Background

The question of what determines “beauty” is one of the most enduring philosophical questions known to man. Is beauty determined by a common appreciation for particular visual qualities of the object or of the experiences, opinions and feelings of the perceiver (“eye of the beholder”)? While there is research that explores the contributions of both of these factors in isolation, most psychologists agree that an object is considered beautiful when there is a particularly harmonious or “fluent” – see Reber, Schwarz & Winkielman, 2004) or unexpected and interesting (see Berlyne, 1960) interaction between the object and perceiver.

The role of the object: Visual elements that contribute to perception of beauty in adults

Collative properties: novelty, uncertainty, conflict, complexity of simple line drawings (Berlyne, 1960, 1964); contrast and symmetry in faces and drawings (Jacobsen, 2004); composition, balance, and clarity in artworks (Vartanian & Goel, 2004; Tinio and Leder, 2009); simplicity and interpretability (Nicki, Lee & Moss, 1981; Reber, et al, 2004); proportion (Angier, 1903) and common “Tools of the trade” made use of by graphic artists, such as color, contrast, complexity, symmetry, focal point, pattern, and texture (see Grombrich, 1995).

The role of “the beholder” in aesthetic appreciation:


Purpose

The purpose of this study is to control for the “subjective” role of the “beholder” in aesthetic appreciation by testing preferences for non-representational artistic masterpieces over altered versions in a population of culturally naïve and cognitively and emotionally immature 6-11-month-old infants, and adults. Without explicit meaning conveyed, abstract art must rely heavily on the more “objective” and “structural” visual cues to convey beauty and interest.

Hypothesis: Based on well-known infant visual preferences, color (Spearis, 1964; Packman, Hartman, & Teller, 1984), contrast (Banks & Ginsburg, 1985; Gwiazda & Birch, 2001; Dobson & Teller, 1978), complexity (Fantz, 1958; Fantz & Miranda, 1975; Fantz & Fagan, 1975, Berlyne, 1958; Cohen, 1973), symmetry (Dannemiller & Stephens, 1988; Fantz, 1958; Spears, 1964), and adult preference (see above) we predicted that both adults and infants would prefer the original artwork over their altered versions in every category.

Results

Main effects of Type: preference for Originals in both adults (F = 35.7, p<.001) and infants (F = 8.8, p<.02) Interaction effects of Category x Type in adults (F = 27.2, p<.001) and infants (F = 2.5, p<.06). Adults significantly preferred the original art when high complexity, contrast, focal point were retained, and when pattern was disrupted (altered form). Infants significantly prefer the original art when high complexity, contrast, and focal point were present. Our results show that our appreciation for the communicative properties of salient visual elements used in human art begins as early as 6 months, suggesting that similar to humans’ innate interest and sensitivity to speech sounds and linguistic stimuli (see Krentz & Corina, 2004) we are born with an interest and curiosity in complex visual stimuli (Berlyne, 1960; Piaget, 1936) embedded in art, and those basic visual preferences hold stable over time.

Methods

Stimuli: 25 original abstract artworks + 25 altered twins (see examples of 5 pairs at left)

> 45 undergraduates at SPU judged 100 abstract selections from the MOMA online collection for levels of familiarity, perceived beauty, complexity, contrast, symmetry, focal point, and pattern.

> 5 ‘exemplars’ of each visual category, rated high in one element and low in all others, were selected for the infant study

> Each exemplar was paired with an altered “twin,” designed to reduce or obscure its prominent visual feature using Photoshop

Infant Study:

> Each of the 25 pairings (trials) was presented twice to counter-balance by side of presentation

> Sequence of 50 pairings (trials) was randomized

> After every three trials (total of 30 seconds), there was a 5 second “orienting and attention-grabber” animated slide created in PowerPoint

> Total viewing time = 10 minutes

> Subjects were asked to record which one of each pair was preferred

Conclusions

This study suggests that both adults and infants prefer abstract art in its original form. In particular, both adults and infants prefer highly complex and highly contrastive art. Interestingly, both adults and infants did not show a preference for more patterned art over less patterned alterations, possibly because reducing pattern increases complexity through irregularity.

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Adult Study

- Each of the 25 pairings (trials) was presented once via a PowerPoint slide show

- Side of originals and altered were randomized and counterbalanced

- Average viewing time = 10 minutes

- Subjects were asked to record which one of each pair was preferred

Infant Study:

- Each of the 25 pairings (trials) was presented twice to counter-balance by side of presentation

- Sequence of 50 pairings (trials) was randomized

- After every three trials (total of 30 seconds), there was a 5 second “orienting and attention-grabber” animated slide created in PowerPoint

- Total viewing time = 10 minutes

- Subjects were asked to record which one of each pair was preferred

Summary

The results suggest that both adults and infants prefer abstract art in its original form. This is supported by the significant preference for the original artwork over the altered versions. The study also indicates that the complexity, contrast, and focal point of the artwork play a significant role in the preference for the original art. The results are consistent with the hypothesis that infants and adults have common preferences for original abstract art.