

Introduction to the special issue on visual aesthetics

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Visual aesthetics encompasses the studies of the relationship between vision and various aesthetic phenomena – from the beauty ratings of simple visual patterns to the appreciation of visual art, from the preference for natural objects and scenes to the preference for products of human creativity, from the aesthetic effects of culture to the aesthetic effects of biology, from the universal aesthetic sensitivity to the individual differences in taste, and so on. In this special issue ten papers reported the most recent studies on very different subjects related to visual aesthetics.

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The interest for aesthetic phenomena, particularly for art, has a long history in visual science. The first empirical studies of aesthetic phenomena date back to the very beginning of modern experimental psychology, that is, to the work of Gustav Theodor Fechner, who founded both psychophysics (*Elemente der Psychophysik*, Fechner, 1860) and experimental aesthetics (*Vorschule der Ästhetik*, Fechner, 1876). Fechner's experimental aesthetics traced a line of investigation of the aesthetic preference for "good" proportions (e.g. golden ratio) in relatively simple visual shapes and patterns. Within next 100 years empirical aesthetics extended its interest to the preference for more complex visual stimuli, including artwork. This interest branched into two distinct lines. The prominent protagonist of the first line was the Gestaltist Rudolf Arnheim who introduced and developed a structural phenomenological analysis of the artistic visual Gestalten (*Art and Vision*, Arnheim, 1969). The second approach was more quantitative and elementary. Its founder Daniel Berlyne used the Semantic Differential method to investigate a complex subjective experience of visual artwork (*Studies in the New Experimental Aesthetics*, Berlyne 1974). In addition, Berlyne developed a "psychobiological" theoretical framework that

associated the aesthetic pleasantness with the optimal neural arousal (Aesthetics and Psychobiology, Berlyne, 1971). The classical period of empirical or psychological aesthetics could also include the theories of individual differences in taste (Eysenck, 1940) and creativity (Koestler, 1970).

Contemporary studies in empirical aesthetics cover an even wider spectrum of phenomena, connecting very distant topics within a general thematic field of “visual aesthetics”. These studies investigate the aesthetic preference for different categories of objects at different levels of stimulus complexity and different levels of engaged visual processes. Modern visual aesthetics uses diverse methods, including the classical experimental and correlational designs, the phenomenological, observational, and action researches and, recently, very popular neuroaesthetic studies.

An interest in studying the aesthetic aspect of visual phenomena and interactions between art and vision has been growing, particularly the last few decades, resulting in the increasing number of meetings and publications, such as the Neuroaesthetics Conference (Copenhagen, 2009), the Art and Perception Conference (Brussels, 2010), Visual Science of Art Conference (annual satellite meeting to the European Conference on Visual Perception, from 2012), special issues of journals *Spatial Vision – Art and Perception: Towards a Visual Science of Art* (2008) and *iPerception – Art and Perception* (2012), and, finally, a whole new journal specialized only for this field – *Art and Perception* (established 2013).

The present Special Issue of *Psihologija, Visual Aesthetics*, is a natural consequence of the spreading interest for this intriguing and relatively new field. This issue covers various themes, theoretical perspectives and methodological paradigms. One of the oldest and still an actual division in empirical aesthetics is associated with the classical distinction between the so-called aesthetics from above and aesthetics from below.

Aesthetics from below investigates the aesthetic effects of simple stimulus features (e.g. single colors, Palmer & Schloss, 2010; symmetry, Wagemans, 1995; etc.) and focuses on the role of low-level visual processing in aesthetic preference. In this issue, Katrin Mundloch, Marie Winterberg, Wanja Hemmerich, Philipp Holzwig, Anna Rupanova, Alice Schönewolf, Nina Winands, Heiko Hecht, and Jasmina Stevanov presented findings that do not support the importance of top-down processes in the preference for abstract paintings, such as Pollock’s paintings and similar low-level image features (statistical fractal noise images). Similarly, Tandra Ghose has shown that the preferred contrast for the low-level pixelated image is very close to the preference for the original image even though it is considerably degraded in both the quantitative and qualitative aspect (i.e. both complexity and semantic information are reduced). The findings of these two studies are in line with the models that stressed the role of low-level statistical properties in aesthetic preference or liking (cf. Redies, Hasenstein, & Denzler, 2007).

Unlike the aesthetics from below, the *aesthetics from above* is interested in the higher integrative levels of vision and the preference for the complex artistic and non-artistic aesthetic objects (cf. Marković, 2014). In this Special

Issue Eva Viviani and Nicola Bruno presented the study in which they tested the hypothesis of the “inversion technique”, which claim that one’s drawing skills should benefit from practicing to copy an image in the upside-down orientation. The results did not support the hypothesis: participants copied upright and inverted drawings (cars and faces) with practically identical accuracy in both aspects global (object’s shape and structure) and local (ratios between inner parts).

Another study that could be categorized as “aesthetics from above” approach is presented in the work of Rossana Actis-Grosso, Carlotta Lega, Alessandro Zani, Olga Daneyko, Zaira Cattaneo, and Daniele Zavagno. Their paper is concerned with the possibility of crossmodal similarities between music and visual arts. The phenomenon of auditory-visual correspondence was introduced by Köhler, 1947) who used the example of phenomenological matching between abstract visual patterns and pseudo-names: an angular line pattern is prevalently associated with the pseudo-name “Takete”, and a curvilinear pattern is associated with the pseudo-name “Maluma”. In the present study, more complex auditory and visual stimuli were used – classic music and jazz vs. figurative and abstract paintings. The results indicated the systematic effects of crossmodal similarity, but only in male participants who appreciated the figurative paintings more when they were accompanied with classical music, while the abstract paintings were appreciated more when they were accompanied with jazz.

The next three papers report the studies on the aesthetic effects of affective and creative priming. In his classical study Zajonc demonstrated the effectiveness of affective priming in temporally very restrictive conditions: positive primes (e.g. happy faces) increase the aesthetic ratings of neutral stimuli, whereas negative primes (e.g. angry faces) reduce it (Zajonc & Markus, 1982). Interestingly, Katrin Mundloch and collaborators did not find that happy faces modulate liking of Jackson Pollock art and statistical fractal noise images (this paper was already mentioned). On the other hand, the paper of Claudia Muth, Sabine Albrecht, and Claus-Christian Carbon reports the significant effect of experimentally induced positive mood and high self-efficacy on aesthetic ratings of ambivalent photographs. Similarly, Ivan Stojilović found the positive effect of the creativity induction on ratings of both creativity and beauty of (semi) abstract paintings (creativity was induced in a collage creation workshop).

Janko Međedović and Branislav Đorđević investigated creativity, as well, but they were primarily concerned with individual differences. The results of their study indicate that creativity and creative productivity are more closely related with the schizotypal traits in painters than in the control group, and that the schizotypal traits themselves are more pronounced in painters compared to the control group. These findings are in agreement with the standard models of the close relationship between artistic creativity and psychopathology (cf. Baas, Nijstad, Boot, & De Dreu, 2016).

In addition to the individual differences perspective, empirical aesthetics also includes the cultural differences perspective. The scientific importance of

cross-cultural studies is unquestionable, but nevertheless, the debate about the role of culture in vision and aesthetic preference seems to be more interesting to social psychologists than to vision scientists (see, for instance, Firestone & Scholl, in press). Two papers in the present issue explore this topic. Stefan Ortlieb, Ivan Stojilović, Danaja Rutar, Uwe C. Fischer, and Claus-Christian Carbon contributed the study in which they compared kitsch concepts in Bavaria, Serbia and Slovenia. The results have shown some cultural differences: Serbian and Slovenian participants rated a threatening content as more kitschy, whereas participants from Bavaria rated determinate items as more kitschy. Meanwhile, Carole Bode, Mai Helmy, and Marco Bertamini conducted across-cultural study comparing the preference for symmetry in British and Egyptian participants. The authors replicated the original study (Soueif & Eysenck, 1971) confirming high correlation between the preference for symmetry in two cultural groups.

Finally, Slobodan Marković and Tara Bulut studied the attractiveness of the female body. The problem of physical attractiveness is a favorite theme of biological and evolutionary approaches in empirical aesthetics. According to these approaches, facial and bodily beauty is closely associated with sexual attractiveness and sexual behavior (beauty as an “honest signal” of genetic quality, general health and reproductive success, cf. Singh, 1993). The results support the so-called “supernormal” hypothesis (Ramachandran & Hirstein, 1999), indicating that both male and female participants prefer a female body which is more feminine (lower waist-to-hip ratio, larger breasts and buttocks) than average.

In sum, our Special Issue covers a variety of different topics, theoretical perspectives and methods – from low-level vision to art appreciation, from general perception to individual differences, from the cultural to the evolutionary aspect of aesthetic preference.

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