

## CS15-036 - Universal Aesthetics of Lines and Colors? Effects of Culture, Expertise, and Habituation

### Abstract

Since the eighteenth century artists and art theorists, later also art historians and psychologists, researched the aesthetic nature of lines and colors as basic formal elements of painting. They assumed that whether an artwork is perceived as being serene, dynamic, sad, or cheerful (typical categories for aesthetic effects), beautiful and/or interesting (categories for preference) is heavily determined by the quality and interplay of these basic formal elements. It was assumed that people largely agree on how they perceive aesthetic effects of lines and colors and that they have similar preferences.

With this project, we systematically and critically examined the claim to aesthetic universality. For the very first time, we combined historical research on the genesis of this theory with experiments to test how single lines and single colors, interactions between these elements, and actual artworks affect beholders. We developed a new study design to test degrees of agreement between people when judging aesthetic objects. Our results show that agreement between persons is unexpectedly low, that agreement does not depend on art expertise, and that both liking and interest have the lowest agreement score—hence preference is more subjective than aesthetic effects. However, whereas general agreement between persons is very low, people do agree in regard to some stimuli on specific scales, in particular, in the rating of active/passive in regard to single lines and warm/cold in regard to single colors.

We were surprised to find a clear contradiction between the strong historical claim for universal aesthetic effects and our experimental evidence. This gave a new perspective to the historical studies within the project. We realized that this contradiction was noticed earlier, although hardly ever pronounced. A prominent example is Wassily Kandinsky. In 1923 at the Bauhaus, he conducted a questionnaire aiming to test how people link the aesthetic effects of colors and geometric forms. However, he never published the results, probably because they did not support his theory. Much earlier, in the late nineteenth century, several authors developed the concept of aesthetic sensitivity as an antidote to this contradiction: whoever does not perceive aesthetic effects is not (yet) sensitive to them.

The project was only possible through an intense interdisciplinary cooperation of art historians and cognitive psychologists. The results question fundamental assumptions of both disciplines. We assume that they will trigger a profound process of reflection not only in those academic fields, but also in art criticism and art education.

Scientific disciplines:

Art history (50%) | General psychology (50%)

Keywords:

Art perception, line, color, aesthetic effects, cross-cultural studies, expertise, habituation

---

Principal Investigator: Raphael Rosenberg  
Institution: University of Vienna  
Co-Principal Investigator(s): Helmut Leder (University of Vienna)



---

Status: Completed (01.07.2016 - 30.06.2020)

---

Further links to the persons involved and to the project can be found under  
<https://wwtf.at/funding/programmes/cs/CS15-036/>