sketching may be very emotional or very mental depending on which aspect the student prefers and it is precisely people's ability to express their bodily perceptions and feelings through drawing the triangular method is based on. After the sketching process, the drawing is analyzed qualitatively for what actually has appeared on the paper and how the student, alone or in collaboration with others, responds to what has appeared on the paper [9]. Precisely our background awareness enables the common qualitative analysis of the nonverbal statements of the drawing. There are pitfalls in both the use of an incomplete conceptual terminology in combination with mind comprehension and the

triangular method, which still requires a secure decoding model for the qualitative statements of drawings. The image forming triangular process is expected to find the greatest application in the production of feeling communicating mood board. The various people involved in the phenomenological registration [4] of the emotion and feeling which space and products facilitate will be under the influence of their own body memories even if they manage to override the preconceived notions of their minds.

2.2 Restoring the Body Perception

Our culture is currently so intensely focused on the exposure that the receptivity is quite weak. When we touch upon the sensuous, that is that which goes beyond the mental and conceptual, it is necessary for people that images are used in order to get an understanding of the meaning. Bråten illustrated the need to train the receptivity of 'to see' [7]. A second concept is 'to observe', which is slightly different from 'to see', there is an inherent interest - a mental template - to look at something with a particular approach. A third concept is 'to sight' - to look both inward and look outward at the same time, just like the fish that look out through the sea, they look softly through the water masses without seeing anything in particular and it may at the same time look inwards. The students trained their receptivity by learning to see softly. To train the soft sight is to train seeing the entire vision surface, just like when you ride a bike. Perception through soft sight is different than perception through point sight, and that could be one reason why the soft sight softens the mind and makes the receptivity greater, so that we can become aware of what we did not notice before. Grey scale sketching has been proven to be suitable for training of the soft sight.

Restoration of body perception is based on the memories we have long ago forgotten, but if we look closer, we do have experiences from the stage of our lives where we stumbled around and took in the world by sensori motor. In other words, we must regain motor skill influence on everything else we experience. At Billedskolen they tried to get a lot of motor skills into modelling. For instance, instead of using modelling tools and rotating the model, the students had to walk around the model and use their fingers to shape the clay. Once students had to draw an architectural space with pillars and then they would say: "I cannot get the column to be vertical" and the instructor would reply: "Try standing up and then feel with your body, because when you stand, you can very clearly feel with your body if the column is straight or not."

By using our bodies actively, we can feel a lot of things, consequently, before the students were asked to sketch a room, they had to walk around and experience the room with their bodies. The experience of the subject becomes more concrete by first awakening the body and the other senses, by becoming aware of and feeling the subject than by simply sketching while sitting down. Two favourite motifs whose assimilation enabled the kinaesthetic perception and space experience was the courthouse, with its ascending staircase and its giant doors, and the Jewish Museum, with its slanting angles [7].

Sculptor Erik Heide described these approaches as follows: "Change happens in the meeting between space and material every time we place ourselves in relation to each other - to a railing - to a car - to a house. We move and everything is a little bit different. We feel form (sculpture) with our hands, with our bodies: cold and hot, rough and smooth, hard and soft, with our feet, we register even the slightest change in what we are walking on" [10]. The memory is also a form of time perception, supported by the traces left behind by processes. Hence, small changes occur in the physical space that make it possible to see that time has past, when we, for example, return home after a lengthy journey.

Fernando Cassasempere [11], who was a guest artist at Guldagergaard while I was resident artist, moulds large pieces - sculptures - with his naked torso, a process that activates body perception in a very exemplary way. The activation of body perception occur when handling the physical weight of models such as centric clay models by holding them over one's head and observing where the balance is down through the body. This was one of the methods the students at Billedskolen used. For the same reason, they always worked with large items or large surfaces. That means, they would relate bodily or physically to the models and with that force themselves to activate their motor skills, as the actual manual processes trigger it, because of the item's physical extent. Preferably, the education was based on modelling and sculpture work, which are much less mental than sketching on a flat surface. Sketching is also more abstract than when we work spaciouly with materials' physical presence. Sensibility is also trained through experiments with processing methods and many different materials such as plaster with and without canvas, metal wire and sheets, plastic in solid form as foamed or foil, cardboard and paper as sheets or pulp and wood more or less processed.

3 COMFORT DESIGNS

What is wellness design actually, when we look beyond the treatments doctors and therapists affiliated with wellness centres offers? To illustrate the issue, two Danish wellness centres at opposite ends of the scale are examined. Vejle fjord Thermal Baths [12] and Frederiksberg Swimming Pool's more popular spa [13] do not have a staff of doctors and therapists, but rather electric massage chairs and lamps with red light and daylight above resting chair free of charge. Both promise pampering of our senses with effects that promote inner peace and relaxation. With the body perception as basis, some of the facilities are examined in order to clarify which design parameters are interesting when dealing with wellbeing. The results of the investigation are shown in Table 1:

Table 1. Design parameters

Facility	Activity	Parameter	Effects
Large pool	Swimming / play	Freedom of movement – heating up to +32°	Muscle relaxing
Fire and ice pool	Stay / contact with others	Temperature variation 8° to +42°	Muscle relaxing
Light pool	Stay in water	Light cones which vary in colour of the rainbow	Break from usual life
Corridor with shower throughout entire ceiling	Hiking	Large, warm water drops as summer rainfall in purple, red, blue and green light	Recall ancient experiences with nature ¹
Large daylight lamps	Rest in deck chair	White daylight	Prevent depression
Large heat lamps	Rest in deck chair	Red heated light	Well-being ²
Light pool	Stay in water with sound	Sound waves	De-stressing ³
Sauna with aromatic oils + tub with ice	Scents of birch and pine needles	Dry heat – cold	Cleans skin and the scents create mood
Steam bath with aromatic oils	Scents of eucalyptus, mint and citrus	Humid heat –increasing temperatures	Softens body and muscles, the scent opens up the airways
Showers	Movement	Varying jets of water	Massaging
Massage chair	Sit / lie	Squeeze and pressure	Massaging

1. The corridor is 8 meters and if you walk slowly, as recommended, then the light switches on the way. The effect could not be observed, but many visitors were fascinated by the light.
2. In agriculture, the experience is that piglets thrive better under such lights.
3. Music by composer Niels Eje, including relaxation and inspiring effect music.

First and foremost, all the facilities are directed against having an effect on the body, and then they are directed against one or more senses. The combined experience can be described as a series of sensory experiences you move through and not as a total experience. Such experience which through bodily resonance gives rise to sensory realisation is aesthetic according to Alexander Baumgarten [14]. Pernille Stockmarr adds to this philosophical approach the aesthetics of the human factor 'pleasure' and she adds 'emotion' in relation to cognition and user-centred design [15]. We can by that conclude that body perception plays a special role for the aesthetic in design.

4 BODY ACTIVATION AND CREATIVITY

The NSF Innovation Centre, which was designed by architect Otto Wagner Archidea, just as Vejle fjord Thermal Baths, was build in order to offer and experiment with interiors that can support the creative process and development of innovative strategies. The centre had approx. 5000 visitors in 2011, typically from schools, trade schools, universities and companies such as Vesta, Siemens Wind Power, Danfoss. Frank Thybo demonstrates the centre's facilities and outlines the experiences gained since its inauguration in 2005. The creative rooms 'Venus' and 'Uranus' hold twice as many sit seat as can be reserved, just to encourage people to move around. One principle is that those standing and those sitting must be at the same eye level. Therefore, the room is equipped with tall tables and bar stools. Another principle is that the extra set of furniture must appeal to a second body position, such

as low sofas. People who like to highlight participation in an activity or not can roll their chair to or from the table. A third principle is that the furniture must be mobile and that the rooms can be opened up to the outside with large sliding doors, so that the furniture can be rolled outside easily. The variety of reversible boards, however, were only supposed to be move around the track system with the exception of the flipover, which is available in both a version on wheels and one that fits into the blackboard system. Thybo has observed that the flipover sheets are popular also as drawing sheets in group discussions in the centre corridor, which is supplied with half-open intimate spaces for 3-5 persons. The flipover sheets can be suspended from the track and are easy to take home. One room has fabric boards in colours corresponding to Edward de Bono's thinking hats and mugs in many colours so that participants can choose their own, and keep track of it even if they move about the room. Similar principles apply to the seminar rooms. There has been no scientific study of whether the three interior design principles, which promote mobility, also encourage creativity. A good indicator is the increasing number of return visitors or people who have somehow heard about the centre. One condition for creativity is probably also that people feel well-being, and therefore, Otto Wagner has designed the Uranus room with a health area with a large spa and a steam bath.

5 CONCLUSION

The development of skills to communicate the body's nonverbal experience requires both training in the use of the triangular method and that the students are part of the design profession's terminology development. Since the body perception plays a central role in the realization of the aesthetics, the training of the body's sensitivity is critical to the student's ability to create aesthetic design. The study provides a basis for believing that bodily resonance can contribute to the nuancing of wishes for space or product design in the form drawings that can be used as mood boards.

Both this assumption and the conceptualization of body as well as mind comprehension must be put through a reliability study before professional use. Such a study must be based on the hypothesis that restoring body perception involves working with life size models and multiple model materials, and that body senses are challenged through close contact with a varied selection of form expression. Studies of the two wellness centres showed that body perception was at the centre of the whole sensory stimulation in wellness design today, and observations of NSF Innovation Centre identifies the body's activation and wellbeing is essential for expression of creativity. However, the question of whether increased activation of the body leads to increased creativity, must be explored further in future.

REFERENCES

- [1] Ziska, Torben *Interview* 2008 conducted by designer Bente Dahl Thomsen.
- [2] Bråten, Bjørn *Interview* 2000 conducted by designer Nina Ganneskov.
- [3] Thybo, Frank NSF Innovationscenter, visited in Kolding at 2012-02-06 see www.nsf.dk.
- [4] Rasmussen, T. Hangaard *Kroppens Filosofi Maurice Merleau-Ponty*, 1996 Semi Brøndby p.52-58.
- [5] Assagioli, Roberto *Notes on education*, Psychosynthesis and Research Foundation 1968 <http://two.not2.org/psychosynthesis/articles/education.pdf>.
- [6] Lauridsen-Katborg, Henrik, *Kærlighed, hengivelse og længsel*. 2007 Modtryk p. 21-30.
- [7] Bråten, Bjørn, *Interview* 2012 conducted by designer Bente Dahl Thomsen.
- [8] Overbye, Jens *Begrebsforklaringer vedr. Pædagogik, videnskab og kunst*, 1997 Danmarks Designskole København.
- [9] Jensen, Lise Maj *Triangulær Terapi*, 2012 Frydenlund.
- [10] 'Å Udstillingen 1977' Catalogue: Editorial: Lars Rostrup Bøyesen .
- [11] Casasempere, Fernando *Workshop discussions* 2004, Guldagergaard.
- [12] Vejle fjords Termiske Bade, visited in Stouby at 2012-01-22 see www.hotelvejle fjord.dk.
- [13] Frederiksbergs Svømmehals Kurbad, visited in Frederiksberg at 2012-01-29 see www.frederiksberg.dk/ByOgKultur/IKulturOgFritid/Svømmehal/Luksusafdelingen.aspx.
- [14] Brandt, Per Aage & Søren Kjørerup 'Alexander Gottlieb Baumgarten – filosofiske betragtninger over digtet' 1968, Forlaget Eccers.
- [15] Stockmarr, Pernille 'Det æstetiske i design' ph.d. dissertation summer 2012.