



Is visual aesthetic sensitivity independent from intelligence, personality and creativity?



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ABSTRACT

Visual aesthetic sensitivity has been conceived as an intelligence-independent and personality-independent disposition (Frois & Eysenck, 1995). However, recent research suggests that aesthetic experience and its outcomes can be predicted by personality traits (Furnham & Chamorro-Premuzic, 2004; Furnham & Walker, 2001; McCrae, 2007; Rawlings, Barrantes-Vidal, & Furnham, 2000) and is cognitively facilitated (Leder, Belke, Oeberst, & Augustin, 2004; Reber, Schwarz, & Winkielman, 2004; Silvia, 2005, 2006; Smith & Smith, 2006). Following these new findings, three studies (the first ones in France) examined the Visual Aesthetic Sensitivity Test (Götz, Borisy, Lynn, & Eysenck, 1979; Götz, 1985) on young adult samples (Total $N = 345$). It was hypothesized that visual aesthetic sensitivity is related to general intelligence (study 1), specific personality traits (study 2) and figural creativity (study 3). The Visual Aesthetic Sensitivity Test was found to be predicted by intelligence ($r = .27$; $p < .01$) openness to aesthetics ($r = .27$; $p < .01$) and figural divergent thinking ($r = .40$; $p < .001$). Implications for further research are discussed.

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1. Introduction

In the domain of scientific psychology, theoretical and empirical research on aesthetic judgment began in the 1930's with Birkhoff's aesthetic formula (Birkhoff, 1933), which defined the amount of received pleasure from an artistic stimulus as a ratio of amounts of order and complexity. Further work included Eysenck's general factor theory (1940) and Leder's multifactorial model (Leder et al., 2004) of aesthetic judgments. Considering both approaches, the aim of the present research is to show that Eysenck's general factor of aesthetic judgments, aesthetic sensitivity (Eysenck, 1940, 1941, 1983), has various sources of variation, notably intelligence, personality and creativity.

1.1. Conceptions of aesthetic judgment

Balance, the extent to which the elements of a pictorial configuration are organized "so that they appear anchored and stable" (Locher, 2003, p. 127), is an essential feature in the creation and judgment of visual displays (Frith & Nias, 1974; Locher & Nodine, 1989; Locher, 2003; Wilson & Chatterjee, 2005). Early scientific research on aesthetic preferences of visual objects (Eysenck, 1940) identified two principal factors that explained

individual differences in aesthetic judgments. Whereas the first determinant of preference judgments refers to what Eysenck (1983) describes as "good taste" (the "T" factor), the second determinant refers to what we describe as preference for complexity (the "K" factor). The empirical bases of the "T" factor are data suggesting that people tended to agree on liking visual aesthetic objects (Eysenck, 1940), and that the judges who agreed the most with the average judgments were the same individuals among different types of stimuli, which provided evidence for a single factor in the field of aesthetic preferences (Eysenck, 1940, 1941). This dispositional "T" factor, aesthetic sensitivity, was identified as the ability to identify differences in terms of harmony and good design (Eysenck, Götz, Long, Nias, & Ross, 1984), and more generally, as "the extent to which, when a person judges the esthetic value of stimuli, his judgments correspond to the external standard of value which is being employed" (Child, 1964, p. 49). In Leder's multifactorial model (Leder et al., 2004), aesthetic sensitivity refers to the ability to perform a set of basic perceptual analyses of the stimulus, based on the stimulus' balance-related features, such as order and symmetry.

1.2. Individual differences in visual aesthetic sensitivity

Visual aesthetic sensitivity, as measured by the Visual Aesthetic Sensitivity Test (VAST; Eysenck, 1983; Götz, Borisy, Lynn, & Eysenck, 1979; Götz, 1985), is mainly described as an "isolated"

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innate ability (Frois & Eysenck, 1995; Iwawaki, Eysenck, & Götz, 1979), independent of intelligence (Frois & Eysenck, 1995; Götz et al., 1979), and personality (Frois & Eysenck, 1995; Götz et al., 1979). Furthermore, Frois and Eysenck (1995) found that artistically trained adults failed to have better scores than untrained 14–15 year-old children, suggesting that art training has no effect on visual aesthetic sensitivity. Overall, Frois and Eysenck (1995) have finally proposed that “genetic factors may be operating there”, suggesting that individuals are predisposed to have high or low visual aesthetic sensitivity.

In contrast, recent theoretical and empirical framework supports extensively that aesthetic experience can be predicted by personality traits (Eysenck & Furnham, 1993; Feist & Brady, 2004; Furnham & Chamorro-Premuzic, 2004; McCrae, 2007; Rawlings, Barrantes-Vidal, & Furnham, 2000), and cognitive facilitation (Leder et al., 2004; Reber, Schwarz, & Winkielman, 2004; Silvia, 2005, 2006; Smith & Smith, 2006). Although such results have been supported by studies using various measures of visual aesthetic sensitivity, notably the Graves Design Judgment Test (Graves, 1948) and art interests, activities and knowledge questionnaires (Chamorro-Premuzic & Furnham, 2004; Furnham & Chamorro-Premuzic, 2004), they have never been supported by studies using the VAST before. Furthermore, these results have not been replicated in a French sample.

The present research, which is the first to study the VAST on an adult French sample, aimed to examine individual differences in aesthetic sensitivity. In line with recent framework (Chamorro-Premuzic & Furnham, 2004; Feist & Brady, 2004; Furnham & Chamorro-Premuzic, 2004; Leder et al., 2004; Reber et al., 2004), we hypothesize that aesthetic sensitivity is at least partly related to intelligence, personality and figural creativity. Indeed, (1) the relationship between visual aesthetic sensitivity and intelligence is widely suggested in previous research (Chamorro-Premuzic & Furnham, 2004; Frois & Eysenck, 1995; Furnham & Chamorro-Premuzic, 2004), and (2) while contradictory results using different measures have been found regarding the relationship between personality traits and visual aesthetic sensitivity (Chamorro-Premuzic & Furnham, 2004; Frois & Eysenck, 1995), the relationship between visual aesthetic sensitivity – as measured by the VAST – and personality traits, may have been partly underestimated in previous research by the use of wide-ranging personality inventories (Frois & Eysenck, 1995). Furthermore (3), the relationship between creativity measures and the VAST has not been investigated before, although its examination is suggested by previous significant research on the relationship between aesthetic judgment and personality (Aks & Spratt, 1996; Rawlings, Twomey, Burns, & Morris, 1998).

In study 1, we re-investigated the relationship between General Mental Ability and the VAST. In previous research (Frois & Eysenck, 1995), weak to moderate correlation coefficients (.20–.36 according to the different age samples) were found between the VAST and General Mental Ability as measured by Raven's Progressive Matrices (SPM; Raven, 1941) with participants aged between 10 and 15. Furthermore, recent empirical and theoretical research suggests that aesthetic judgment is related to cognitive facilitation (Chamorro-Premuzic & Furnham, 2004; Reber et al., 2004; Silvia, 2005, 2006; Smith & Smith, 2006), suggesting that the easiness with which one processes a stimulus can predict the outcomes of the aesthetic judgment of the stimulus. As intelligence may play a role in facilitating visual aesthetic sensitivity, we decided to further examine the relationship between intelligence and the VAST on an adult sample, hypothesizing a positive correlation.

In study 2, we hypothesized that general structural models of personality, though useful for exploratory research on relationships between a variable and personality, are not precise enough to investigate the relationship between the VAST and personality

traits. As noted before, earlier work (Eysenck, 1972; Frois & Eysenck, 1995; Iwawaki et al., 1979) suggests that visual aesthetic sensitivity is not correlated to personality, as measured by the Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975). However, in these studies, possible relationships between visual aesthetic sensitivity and personality have only been investigated using the EPQ. In this study, based on recent research that suggested that art judgment ability is predicted by Openness to Experience (Chamorro-Premuzic & Furnham, 2004; Furnham & Chamorro-Premuzic, 2004), and on research on the art-related side of Openness (Eysenck & Furnham, 1993; Feist & Brady, 2004; Furnham & Chamorro-Premuzic, 2004; McCrae, 2007; Rawlings et al., 2000), it was hypothesized that visual aesthetic sensitivity is related to specific personality traits. More specifically, we propose in this study that high openness to aesthetics, high openness to fantasy, high openness to feelings, high openness to ideas are positively correlated with the VAST. Moreover, the VAST consists of recognizing harmonious and well-organized designs, it was hypothesized that the tendency to seek order and organization (Costa, McCrae, & Dye, 1991), is positively correlated with the VAST. In addition, because sensation-seeking is a predictor of aesthetic preferences (Rawlings et al., 2000, 1998), it was hypothesized to be a predictor of the VAST. Finally, because of the very definition of visual aesthetic sensitivity, it was especially hypothesized that, among these factors, openness to aesthetics is the best predictor of the VAST.

In study 3 we hypothesized that visual aesthetic sensitivity is positively correlated with creative potential, as measured by a figural divergent thinking task of the *Torrance Tests of Creative Thinking* (Torrance, 1966, 2008). Although research on the VAST (Frois & Eysenck, 1995) suggested that art training is not a predictor of visual aesthetic sensitivity, more recent research (Chamorro-Premuzic & Furnham, 2004; Reber et al., 2004; Silvia, 2005, 2006; Smith & Smith, 2006) suggests that aesthetic judgments partly depends on cognitive facilitation. However, such cognitive facilitation may not only result from high General Mental Ability, but also from high creative potential. As previous results (Aks & Spratt, 1996) suggest that creativity and aesthetic judgment are related, it was thus hypothesized that divergent thinking is a predictor of visual aesthetic sensitivity. More specifically, because creativity is partly domain-specific (Lubart & Guignard, 2004; Silvia, Kaufman, & Pretz, 2009), it was hypothesized that figural divergent thinking would be a better predictor of the VAST than verbal divergent thinking.

2. General method

2.1. Participants

All the studies were conducted on second-year French psychology students, who received credit course points for participation. The three studies were conducted separately on different samples.

2.2. Material

Unlike earlier attempts to measure aesthetic sensitivity, such as the Meier Art Tests (Meier, 1940) or the Graves Design Judgment Test (Graves, 1948), the Visual Aesthetic Sensitivity Test (VAST; Eysenck, 1983; Götz et al., 1979; Götz, 1985), has demonstrated adequate psychometric qualities (Frois & Eysenck, 1995). The VAST is composed of 50 pairs of abstract drawings, drawn by a German painter, Karl Otto Götz. In each pair, one of the two drawings was created to objectively show better aesthetic features than the other one, which is essentially the same drawing with “errors” that were added to make it less harmonious and balanced.

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