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# Klee or Kid

## The subjective experience of drawings from children and Paul Klee

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### Abstract

I have compared the subjective experience of drawing from Paul Klee to drawings from children. Subjective experience was measured via a five factor model established by Hagtvedt, Hagtvedt, and Patrick (2008). These five factors were: skill, originality, arousal, valence (pleasantness), and beauty. I expected that work from Klee would be rated more as original and skilled than work from children, but similarly arousing and pleasant. In a web based study, participants rated eight paintings from Klee and children on five items; one for each factor. The results show that paintings from Klee are experienced as more skilled, original, arousing, pleasant, and beautiful than paintings from children. My hypothesis was partially confirmed: differences in ratings were much larger for skill and originality than for arousal and valence. Explorative analyses examined the effects of art experience, gender, and age. I discuss how the convergence of ratings on all five factors might indicate a single 'art appreciation' construct. Finally, I address how future research could control for participant expectations via implicit measures.

### Introduction

We have compared the subjective experience of Paul Klee's works to child drawings. Klee's work contains drawings that, on a superficial level, look quite similar to child drawings. Indeed, Klee aimed to manifest the spontaneous creativity of the child in his own work, to embrace his inner child, so to say. His art did spark some debate, most notoriously with Geist. While Geist and Klee agreed that child drawings had a certain uncorrupted quality to them, Klee did consider his work as categorically different from actual child drawings: "Never forget that the child knows nothing of art." (Geist, 1970, pp. 190/191).

Generally speaking, there are may be both differences and similarities between Klee's art and child drawings. We aim to find out what those differences are in the eye of the average person. We have had participants rate both works of Klee and child drawings on a set of scales. These scales are selected from a model for the perception and evaluation of art by Hagtvedt, Hagtvedt, and Patrick (2008). This model made a distinction between cognitive and affective components. For the cognitive component, we have selected the scales Skill (does this drawing indicate a skilled painter?) and Originality (is this drawing original?). For the affective component, we have selected the scales Valence (does this drawing make you unhappy/happy?) and Arousal (is this drawing calming/arousing?). In addition, we measured how the drawings were experienced aesthetically (is this drawing ugly/beautiful?).

Based on the Geist Klee debate, we might expect that Klee succeeded in displaying the same kind of emotions as a child does, but did clearly show greater skill and originality. Hence we expect that ratings for Klee and child are similar on the affective factors Valence and Arousal, but differ on the cognitive factors Skill and Originality.

In addition to the ratings, we have administered a short demographic questionnaire. The questionnaire measures a set of variables deemed important to art perception, such as age, sex, and artfulness. Different demographic categories are compared to one another in order to find out if they affect the way Klee and child are perceived. This way we can discover if different kinds of audiences experience Klee and child in different ways.

## Method

### Participants

This experiment is a part of the 2012 Paul Klee exhibition in the Cobra Museum, Amstelveen, The Netherlands. Participants are recruited via promotion of the research website in various media outlets.

### Measures

#### Entrance Questionnaire

The entrance questionnaire consisted of three parts: questions for age and birth year, questions for art experience, and questions for prior knowledge of the experiment. Artfulness was measured via three Likert scale questions: (1) How often do you visit a museum or gallery? (2) To what extent do you consider yourself an art lover? (3) To what extent do you consider yourself knowledgeable of art? A scale for artfulness was constructed by summing the scores on these three questions. Prior knowledge was measured via three questions: (1) Have you taken part in this experiment before? (2) Have you been to the 2012 Paul Klee exhibition in the Cobra Museum? (3) How did you learn about this study?

#### Rating Task

During the rating task 16 drawings are presented in the following fashion: First the drawing is displayed for 2.5 seconds. The drawing then animates to a small thumbnail on the left side, and on the right side a panel appears (see the image below for an example screen). The panel features five questions:

1. How pleasant do you find this drawing? (unpleasant to pleasant)
2. How arousing do you find this drawing? (calming to exciting)
3. How skilled is this drawing made? (unskilled to very skilled)
4. How original do you find this drawing? (unoriginal to very original)
5. How beautiful do you find his drawing? (ugly to beautiful)

These questions are chosen to represent five important factors distilled from the study of Hagtvedt, Hagtvedt, and Patrick (2008), namely: valence, arousal, skill, originality, and beauty. Each question is answered on a Likert scale from 1 to 9, the ends of the scales labeled with the terms shown above (e.g. unpleasant to pleasant for question 1). After each of the five questions is answered, the "Continue" button is activated. Upon clicking this button, the next drawing is displayed.



Hoe aangenaam vind je deze afbeelding?  
onaangenaam          aangenaam

Hoe opwindend vind je deze afbeelding?  
ontspannend          opwindend

Hoe vaardig is deze afbeelding gemaakt?  
niet vaardig          wel vaardig

Hoe origineel vind je deze afbeelding?  
heel onorigineel          heel origineel

Hoe mooi vind je deze afbeelding?  
heel erg lelijk          heel erg mooi

Afbeelding 1 van 16

Figure: Example screen from the rating task.

### Stimuli

The stimuli are 16 drawing of fantasy animals. Eight drawings are made by Paul Klee; eight are made by children aged six to nine in a painting workshop during school time.

### Exit Questionnaire

The exit questionnaire featured three questions: (1) if the participant noticed anything about the drawings; (2) if the participant had any further remarks; (3) the possibility to enter their e-mail address for receiving a debriefing.

### Procedure

All tasks are administered via the Internet, using the TOP Survey Tool. Participation starts with a short introduction, in which the experiment is described as a study into the experience of artful expressions. Next are administered: the entrance questionnaire, the rating task, and the exit questionnaire.

## Results

### Participants

1094 participants visited the website, of which 394 completed the rating task and both questionnaires. A summary of the characteristics of these 394 participants is displayed in the table below. Remember that the Artfulness scale was constructed by summing the scores for three art-related questions (see Methods – Measures – Entrance Questionnaire).

Measure	Summary
Birth year	Median: 1960, Minimum: 1930, Maximum: 2002
Gender	124 males, 270 females
Artfulness	Median: 15, Minimum: 4, Maximum: 24
Done experiment	3 participants
Visited Exhibition	37 participants

*Table: Participant characteristics*

The three participants who already done the experiment were excluded. Splits were performed on birth year and artfulness. Birth year was split on the median into an older group (born before 1961, n=205), and a younger group (born on 1960 or later, n=189). Artfulness was split on the median into a low group (lower than 15, n=183) and a high group (15 or higher, n=211).

### Exit interview

The exit interview revealed that most participants were aware that drawings from adult artists and children were presented to them.

### Rating task

For each participant, we calculated the average rating for each Klee and child on each of the five measures. All ratings run from 0 to 8. To examine how the drawings of Klee and child are experienced, and how this may be affected by age, gender or artfulness, this data was subjected to Mixed ANOVA. The ANOVA included as within subjects factors: Measure (each of the five ratings) and Artist (Klee or child), and as between subjects factors Age, Gender, and Artfulness. The results of this analysis are reported below.

### Klee versus Child

The figure below shows the ratings for child and Klee on each of the five measures. Overall, Klee drawings are experienced as more pleasant, more arousing, more skilled, more original and more beautiful than child drawings (main effect of Artist;  $F(1,386)=406.58, p<.001$ ). The differences in ratings between Klee and Child were greatest for skill and originality, less so for arousal and beauty, and least for valence (Artist x Measure interaction;  $F(1,386)=169.7, p<.001$ ).

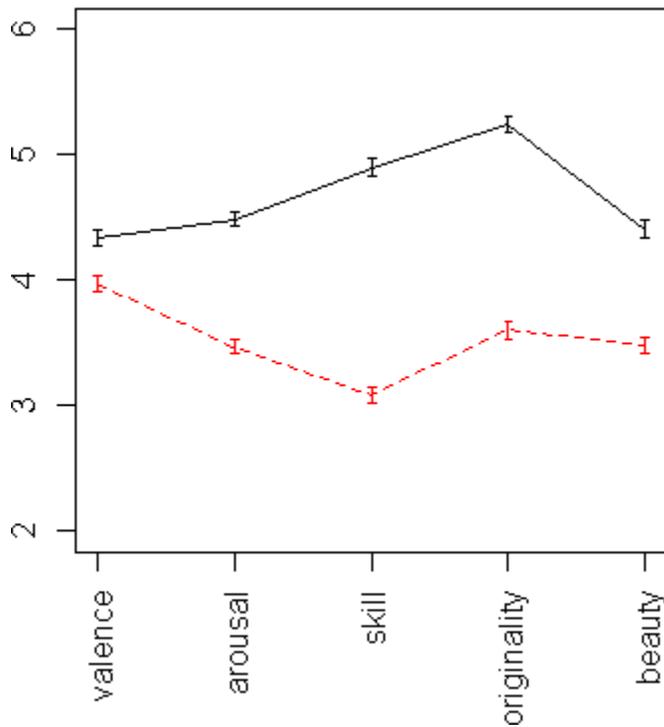


Figure: Ratings by Artist. Black is Klee, Red striped is child.

### Effects of Artfulness

Participants with high artfulness rated Klee and child differently than participants with low artfulness did (Artfulness x Artist interaction,  $F(1,386)=17.35$ ,  $p<.001$ ). Follow-up ANOVA's revealed that ratings for child drawings did not differ between more and less artful people ( $F(1,386)=.008$ ,  $p=.929$ ), but more artful people rated for Klee higher than less artful people ( $F(1,386)=13.6$ ,  $p<.001$ ). This difference in ratings was present in all five measures to a similar extent (no Artfulness x Artist x Measure interaction,  $F(1,386)=1.35$ ,  $p=.246$ ).

### Effects of Age

Age affected ratings for Klee and child (Age x Artist interaction,  $F(1,386)=16.35$ ,  $p<.001$ ). Follow-up analyses revealed there was no difference in ratings between younger and older participants for Klee ( $F(1,386)<.001$ ,  $p=.985$ ). However, younger participants gave lower ratings for child drawing than older participants did ( $F(1,386)=13.74$ ,  $p<.001$ ). This difference in ratings was present in all five measures to a similar extent.

### Effects of Gender

The figure below shows the ratings for Klee and child for men and women. There was a marginal effect indicating that men showed a different pattern of responding to Klee and child than women did (Measure x Artist x Gender interaction,  $F(1,386)=3.84$ ,  $p=.051$ ). Follow-up analyses indicated that women rated Klee as more original than men did ( $F(1,392)=5.76$ ,  $p=0.17$ ).

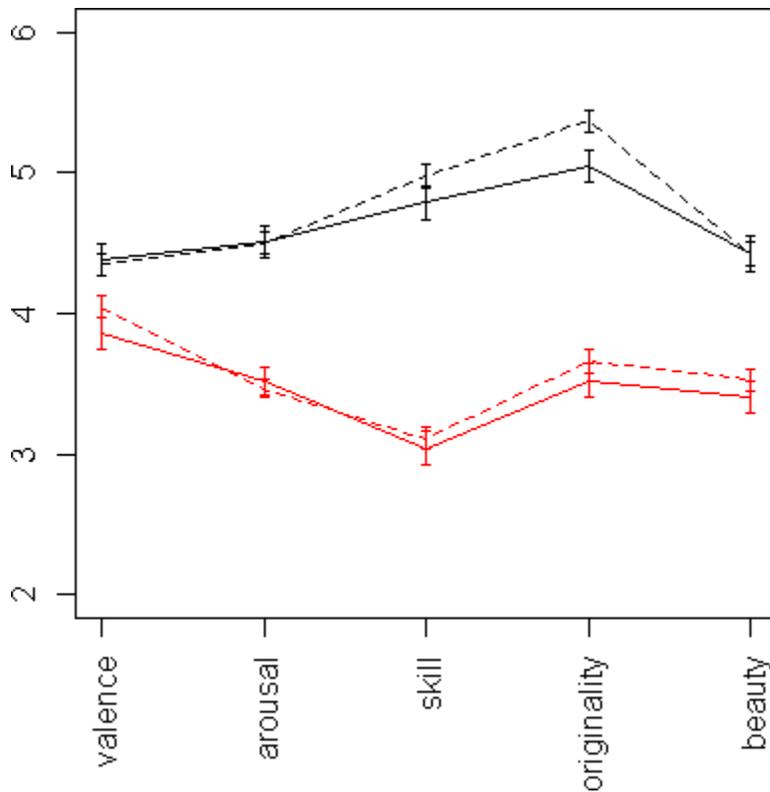


Figure: Ratings by Artist and Gender. Black is Klee, Red is child. Solid is male, striped is female.

### Effects of visiting the exhibition

We compared participants that did and did not visit the Paul Klee exhibition. There was a marginal effect, indicating that participants that had visited the exhibition gave overall higher ratings than participants that did not ( $F(1,392)=3.73, p=.054$ ).

### Ratings for individual drawings

Finally, we examine the highest and lowest rated Klee and child drawings. To compare all sixteen drawings on a single dimension, we calculated the mean rating of all five measures for each drawing. The histogram below shows the distribution of mean ratings for the eight Klee and eight child drawings used in this experiment. Note that the distributions slightly overlap; the highest rated child drawing is rated higher than the lowest rated Klee.

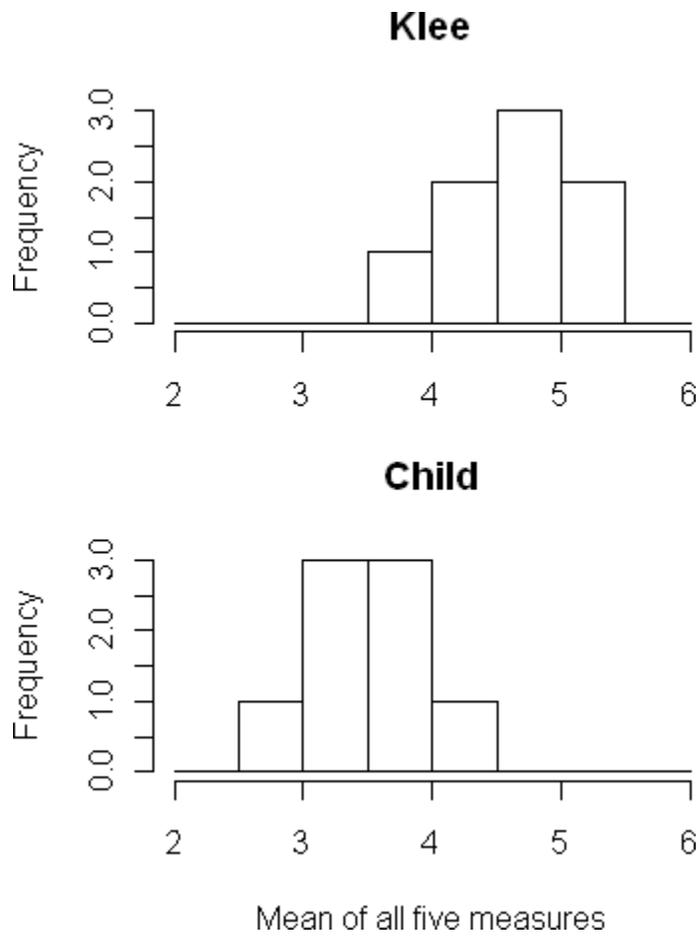


Figure. Histogram of mean ratings of all five measures for Klee and Child.

The highest and lowest rated Child and Klee drawings are shown in the table below.

	Klee	Child
Highest rated	 A drawing by Paul Klee showing a white dog-like figure with a blue skeletal structure, set against a dark green background.	 A vibrant, abstract drawing by a child featuring a mix of colors including red, blue, green, yellow, and brown, with various shapes and textures.
Lowest rated	 A drawing by Paul Klee featuring a large, red, rounded shape with yellow accents and a black outline, resembling a stylized face or mask.	 A drawing by a child showing a brown, rounded shape with pink and purple accents, possibly representing a bear or a similar animal.

Table. Highest and lowest rated Klee and Child drawings.

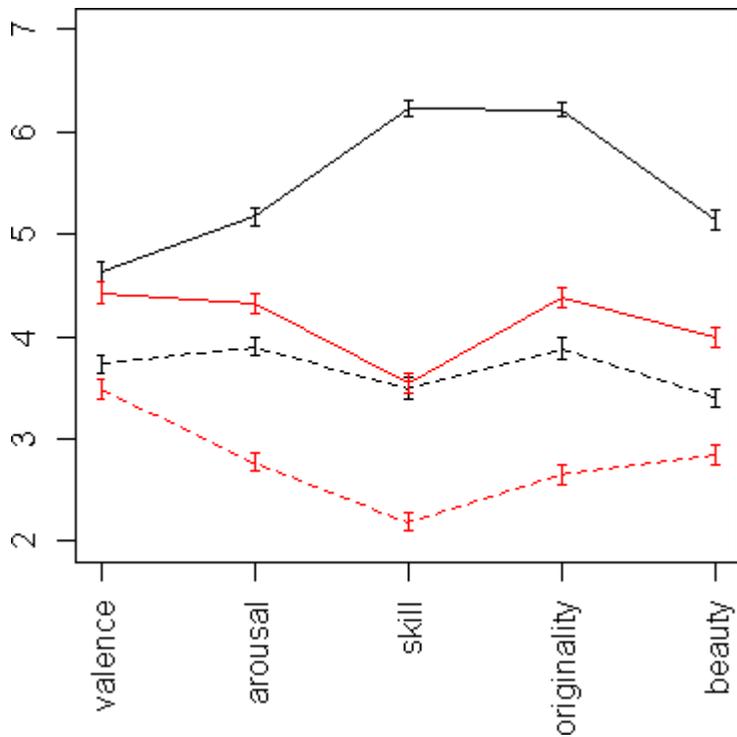


Figure: Ratings for highest and lowest rated Klee and Child drawings. Black is Klee, Red is child. Solid is highest rated, striped is lowest rated.

## Discussion

The subjective experience of drawing from Klee and drawing from children has been measured on valence, arousal, skill, originality, and beauty. It was hypothesized that the experience of Klee did not differ on the affective factors Valence and Arousal, but did differ on the cognitive factors Skill and Originality. Our hypothesis was disconfirmed, as Klee was rated more pleasant, more arousing, more skilled, more original and more beautiful than child drawings. However, there was a trend in line with our expectations, as differences in ratings were greater in skill and originality than in pleasantness and arousal.

The experience of child and Klee was also affected by art experience, age and gender. More experienced art viewers rated Klee higher than less experienced art viewers did. Younger participants (born after 1960) rated child drawings lower than older participants did. Women rated Klee as more original than men did. Participants rated all drawings higher after visiting the Cobra exhibition.

What do these results tell us about the subjective experience of Klee and child drawings? We did not find any measure on which Klee scored the same as child drawings did, so for none of the five measures, drawings of Klee can be considered similar to child drawings. A closer look at the trends for Klee and child reveals that drawings from Klee are most readily characterized by their high originality, whereas child drawings are most readily recognized by their lack of skill.

The effects of artfulness indicate that a more experienced art viewer perceives Klee differently from a less experienced viewer. One could expect that a more knowledgeable art viewer would be better able to recognize Klee's skill and originality. However, this was not the case; more artful viewers experienced Klee differently on all five measures. This is an interesting result, since it suggests that greater art experience not only affects one's cognitive experience, but also one's esthetic and affective experience. Also, since there was only a difference in the experience of drawings from Klee, but not in child drawings, it seems that greater artfulness does not affect one's experience of any random artistic expression, but only one's experience of more established artworks.

That women experience Klee as more original than men do, is another interesting result. One could have expected that the traditional role of women as being more involved with child rearing than men results in a greater affinity with child drawings, and thus a different subjective experience. However, this was not the case; our results only show that women are more able to appreciate the originality of Klee's work better than men do.

That younger people (born after 1960) rated child drawings different than older people did, is a puzzling result. Perhaps younger people are better able to recognize a child drawing, or perhaps the older generation has a looser conceptualization of art? At present, the results cannot explain what might cause this difference in experience.

Finally, it does seem that the Cobra exhibition does result in a higher appreciation of Klee and child drawings, since people that have visited the exhibition show overall higher ratings. However, the results do not allow us to make a causal inference, since it might well be that people who that visited the

exhibition already had a higher appreciation of Klee and child drawing before their visit. Also, we cannot establish if the exhibition only resulted in an increase in appreciation for the kind of works displayed (Klee and child drawings), or for artistic expressions in general. An experiment in which participants are measured before and after visiting the exhibition could answer these doubts.

The present results leave some open questions that future research could explore. For one, the correspondence between all five measures is striking, since it indicates that scores on these measures are caused by a single mental construct. An interesting question is how people relate these five scales to their art experience: do they appreciate art more if it is more pleasant, arousing, skilled, original, and beautiful? If so, our differences in ratings might well just capture one single trait, namely an appreciation of Klee as more artistic.

Also, additional research could examine how consistent these ratings are over drawings; the current results are based on averages of all eight drawings from Klee and child, but are these works experienced in a similar way? A more fine-grained analysis on stimulus level could reveal how representative each drawing is for the Klee and child experience.

Finally, one serious confound of the current study were the participant expectations: almost all of them expected to be confronted with Klee and child drawings, and this expectation might have affected their experience. A recruitment method that does not affiliate this study with an art exhibition is one way to control for such expectations. Another way is to incorporate implicit measures (such as the Implicit Association Test), which are less affected by conscious expectations.

Generally speaking, the results show that from the viewpoint of the average observer, Klee's art is categorically different from child drawings. Perhaps "the child knows nothing of art", but the average adult knows their Klee.