

INVESTIGATING INTERACTIVE BEAUTY – A RESEARCH-ART INSTALLATION

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My paper presents and discusses my academic-artistic installation *Investigating Interactive Beauty (IIB)* being part of a theoretical investigation of the notion of beauty in interactive art. *IIB* is on the one hand an art installation and on the other hand an experiment that allows for collection of user opinions and experiences. Interviews and questionnaires, one prior and one, seek to collect opinions on the notion of interactive beauty.



Fig 1. Investigating Interactive Beauty – a research-art installation 2011

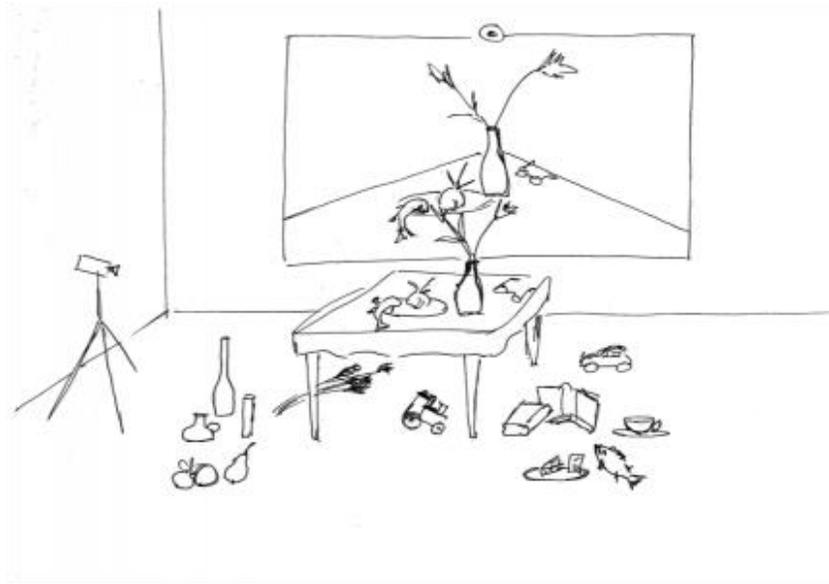


Fig 2. Sketch of Investigating Interactive Beauty, 2011

This is a presentation of the academic-artistic installation *Investigating Interactive Beauty*, preceded by a short introduction to the overall research project *Interactive Beauty*. My field of investigation is the notion of beauty in interactive art.

In academic literature, beauty is often described as an aesthetic judgment of an artefact or an object. It is generally seen as a sentiment of positive arousal. During modernity, art has been positioning the onlooker at a 'distance' allowing for a sublimation of the onlookers' immediate physiological reaction to the piece of art. The distinction between reality and fiction is one prominent example of this distance. Art works are to be contemplated. This gave rise to a distinct notion of beauty that is tight to 'emotional reflection' underpinned by the purposelessness of art (Kant). But different philosophers have different views on, whether beauty is an immediate emotional reaction or whether interpretative reflectivity plays a part in the sentiment of beauty. Beauty is generally seen as a positive experience; it is nevertheless founded on a perceptual distinction between beauty and ugliness. During the century of modern art, both its artistic and academic proponents, reject the validity of beauty for art making. Yet, there are also other voices stressing the historical changeability of the notion of beauty. For example, Roger Fry's *Vision and Design (1961)* asserts that the initial ugliness of modern art already has become beautiful since art changes its notion of beauty. The sentiment of beauty in modern art shifts from being an exclusively aesthetic judgement to be interplay between conceptual and 'purely' aesthetic dimensions.

The following thoughts and the conducted experiment is based on the belief that the sensation of beauty is an emotional reaction framed and generated by cultural and conceptual values; there are no essential and normative requisites for beauty. Nevertheless, I do not see beauty as an exclusive driving power for art; our notion of beauty today is highly dependent on other cultural developments like media technology and media artefacts (video games, interactive TV, computer applications and apps).

Foundational thesis

The shifting notions of beauty from the Renaissance up to modern and post-modern art rely on a distant positioning of the onlooker in front of the artwork. There have been many efforts to make the audience a part of the artwork, like for example installation art, performance art, and recently interactive art. In interactive art the onlooker has finally become a participant physically acting and reacting within the timely and spatial framework of an interactive art piece. Consequently, there is a need for a differentiated notion of beauty that takes into account the beauty of doing, (re-)acting, performing, and creating within a conceptually confined space of possible interactions. My hypothesis is such: the experience of beauty in interactive and performative art pieces has changed (or is in the process of transformation) from being an act of contemplation to (1) an intrinsic sentiment of interaction proper and (2) a reflective post-actional sentiment.

My investigation is mainly a theoretical one relying on philosophical inquiries, trying to answer a whole array of questions: Is the notion of interactive beauty an indication for a changed socio-cultural context or is it a phenomenon exclusively bound to interactive art? Can we trace a changed notion of beauty taking into account historic philosophical theories on beauty from the Greek Classics to modernism and post-modernism? The notion and sentiment of beauty is without doubt context dependent rendering different dimensions of beauty, what is then the relationship between let's say design and art, or the blooming beauty industry and interactive art? My hypothesis has its roots within the domain of art and art experience being thus a research question within the domain of aesthetics and art theory, but do other scientific disciplines have different notions of beauty - I here think very much of design theory and

marketing, psychology and neuroaesthetics - and how can these disciplines contribute to my investigation?

Artistic Investigation as academic method

Despite the overall theoretical modus of my investigation, I nevertheless want to describe an empirical experiment that tries to tap into the interactive art participants' opinions on the question of beauty. Since the question of beauty in modernity and post-modernity is considered to be a subjective judgment and not the result of a normative doxa, a phenomenological method of investigation is the only appropriate one. The overall method of my research is a circular (or cybernetic) process, consisting of firstly theory formation as a discursive process that questions and re-describes already existing theories on beauty, and secondly the validation of my theoretical findings by means of observation and analysis of interactive artefacts by various artists as well as own artistic experiences. It has to be emphasised that most interactive art works do not specifically investigate beauty, yet it is my conviction, that all operate with the sentiment of beauty (or ugliness). This cybernetic process takes as its starting point my own experiences as a participant of numerous interactive artefacts as well as my experiences as a maker of such artefacts serving thus as a lived and internalised background for my theoretical research. In this I follow a well-established, discursive, hermeneutical research methodology, mainly found in the humanities.

In addition to my own experiences, I decided to design an experimental setting in form of an interactive art installation. The objective of this experiment is to generate empirical user data, through, firstly participant observations, and secondly interviews. It is my hope that the results will broaden my own understanding of the function of beauty in interactive art. Contrary to the modus of experiments prevalent in the natural sciences, the goal of my experiment is not to verify or falsify a hypothesis, but rather to create a framework for concrete interaction, which allows me to further my own understanding.

The interactive research-art installation should therefore encompass both an artistic experience of a kind and a reflective perspective on the nature of beauty in interactive art. In other words, the research-art installation aims at an experience of interaction that thematizes and discusses the notion of beauty. The objective cannot be to design beautiful interactions (because beauty is a subjective sentiment), but to design an installation that contributes to the discussion of the notion of beauty in interactive art.

Designing an interactive research-art installation gives rise to many questions and challenges. One of the foundational questions is, whether it is possible to design an installation that serves art and academic research alike. As such, my experiment forms part of an already existing, but still incipient academic praxis, where artistic methodologies are used to generate a field for observation that can render different understandings of a chosen subjects (e.g. Leavy, 2008; Kaplan 1996). Artistic processes rely firstly on certain art genres and secondly are scientifically idiosyncratic explorations without a fixed goal in terms of solutions to predefined problems. Academic humanistic research on the other hand depends on a thesis and a method that generates answers. By applying an artistic method, I therefore cannot hope for definite answers, but expectantly for rather vague indicia showing general tendencies, and new valuable questions to be answered. My investigation reckons the dependency on art genre and general cultural developments. In that, it differs from for example the neuro-aesthetic (e.g. Zeki 1999, 2004; Ramachandran 1999; Turner 2006) and psychological approaches (e.g. Arnheim 1969; Boselie, F., & Leeuwenberg, E., 1985), which aim at finding generic perception principles for the sensation of beauty.

The design of the interactive research-art installation *Investigating Interactive Beauty (I-I-Beauty)*

The basic idea of the experimental installation is the seemingly contradictory notions of contemplative and interactive beauty. In the research art installation, the former is represented by the static representational genre of *still life*. The latter by the very artistic act of creating and composing *still life* set-ups. In that I am following one kind of interactive art, where the art piece offers and uses the participants' poetic (creative) impetus. The installation will give the participants the opportunity to create a physical model of a *still life* and see the photographic result of his/her arrangement real time.

The installation space is a square space. A table with covered white cloth is standing in the middle. Upon this table, the participant can put and arrange various objects found in many still life paintings: vases, flowers, food, dead animals, etc. The objects are scattered on the floor around the table. The whole scene emulates our romantic picture of an artist's studio. The participant can use these objects in order to create their personal still life arrangement on the table. The participant can illuminate the scene with a simple set of lighting devices (front and side lights). The camera, constantly recording the still life, is positioned in a 45-degree angle in front of the table. Behind the table, a projection shows the video picture of the table and the arranged still life.

But the picture is not a photorealistic depiction of the material still life arrangement; it shows a digitally manipulated picture. The degree and kind of modification depends on the amount and kind of the participant's physical action around and on the table. An infrared camera and various algorithms track the participant and extract a data-description of his/her movements and motion in space. These data are used to digitally manipulate the video image.

The modification of the video picture is inspired by some exponents of art history's development from representational art to various kinds of motion abstraction (Balla, Boccioni, M. Duchamps, Muybridge) and the aesthetics of digital image manipulation. The modification process is triggered and computed by the data of various movement parameters (especially the accumulative quantity of changed pixel values). Despite of the fact that motion results in modification of the digital image and non-motion in a slow transformation back to a photo-realistic, static representation, the detailed algorithmic logic is not completely transparent. The transformational logic should be a part of a semi-enigmatic process controlled by the algorithmic system.

The experiment

The experiment begins with a short initial introduction to the overall objective, namely the investigation of interactive beauty and to the aesthetics of the chosen genre (still life). The research-art experiment is framed by an informal interview structured by questions.

1. The first part of the experiment consists of three initial questions:

Could you briefly describe your sensation of beauty?

How would you describe beauty in art?

Have you ever experienced beauty in interactive art (as a participant or as an onlooker)?

The pre-interaction questions seek to get information about the participants' general notion of beauty and specific notion of artistic.

2. The second part consists of the interactive experience. The participant is supposed to create a still life out of the available objects. S/he can decide to finish the experiment by clapping the hands, which makes the system save a file of the digitally manipulated picture.

3. After the short interactive experience, I pose more guiding questions:

Can you describe the relationship between the intended beauty of the tableau and the experience of arranging the tableau?

What elicits satisfaction and reward in the process of composing the still life?

Can you describe the difference between the unmediated and the digitally manipulated of picture?

The purpose of these questions is solely to propel a general discussion on the notion and function of beauty in interactive art.

Preliminary results

At the present moment, the research installation has been tested (both the digital system, the set up and the questions for the interview), but no real research experiment has been conducted. The test interviewees were students of the educational program Art and Technology at Aalborg University. The purpose of the tests was to examine the validity of the questions asked, the functionality of the artistic research installation, and the discovery of unintended aspects. In the following I am presenting the main points made integrating the interviewees' wording into my interpretation of it.

The first interview did reveal that the notion of beauty is associated with "attraction", "pleasing objects", "kindness" and the "simplicity and purity" of the object eliciting the urge to be "near and observe" the objects. Beauty is a kind of "positive" holistic conclusion made by audience, beauty sets "a period!". Beauty in art is associated with both the sensuous aspects ("awareness") but also with the conceptual aspects. A "great and strong artistic idea" with a vital "message" is beautiful. In regard to interactive art, the interviewees pointed out that a requisite for the sentiment of beauty is a "clear understanding" of the interaction mechanisms. A beautiful interactive art piece "talks to and attracts" the participant. One interviewee asserts that beautiful interactive art pieces must make sense also without the user participation, which I interpret as the clear conveyance of the conceptual dimension of an artefact.

The second part of the interview after the interviewees' experiences with the interactive still life installation revealed, that the interviewee generally like to interact and having the possibility to create and arrange their own still life (which of course is not surprising, since they all are art and technology students). They felt good as a participant being able to choose certain objects and to disregard other in the process of arranging the still life. They all sought to express a personal idea about the intended still life. Some of them chose the objects due to their symbolic value. They acknowledged that their personal vision is heavily influenced by genre paradigms and conventions of still life.

There seems to be an unintended gap (for one interviewee even an incompatibility) between the arrangements on the table and the digital representation of the tableau. It seems that the experiment deals with two different forms of interaction, a mediated and an unmediated one. This led me to a bipartition of the second part of the experiment. In the future, the participants will be asked to focus on the arrangement of the still life (the video picture will show the tableau non-manipulated), and, in a second round, to focus on the digitally modified picture in order to elaborate on the different mediation modes.

Discussion

The experiment needs of course to be conducted for real with a demographic variety of persons interested in interactive art. This paper deals primarily with methodological questions in regard to the design of a research-art experiment as a qualitative method.

I could simply have conducted interviews with audiences of relevant interactive art exhibitions. But designing an experimental research-art installation fulfils at least one further goal apart from the collection of user experiences and opinions. The process of designing an experiment with an academic purpose (in my case the generation of user experiences of the function and sentiment of beauty in interactive art) reveals much of the nature of my research subject. For example, the notion of beauty is extremely domain-dependent; there no longer exists a general notion as in Schiller's era, where beauty indicated a unified moral and aesthetic refinement. Today's beauty is not able to defy the experienced fragmentation of life, revealing the obvious subjective quality of beauty.

One preliminary result of the test scenario seems to show that beauty in interactive art is not exclusively bound to the individual experience of interaction. The interviewees' experiences were described as funny, interesting, and rewarding since the participants are given the possibility to tell their own stories and preferences (through the choice and arrangement of still life objects). Yet, the experience of beauty seems to necessitate the objectification and extrapolation of interactive experiences into the realisation of the artefact's conceptual dimensions. The test persons seem to merge and align their existing contemplative notion of beauty in the arts with their performative acts during interactions.

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