

## How do exhibition visitors describe aesthetic qualities?

Thomsen, Bente Dahl; Ravn, Anders Peter

*Published in:*

International Conference on Computing, Communications and Control Technologies CCCT 2007

*Publication date:*

2007

*Document Version*

Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

*Citation for published version (APA):*

Thomsen, B. D., & Ravn, A. P. (2007). How do exhibition visitors describe aesthetic qualities? In *International Conference on Computing, Communications and Control Technologies CCCT 2007: Interactive Communication Design of Information Systems* (1 ed., Vol. III, pp. 155-160). International Institute of Informatics and Cybernetics.

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal -

### Take down policy

If you believe that this document breaches copyright please contact us at [vbn@aub.aau.dk](mailto:vbn@aub.aau.dk) providing details, and we will remove access to the work immediately and investigate your claim.

# How do exhibition visitors describe aesthetic qualities?

**Bente DAHL THOMSEN**  
**Department of Architecture & Design, Aalborg University**  
**Aalborg, DK-9000, Denmark**

And

**Anders Peter RAVN**  
**Department of Computer Science, Aalborg University**  
**Aalborg DK-9220, Denmark**

## ABSTRACT

In this investigation, visitors to an art and design exhibition have used an interactive computer program to express the qualities they consider important for an art or design object (artefact). They have then used the program with their individually selected qualities to assess the artefacts. In this article, we present the experiment and its results. They indicate that with such a setting it is relatively easy to reach a degree of consensus about criteria. Such an interactive program can therefore be very useful, for instance when choosing among design proposals or when selecting artefacts for exhibitions, because they make the assessments open to a larger audience such that their basis can be discussed.

**Keywords:** aesthetic quality, methodical evaluation, artefact, Baumgarten's reflections

## INTRODUCTION

Knowledge about aesthetic strengths and weaknesses of an artefact can be a starting point for improving it. To get statements about aesthetic qualities, we asked visitors at an exhibition of design, craft and art at Biesgaard, Denmark to evaluate artefacts. The exhibition was arranged by Mariagerfjord Kunstforening (art society) and open in July and August 2006, who gave us the opportunity to investigate: What are the aesthetic qualities in an artefact that the visitors to an exhibition consider important?



Evaluation at of Biesgaard exhibition Art and quality

For the ordinary visitor, this may not be important, but for hopeful artists, designers and architects handing in works or proposals for works to censored exhibitions or competitions, it is important to understand the criteria. Usually, only winners of competitions are presented with the jury's arguments in favour of their proposal and why they won: there is no feedback to the many who did not make it. One difficulty in giving such a feedback is that one has to express verbally the criteria used to assess the aesthetic qualities of objects. It may be even more difficult to arrive at a common language, to find common verbal expressions by which the aesthetic qualities can be described in details. Peer. F. Bundgård [1] has developed a system for describing aesthetic qualities, but only a few out of a group of 25 students were able to use it in practice when they tried it as a method to present the aesthetic qualities of their works as they were unable to present succinct descriptions of the aesthetic qualities of the given artefacts. Consequently, our students also tried using some of Alexander Gottlieb Baumgarten's [2] reflections on aesthetics. The outcome was better, but they still did not obtain a description that was sufficiently detailed that it could be accepted by all their assessors. The assessors span a range of professions: from architects to engineers.

We found a similarly interdisciplinary assessment group in the church council. Therefore, we have investigated the process by which they have chosen a new interior. The church council members, artists and the architect were asked to explain their notion of aesthetic qualities, but instead of an answer, we saw instances of misunderstandings, which could be ascribed to ambiguous descriptions of aesthetic qualities.

Motivated by such experiences, which show the need for clear, common criteria for aesthetic qualities, we have investigated a method for transparent evaluation. It gives a possibility to collect assessor descriptions of aesthetic qualities. It is based on approaches that from the middle of the 1980s were introduced by mechanical engineers in connection with assessment and evaluation of design proposals that were going to be developed further or realised [7]. Together with a checklist of relevant qualities that a product ought to have, such methods give a jury a manageable basis for responding to those who have handed in the design proposals.

A methodical evaluation also ensures transparency in regard to selection criteria which gives the public and the professional groups a chance to debate the relevance of the selected quality

criteria and their applicability in relation to giving a graduated expression of the qualities of the works.

However, working with pencil and paper and long checklists requires disciplined and professional assessors, so we would like to make the methods accessible for the public in general, such that one could have a more constructive debate about, for instance design for public spaces.

Thus we asked, ourselves, why not use the interactive capabilities of the modern computer to make methodical assessments much easier? However, we also want to take into consideration an often raised objection against lists with "standard qualities", that they are not tailored to the specific task. Thus interaction is also useful to give a flexible, even free style of criteria selection, as in [3, 7 and 10].

The theses that will be reviewed through the exhibition-based experiment are as follows:

1. Visitors to an exhibition can help us to provide additional quality criteria for a checklist used for evaluation of artefacts.
2. All criteria are not of the same importance so, they must enter into the overall evaluation of an artefact with different weights or impotent factors.
3. The checklist will be under continual development, such that a selection method based on it can be used to evaluate artefacts where there is a requirement for novelty.
4. A systematic approach contributes to transparency in the evaluation process.
5. It is assumed that a systematic approach to evaluation of aesthetic quality can be established on the basis of a common checklist for these categories: craft, art, and design; but that the categories are weighted differently in the evaluation of artefacts belonging to the individual categories.
6. An assessment of how well an evaluated artefact complies with the individual quality criteria gives the artist knowledge about how to improve the quality of future works.

Only theses 1, 2, 3 and 6 were really investigated in the exhibition at Biesgaard, but a plan for future studies of the remaining theses will be established on the basis of the material from this investigation. As it is evident from thesis 5, artistic qualities are included in the present study, because, like S. Kjølrup, [6] we consider aesthetics and philosophy of art one and the same.

## TARGET GROUPS

The main target group, both in terms of whom we expect to participate in the investigation and whom we would like to show the results, primarily consists of people who need to describe or determine whether a project or work is of a high aesthetic quality in a professional context or not. Specifically, we would like to inform members of e.g., church councils, art associations and public authorities, who undertake the task of choosing works of art, design or architectural projects about the evaluation method. All these members have to face the problem of communicating clear descriptions of aesthetic qualities across disciplinary boundaries.

A secondary target group consists of children and young people, both in relation to teachings of design, architecture and art related matters, as well as the teaching of language, where they need to master a varied use of language and, thus, show that they understand that part of aesthetics. Teacher of visual arts Tove Kobberå, The School of Music and Arts, took it upon herself to ensure that the information material is suitable for children and young people, and she involved her pupils in the investigation as to make sure that both adults and children were able to use the interactive computer programme. Pupils from The School of Music and Arts commented on the fixed criteria in the interactive user evaluation program and tested it during the pilot exhibition. A result was that the criterion: 'Strangeness: the degree of something incomprehensible' was omitted.

## METHODICAL EVALUATION

The method utilised in connection with product development, has the following steps:

1. The team in charge of the selection is an interdisciplinary group in order to get as versatile an evaluation as possible.
2. The team selects the specific evaluation criteria using a checklist and supplements with additional criteria, which the team finds relevant for the specific task.
3. Each criterion is then allocated a weight, which indicates how important the individual criterion is. If the team cannot agree on the weights for a criterion, an average of the proposed weights is assigned.
4. Evaluation matrices are formed by listing the proposals against the weighted evaluation criteria.
5. Each member of the team gives marks for all criteria for each artefact.
6. Finally, all of the weighted marks, which the individual proposal has received, are added up. The proposal with the highest overall score is, in principle, the winner.

Selecting and formulating new criteria is an important element in the effort to obtain a common understanding of what the team considers to be a quality in the given context.

The strongest point of the method is that it becomes transparent, firstly, on which quality criteria the evaluations are based, secondly, how important the individual quality criteria are for the selection, and, finally, that all evaluators are placed on equal footing, regardless of how good they are at presenting their opinions. Such an evaluation ought to be followed up by a discussion about whether or not the proposal, which the method points to, really is the best choice, or if the closest competitors to the proposal have qualities that have not been taken into consideration.

When there are many proposals, it may be appropriate to use simple criteria to select a short list and then make a second selection among the best proposals on the basis of more criteria.

## A FIRST EXPERIMENT

In the summer of 2004, participants at the symposium 'Culture & Identity' tried the method for selecting artefacts among arts and crafts made at Guldagergaard, International Ceramic Research Center Denmark. The participants were split into two groups with five in each. Both groups used the method with success, but it was

obvious that it was difficult for them to formulate statements about aesthetic qualities [8].

In order to really test the ideas about using a computer to get statements about aesthetic qualities we needed a small exhibition and had to develop an interactive evaluation program to test the ideas outlined above. It is also meant to give the visitors an extra experience – to see which qualities other people associate with aesthetic quality.

A pilot exhibition, known as Match Art Design, was for that purpose arranged in two weeks in February 2005 at the Architecture & Design Department (A&D), Aalborg University where sponsors, teachers and students from Nordjyllands Kunstscole (The Art School of Northern Jutland) and Den Musiske Skole (The School of Music and Arts) were invited to the exhibition. These two schools are responsible for teaching visual art for adults and children respectively.



Opening of pilot exhibition Match Art Design

The thematic arrangements mainly consisted of 3 works by the same artist and 6 pieces of design, which were divided into furniture and concrete pieces. It was not feasible to have mixtures of works by, respectively, an artist, a designer and someone with another professional background in order to gain a wider range of qualities.

The exhibition combined thematic arrangements of works in groups with computers, so the visitors could observe and even examine the works at the same time as they did the evaluation.

The interactive computer program gives the public an option of writing their own description of the work's qualities, and they can compare their evaluation to the ones of other visitors. The pilot study proved that it was possible to gather new evaluation criteria from the public's use of the interactive user evaluation programme. Some of the new attributes were: 'Choice of material', 'Entertainment value', 'Material aesthetics', 'Material originality', 'Ingenuity, Personality stamp', 'Asks questions' and 'Boundary breaking'.

The collected criteria may have a relation to fixed criteria, which the visitors have read prior to the submission of their contribution. In part, the fixed criteria are based on some of Baumgarten's reflections, such as 'Clarity of idea/concept', 'Harmony between content, structure and expression', 'Integration of individual parts into a coherent whole', 'Style – concordant between expression and the supposed intention', but some have also been expressed by the artists taking part in the exhibition: 'Originality', 'Experimental value', 'long-lasting importance' and so on. Some of the visitors found the criteria based on Baumgarten's reflections very academic. Therefore, the exhibitors

at Biesgaard were asked about the aesthetic qualities they found relevant to an evaluation of their particular artefact.

The intention behind involving the public is to gather as much raw material and as many notations of aesthetic quality as possible expressed in interdisciplinary terms.

How the different qualities affect each other, form alliances, cause conflict between supervening qualities or gather in self-increasing or decreasing groups was not taken into consideration in the first experiment. It did not yield a collection of criteria large enough to advance the checklist or the fixed criteria in the computer program in a comprehensive structure based on the interplay between the attributes that form the basis of quality criteria, as suggested by Peer F. Bundgaard [1].

It also proved that quite a few weighed the criteria, but also that many did not use weights. A considerable number of users did not complete the evaluation, because at the beginning it was not possible to choose how many groups they wanted to evaluate.

Altogether 117 tried the interactive user evaluation programme, among them 14 conducted the evaluation with weights, 20 conducted the full evaluation without weights. A further 13 did part of the evaluation and the remaining generated data files were empty.

### THE INTERACTIVE COMPUTER PROGRAM

The interactive computer program is based on the mentioned systematic selection method, with the difference however that single individuals (the users/the public) and not a team evaluate the works. This also means that the weighting of criteria is carried out by the individual users.



The visitor can examine the artefacts at any point during the evaluation

The interaction is as follows:

1. The user is shown the exhibitions thematic arrangements and asked to select which they want to evaluate.
2. The user is at next frame shown 18 fixed criteria and 4 blank panels for new criteria. The user should choose at least 3 criteria and max 10, but is free to base the evaluation on own criteria only. The user may get inspiration from a menu labelled 'selected choices', which presents the user for the criteria that are gathered during the exhibition and how often they have been used.
3. The third frame asks the user to select a weight (0-4) for each criterion. It means that they will enter into the overall assessment with different weights. The user can also just accept the standard weights and continue.

Weight	Interpretation
0	The quality is irrelevant for this group of objects
1	The quality is of minor importance
2	The quality is relevant
3	The quality is very relevant
4	The quality is highly important

4. The program then presents pictures of a group of works with a common theme. The selected criteria are shown, and the user is asked to evaluate the works by assigning marks with 0 as the lowest value and 4 as the highest
5. The program calculates the score of the works and presents them to the user. It is possible to undo the evaluation and make a new one. Here, the works are augmented by the artist/designer's description.
6. The procedure described in points 4 and 5 is repeated until the user has completed the evaluation.
7. The users are finally asked about their professional relation to the exhibition, their age and their E-mail address if they want to have the result of the evaluation sent to it. In order to assess whether or not the criteria are expressed in technical terms or in ordinary language, the users are asked about their profession. Information about age has been included in order to study if a scanty familiarity with computers may prevent some groups from using the program.

The 18 fixed criteria used at the exhibition in Biesgaard were primarily the ones suggested by the exhibitors in addition to some that were selected by the exhibition organizers from an order of priority set up by the exhibitors. Their starting point was the criteria which came out of the Match Art Design exhibition. The list is:

Quality criteria:	
Harmony between contents and expression	Clear idea/concept
Originality	Stamp of imagination
Is self-sustaining	Operating value
Entertainment value	Variability
Material conform to the form	Proportioning
Pleasant to touch	Material - originality
Simplicity	Logical
Variation - rough/smooth	Variation – light/shadow

structure	
Strict line routing	Rough - unrefined

At Biesgaard 18 artefacts were exhibited in six thematic arrangements. The theme groups were: ceramics, wood, stone, glass, paper and metal. In each group were three works made by individual exhibitors.

At Match Art Design we did not make much out of the possibility of getting the results sent to an E-mail address, since the raw data file did not make up the intended reward in form of a mini-catalogue. From thee feedback that we received, we learned that the visitors would like a catalogue with their evaluation and the accumulated results up. Curiosity about the programme and the evaluation method does not necessarily trigger a need to evaluate the exhibited pieces. For that reason we developed for the Biesgaard exhibition an electronic catalogue which both presents the works and the result of the individual evaluation and a summary of all evaluations. At a poster in the exhibition we used the possibilities to get at catalogue as bait to get the visitors to try the interactive computer program.

### THE RESULT OF BIESGAARD EXHIBITION

Among the 1235 visitors, 23 conducted a full evaluation of one or more theme groups. A further 8 began the evaluation and selected quality criteria. The response rate was disappointing, and we must conclude that there should be guides present at the exhibition to entice visitors to evaluate the works, or the visitors should have a greater incentive to do it.

Summary the use of criteria: Qualities	Times of selecting	Average weight
Simplicity	35	2.5
Stamp of imagination	29	2.7
Clear idea/concept	28	3.2
Originality	28	3.1
Material conform to the form	26	2.9
Harmony between contents and expression	24	3.2
Material - originality	23	2.9
Proportioning	21	3.3
Is self-sustaining	21	2.3
Variation - rough/smooth structure	17	2.3
Strict line routing	17	2.2
Entertainment value	14	2.8
Pleasant to touch	14	2.7
Variability	13	2.7
Variation – light/shadow	11	2.2
Operating value	10	2.6
Logical	7	2.2
Rough - unrefined	5	2.5
Sensuality - appeal to the senses	3	3.0
Mega-cool	1	4.0
Total cool	1	4.0
Contrast in work	1	4.0
Balance in selection of colour(s)	1	3.0
Variation between volatile/durable	1	3.0
Tension between light/shadow	1	2.0

From the summary of the use of criteria it appears that most visitors used the fixed criteria, but some new were entered (criteria visitors could not see in the list of 'selected choices'). These were:

'Sensuality - appeal to the senses', 'Balance in selection of colour(s)', 'Tension between light/shadow', 'Variation between volatile/durable', 'Contrast in work' and 'Total/mega cool' although what the visitor meant by the last one is not clear. It came from a visitors below 20 years of age. The age distribution for the other visitors was: 2 between 20-29, 5 between 50-59, 4 between 60-69, 2 above 70. Some did not give information about their age. Among the visitors that had conducted the evaluation was one designer and two artists.

<b>Summary assessment for 'Aunt Clare's best cushion'</b>			
Qualities	Numbers of using times	Average weight	Average assessment
Originality	9	3.3	3.1
Is self-sustaining	7	2.1	2.4
Clear idea/concept	6	3.0	3.1
Harmony between contents and expression	6	3.5	3.5
Stamp of imagination	6	2.7	2.1
Material conform to the form	5	2.8	2.4
Proportioning	5	3.2	2.7
Simplicity	5	3.2	3.5
Pleasant to touch	4	1.8	2.3
Variation - rough/smooth structure	4	2.3	1.7
Strict line routing	4	2.5	3.1
Logical	4	2.0	1.3
Entertainment value	3	3.0	3.2
Material conform to the form	3	3.0	2.7
Operating value	3	3.0	2.2
Variation – light/shadow	2	2.0	2.0
Variability	1	2.0	2.0
Sensuality - appeal to the senses	1	3.0	1.0
Balance in selection of colour(s)	1	3.0	2.0
Contrast in work	1	4.0	3.0
Tension between light/shadow	1	2.0	2.0

Total Average assessment 2.7

After closing of the exhibition, the average assessment has been mailed to the exhibitors with some questions about the usefulness of the evaluation and about the text presentation of their works. A typical average assessment is seen above as: 'Summary assessment for 'Aunt Clare's best cushion'.

Fourteen exhibitors answered our questions and from these we must admit, that we have got too few marks with too many criteria, to have a result they could use for inspiration to develop professionally. They have recommended that the interactive computer program a next time only work with a few fixed criteria, related to the individual themes. This recommendation is in agreement with the methodical evaluation where the criteria are set up specifically for the group of artefacts, which the team is going to evaluate.


Some of the fixed criteria in the computer program were attached to attributes, which only occur in some of the thematic groups of artefacts. This gave rise to doubts as to what the visitors wished to express by the criteria when they have been used for evaluating other thematically grouped artefacts. During the investigation, it is obvious that criteria have changed from being criteria in the form of sentences that include an attribute to being concepts. We may

state that when a criterion loses its attachment to attributes, some of its meaning is lost.


We have to emphasize that this is a holistic evaluation of artefacts since the evaluation of the individual aesthetic strengths is carried out on the artefacts as a whole. Similarly, the evaluation is of the artefacts themselves and not of an image depicting them. Therefore, the computer program cannot be used without direct access to the artefacts.

Knowledge about aesthetic strengths and weaknesses of an artefact can be a starting point for improving it, but it does not give an answer to how many individual aesthetic strengths form an aesthetic whole.


**Example on presentation of works**



**Hearttrunk#4**  
The sculpture, 'Heart trunk #4', is inspired by the concept of existence. Life, love and death. The journey through life. The scars and bruises of a lifetime, the ravages of time, and heartaches form personality. They too are beautiful - what is beauty?



**Bassbowl**  
The bowl has been turned from fresh lime tree. Part of the weathered surface has been preserved. While it has been drying, the form has been allowed to deform into its own unique shape.



**Suneye**  
The sculpture is carved from horse chestnut and has been treated with cold-pressed linseed oil. Inspiration for the sculpture was drawn from a stroll up the path by the coast south of Gudhjem on a beautiful late summer morning.

We have asked the exhibitors to make a 27 – 33 words long text presentation of their work. This task did they tackle very differently. Theirs presentation can be characterize as description of

- Technique of production / method
- Components / materials
- Aesthetic quality
- Guidance to the artistic experience
- Inspirations source for the work creation
- Essence of the story work form a part of
- An adjectival sense, which adds to work a specific interpretation

About half of the exhibitors would have wont to have so at list of suggestions to the presentations text, which they have found difficult to writhe.

## CONCLUSION

As our experiments have shown, it is challenging to provide a transparent and yet flexible assessment procedure for aesthetic qualities by using an interactive computer program. However, referring to our initial theses, we did find:

Visitors to an exhibition help us provide additional quality criteria, although the said criteria were a bit unclear.

Some visitors use weights in the overall evaluation of an artefact. The checklist will be under continual development. Although one should carefully select a few criteria at the start of an exhibition. Although we had fewer evaluators than we hoped, we did get some responses. However, we tend to think that the method should be targeted towards use where the visitors have a real interest in the outcome of the evaluation.

As far as we can see, the summarised assessments of the individual artefacts have not been clear enough to provide an answer to the theses regarding the usefulness of the assessment in relation to improving the quality of future works.

### RELATED WORK

In selecting criteria, we have besides Alexander G. Baumgartner's reflections considered using Zen aesthetics' seven rules [9]. An experiment at Architecture & Design has, however, shown that students with little knowledge of Chinese culture do not find it as easy to use these as Baumgartner's reflections.

Professor David Favrholt has also developed a simplified (compared to Pahl and Beitz's method) method for evaluation of art with examples of evaluation of e.g. pictorial arts [4]. The most significant difference is that Favrholt's feature or parameter lists is fixed, and thus is interpreted as definitive, although Favrholt has stated that it was not his intention [5]. Favrholt does not use weighting, which means that all criteria are considered equally important.

### FURTHER WORK

We are looking forward to use the interactive computer program to get an evaluation of furniture designs in the spring of 2007. At this investigation we plan to restrict the evaluator's possibilities to chose criteria. We want to learn more about possibilities of using the results as at starting point to improve the quality of future works.

In the future it is also interesting to investigate if the public, the designers and producers will set up the same set of criteria for an evaluating of furniture designs. Whether the comprehensive structure based on the interplay between the attributes that form the basis of quality criteria, as suggested by Bundgård, work in practice is also a question, which we would be very interested in seeing answered.

### ACKNOWLEDGMENT

We are grateful to Mariagerfjord Kunstforening's committee members for their work with arranging the exhibition in Biesgaard and the exhibitors for their participation in our investigation. The exhibitor under theme ceramics were: Betty Engholm, Helle Bovbjerg and Merete Strøm. Under the theme wood were: Jørn Rønnau, Hans Humble and Tage Ravnskjær. Under the theme stone were: Klaus Unger, Niels Pedersen and Henning

Christensen. Under the theme glass were: Tine Munk, Britta Madsen & Søren Gøttrup and Vibeke Skov. Under the theme paper were: Nina Ganneskov, Gitte Harslev and Ida Gulddammer. Under the theme metal were: Bjørn Nordahl, Hans Jørgen Nicolaisen and Kurt Tegmeier.

### References:

- [1] Bundgård, P. F., **Kunst-Semiotisk beskrivelser af æstetisk betydning og oplevelser**, Copenhagen: P. Haase & Søn, 2004.
- [2] Brandt, P. A. and Kjörup, S., **Alexander Gottlieb Baumgarten filosofiske betragtninger over digte**, Copenhagen: Arena, 1968.
- [3] Casper, K., **Vejledning i Integreret Produktudvikling**, Lyngby: DTU publication no. 661, 1995.
- [4] Favrholt, D., **Æstetisk filosofi**, Copenhagen: Høst Humaniora, 2000, pp. 116-151.
- [5] Favrholt, D., Comments at a debate about his book at Nordjyllands Kunstmuseum 6th November, 2002.
- [6] Kjörup, S. 2000, **Kunstens Filosofi – en indføring i æstetik**. Roskilde, Universitetsforlag, 2000.
- [7] Pahl, G. and Beitz W. , **Engineering design: a systematic approach** Berlin: Springer, 1996, pp. 89-117.
- [8] Thomsen, B. D. , **Kan en computer spørge publikum om æstetisk kvalitet?** Aalborg: Arkitektur & Design, 2005.
- [9] Hisamatsu, Shin'ichi 1971, **Zen and the Fine Arts**. Tokyo: Kodansha International Ltd, 1971.
- [10] Ulrich, K. T. and Eppinger, S. D. , **Product Design and Development**, New York: McGraw-Hill, 2000, pp. 137-159.