Cross-cultural empirical aesthetics

Jiajia Che*, Xiaolei Sun*, Víctor Gallardo†, Marcos Nadal*1
*Human Evolution and Cognition Group, IFISC, University of the Balearic Islands—CSIC, Palma, Spain
†Hospital Can Misses, Ibiza, Spain
1Corresponding author: Tel.: +34-971-259899, e-mail address: marcos.nadal@uib.es

Abstract
Cross-cultural empirical aesthetics seeks to determine whether the psychological processes underlying aesthetic preference are universal. Here we provide a critical review of the field’s origin, development, and current state. Our goal is to evaluate the evidence and separate what is actually known from what is only assumed. We conclude that the evidence shows that people from different cultures base their aesthetic preference on a common set of formal features, including symmetry, complexity, proportion, contour, brightness, and contrast. The reason for this commonality is that aesthetic preference emerges from basic perceptual and valuation processes that are common to all humans, and to many other animals.

Keywords
Art, Aesthetics, Disposition, Universals, Cross-cultural

1 INTRODUCTION
All cultures around the world produce objects appreciated for their artistic or aesthetic qualities. Art and aesthetics are therefore often regarded as human universals (Anderson, 2004; Silver, 1979). If all humans share a common capacity for aesthetic appreciation, it seems plausible that the underlying psychological and brain processes are also common to all humans. These processes are multiple, involving expectation, perception, memory, affect, emotion, meaning, and judgment (Chatterjee and Vartanian, 2014; Leder and Nadal, 2014; Leder et al., 2004; Pearce et al., 2016). They have been studied almost exclusively in Europeans and North Americans, thus providing little insight into the universality of psychological and neural underpinnings of aesthetic appreciation.
The few studies that have collected experimental evidence on aesthetic appreciation in different cultures constitute the subfield of cross-cultural empirical aesthetics. According to Berlyne (1980), the initial development of cross-cultural empirical aesthetics between the 1950s and 1970s had “one relatively modest objective. This is to ascertain how far findings obtained with subjects from the predominant cultures of Europe and North America can be generalized to other populations or, in other words, to what extent there are universals in the domain of psychological aesthetics” (Berlyne, 1980, pp. 353–354).

Berlyne’s (1980) concise and straightforward overview, however, overlooks the diversity of studies conducted in this period and makes light of their grand ambitions. Measuring cross-cultural agreement in aesthetic appreciation was only an ancillary objective. The main purpose was to vindicate and promote a normative view of aesthetic appreciation whereby people could be ranked according to their ability to correctly judge the beauty or artistic merit of objects. Cross-cultural empirical aesthetics, in fact, was born of the eugenicist ambition to classify people based on their innate abilities and to direct them toward careers suited to those abilities. When applied to art, this urge for efficiently matching aptitude and occupation led to the development of multiple tests for artistic or aesthetic abilities (Carroll, 1933; Heinlein, 1925; Meier, 1928; Thorndike, 1916). The results of these tests were presented as evidence for a single general aesthetic competence (Burt, 1933; Eysenck, 1940), presumed to be inherent to human nature, and measurable in all people regardless of culture (Child and Siroto, 1965; Soueif and Eysenck, 1971).

Here we retrace the origin and development of visual cross-cultural empirical aesthetics. Our goals are to evaluate the evidence and separate what is actually known from what is only assumed, and to determine whether there is any solid evidence for universal psychological processes underlying aesthetic appreciation. For reasons of space and clarity of presentation, we have left out most cross-cultural studies of color preferences. Readers can find a succinct introduction to this literature in Palmer et al.’s (2013) review (pp. 88–89). We have divided our presentation into four stages, roughly corresponding to four different programs and time frames: the genesis of Burt and Eysenck’s notion of a general aesthetic ability (1920s–1940s), the search for cross-cultural evidence for the general factor (1950s–1980), the search for agreement and common personality traits in art experts from different cultures (1960s–1970s), and the search for collative properties underlying aesthetic preference in people from different cultures (1970s–2017).

2 FROM GALTON TO THE GENERAL OBJECTIVE FACTOR OF AESTHETIC APPRECIATION

Cross-cultural empirical aesthetics grew out of the early 20th century eugenicist fascination with ethnicity, inheritance, and social status. Some of the earliest comparisons of color preferences across cultures (Garth, 1922a, 1924; Garth and Collado, 1929), for instance, were part of the general study of the impact of ethnic background
and education on mental abilities and performance (Garth, 1921a,b, 1922b). But the basic methods and theoretical scaffolding for cross-cultural empirical aesthetics originated in Cyril Burt’s studies of children’s artistic competence in London during the 1920s and 1930s.

At the time, British psychology was under the influence of Francis Galton’s enthusiasm for individual differences, mental testing, correlations, and eugenics (Boring, 1950; Burt, 1962; MacKenzie, 1976). Psychology—it was believed—should aim to quantify and explain differences in mental abilities among people. This required characterizing the distribution of such abilities in large samples of individuals using standardized measures. Burt’s admiration for Galton was unreserved (Burt, 1962). He embraced Galton’s interest in individual differences, his theories on mental abilities, and his views on eugenics (Wooldrige, 1994). Burt accepted as incontrovertible that intelligence and mental abilities were genetically based, that they were the main determinants of social position within the hierarchy of occupational classes, and that they could be measured objectively and accurately using mental tests (Norton, 1981). It was with such convictions and promise that Burt introduced mental tests and psychometrics into the education system. He systematically studied the distribution of intelligence, mental abilities, and achievements of the London school population. He determined averages and normal ranges; he developed standardized measures and compiled test batteries. And he used children’s performance on such tests to set them along the vocational path fitted to their natural aptitudes (Lowe, 1980; Wooldrige, 1994).

The battery that Burt devised to measure children’s abilities included several tasks of aesthetic appreciation. He believed—following Spearman’s approach to intelligence—that there existed a unitary aesthetic ability, inherited and unalterable, that could be measured by means of responses to simple tests. It was possible, thus, to determine the population’s distribution of this hypothetical single factor of aesthetic appreciation. This suited administrative purposes well, because once the statistical norms were known, deviations could be easily detected, and individuals directed toward or away from careers in art (Burt, 1949).

Burt began his studies and factor analyses of this aesthetic ability in 1919 at art schools administered by the London County Council (Burt, 1960). The test battery included several tasks of literary, musical, and visual appreciation and creation, consisting in ranking fragments and images, paired and triple comparisons, composition, and drawing. Children’s answers were scored according to predefined correct solutions. These early studies revealed a common factor explaining part of the variance in performance across tests. Burt referred to this as the general factor for artistic ability and believed it underlay the ability to appreciate relations among elements in art, combinations of lines and colors, sounds and words (Burt, 1933, 1949). In Burt’s view, therefore, this general ability did not merely amount to having clear-cut or consistent preferences. It actually required overcoming personal preference and all sorts of other “irrelevant associations,” such as fashion and familiarity, that interfere with and bias people’s correct appreciation of relations among elements (Burt, 1933).
Burt’s main interest shifted from educational psychology to statistical theory after 1932, when he succeeded Spearman as Professor of Psychology at the University College London (Wooldridge, 1994). But his psychometric approach to aesthetics did not wither. On the contrary, Eysenck (1940) turned it into one of the most influential and long-lasting programs in empirical aesthetics. At the core of this program was Burt’s notion of a general factor of aesthetic appreciation and his conviction that the proper study of aesthetic abilities required materials preventing the influence of culture, excellence of technique, and familiarity (Eysenck, 1940). Consistent with this premise, Eysenck assembled 18 sets of pictures, including portraits, photographs of statues of Roman emperors, pencil drawings by Claude Lorrain, photographs of vases, Malayan masks, Japanese paintings, reproductions of colored embroidery, and curves of mathematical functions. He then asked 18 participants to rank the materials in each set in order of liking. Eysenck’s (1940) factor analysis of participants’ rankings revealed a factor accounting for 20.6% of the variance across sets, which he called the general objective factor of aesthetic appreciation. Faithful to Galton and Burt, he asserted that this factor was responsible for performance on virtually any conceivable test of aesthetic appreciation, that it was common to all humans, determined largely by biological factors, and innate (Eysenck, 1941a,b, 1942, 1981).

Eysenck believed that this general factor underlay people’s taste, that is, their ability to appreciate objective beauty. He avoided the problem of defining objective beauty by assuming that the average of people’s judgments was an acceptable approximation to true aesthetic value (Eysenck, 1941b, 1942). Measuring people’s aesthetic taste, thus, became a simple matter of subtracting their judgment from the group norm. People whose judgment approached the group average were highly aesthetically sensitive or had good taste. People whose judgment deviated from the group norm were aesthetically insensitive or had bad taste (Fig. 1).

**FIG. 1**

Eysenck’s measure of aesthetic sensitivity or good taste.
3 PROVING THE UNIVERSALITY OF THE GENERAL FACTOR OF AESTHETIC APPRECIATION

Eysenck’s (1940) only evidence for a general objective factor of aesthetic appreciation was 18 British participants’ rank ordering of 18 picture sets. His claim that this was a universal factor, common to all humans regardless of culture, was empirically unfounded. Its only support was his commitment to a conception of mental ability that had been handed down from Galton to Spearman to Burt. It therefore became imperative to obtain evidence that the general factor of aesthetic appreciation indeed cut across cultures.

But cross-cultural evidence proving the universality of the general factor of aesthetic appreciation initially refused to turn up. McElroy (1952) and Lawlor (1955) were the first to test Eysenck’s (1940) universalist claims (Table 1). McElroy (1952) presented 40 male Australian Aborigines and 20 white Australian males with 10 sets of images similar to those developed by Eysenck (colored reproductions of flowers, butterflies, fishes, birds, paintings of landscapes, polygons, and so on) and asked them to place the images in each set in order of liking. Lawlor (1955) asked 56 Ghanaian and 56 English participants to indicate the two most liked and the two least liked designs from a set of 8, taken from decorations on wooden carvings, metal figures, and woven material in common use in Ghana at the time. Both studies reported high within-culture agreement in ranking and preference, but negligible between-culture agreement. McElroy’s (1952) cross-cultural rank correlations varied between −0.18 and 0.11, depending on the set, and Lawlor’s (1955) analysis produced a cross-cultural correlation value of −0.17. Both studies agreed in their conclusions: “Within each of the groups there is considerable agreement of choice and evidence of central tendency both in likes and dislikes; to this extent each group taken separately confirms the findings of previous workers (…) There is, however, no agreement at all between the preferences of the two cultural groups. The absence of correlations makes it clear that there is no general agreement which extends beyond the cultural boundaries” (Lawlor, 1955, p. 690).

Cross-cultural evidence for Eysenck’s general factor of aesthetic appreciation was obtained only when he turned to cross-cultural studies himself (Table 1). Eysenck used three different sets of materials in his studies: simple graphic designs, Birkhoff’s (1932) polygons, and Götz et al.’s (1979) Visual Aesthetic Sensitivity Test (VAST). Eysenck and Iwawaki’s (1971, 1975) studies revealed correlations in the liking ratings for simple designs and polygons awarded by British and Japanese participants that ranged from 0.60 to 0.82. Moreover, a factor analysis of the ratings revealed common preference types for rectangular, circular, interlaced, star-shaped designs. Soueif and Eysenck (1971, 1972) reported similar results comparing Egyptian and British pleasingness ratings for Birkhoff’s (1932) polygons. The correlations in these studies ranged from 0.55 to 0.72, and a factor analysis again revealed common formal factors underlying participants’ preferences: rectangularity, simplicity, symmetry, etc. Iwawaki et al. (1979) and Chan et al. (1980) compared
## Table 1  Studies Testing the Universality of Eysenck’s General Factor of Aesthetic Appreciation

<table>
<thead>
<tr>
<th>Study</th>
<th>Materials</th>
<th>Participants</th>
<th>Task</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>McElroy (1952)</td>
<td>10 sets of between 10 and 15 visual stimuli (drawings of plants, animals, landscape paintings, polygons, etc.)</td>
<td>Australian Aborigines (40)Australian Caucasians (20)</td>
<td>Place images in each set in order of liking</td>
<td>High within-culture agreement, negligible between-culture agreement. Cross-cultural correlations between −0.18 and 0.11</td>
</tr>
<tr>
<td>Lawlor (1955)</td>
<td>8 geometric designs on wood, metal, and cloth</td>
<td>Ghana (56)Britain (56)</td>
<td>Indicate the two most and least liked designs</td>
<td>High within-culture agreement, negligible between-culture agreement. Cross-cultural correlation of −0.17</td>
</tr>
<tr>
<td>Eysenck and Iwawaki (1971)</td>
<td>131 geometric designs and 135 polygons</td>
<td>Britain (179)Japan (45 rated the polygons, 70 rated the designs)</td>
<td>Indicate liking on a 1–5 Likert scale</td>
<td>Correlations between the samples were 0.82 for polygons and 0.60 for designs</td>
</tr>
<tr>
<td>Soueif and Eysenck (1971)</td>
<td>90 polygons</td>
<td>Britain (777 art students, 356 nonart students)Egypt (697 art students, 199 nonart students)</td>
<td>Indicate pleasingness on a 1–7 Likert scale</td>
<td>Correlations between British and Egyptian art students were 0.72 and between British and Egyptian nonart students was 0.55. Common image factors underlying British and Egyptian participants’ ratings</td>
</tr>
<tr>
<td>Soueif and Eysenck (1972)</td>
<td>90 polygons</td>
<td>Egypt (792 art students, 145 nonart students)</td>
<td>Indicate pleasingness on a 1–7 Likert scale</td>
<td></td>
</tr>
<tr>
<td>Eysenck and Iwawaki (1975)</td>
<td>131 geometric designs</td>
<td>Japan (206)Britain (179)</td>
<td>To rate how much they liked each design on a 1–5 Likert scale</td>
<td>Correlations between Japanese and British participants ranged from 0.61 to 0.65. Factor analysis of images revealed a very similar structure</td>
</tr>
<tr>
<td>Iwawaki et al. (1979)</td>
<td>VAST: 42 pairs of abstract designs</td>
<td>Japan (327 children, 308 adults)Britain (369 children, 111 adults)</td>
<td>To identify which in each pair is the better design, the more harmonious</td>
<td>Correlations between Japanese and British participants ranged from 0.65 to 0.90</td>
</tr>
<tr>
<td>Chan et al. (1980)</td>
<td>VAST: 42 pairs of abstract designs</td>
<td>China (539 children, 202 adults)</td>
<td>To identify which in each pair is the better design, the more harmonious</td>
<td>Correlations between scores of Chinese participants and Iwawaki et al.’s British participants ranged from 0.58 to 0.85</td>
</tr>
</tbody>
</table>
British, Japanese, and Chinese participants’ responses on the Visual Aesthetic Sensitivity Test (Götz et al., 1979). Their results showed correlations of between 0.58 and 0.90 in the items’ difficulty score, indicating that items that were easy for British participants also tended to be easy for Japanese and Chinese (Hong Kong) participants. These results provided further reassurance that the rules governing aesthetic appreciation are common across cultures.

Eysenck concluded from these results that “there appear to exist firm cross-cultural tendencies which predispose people to prefer certain polygonal forms to others; these predispositions not only govern overall preference judgments, but extend to the finer detail into which the overall judgments can be split. Such a conclusion would seem to contradict a purely environmental, cultural interpretation of aesthetic judgments, and suggest the possibility of a more deeply based, biologically determined cause for aesthetic judgments” (Souef and Eysenck, 1972, p. 152).

The eight studies summarized in this section sought cross-cultural evidence for Eysenck’s (1940) general objective factor of aesthetic appreciation. Six of them found moderate agreement in the aesthetic preference of participants from different cultures. Still, the evidence for a general objective factor of aesthetic appreciation common to all humans regardless of culture is limited in several ways.

The first limitation has to do with the samples of participants. Eysenck’s studies generally included large samples of participants. In total, over 1000 British and Egyptian participants took part in them. Nevertheless, three of the studies compared British and Japanese samples, two of them compared British and Egyptian samples, and one compared British and Chinese samples. Thus, the populations of only four countries were sampled, and Great Britain was always the point of reference (Fig. 2).

**FIG. 2**

Number of studies and sample sizes of studies testing the universality of Eysenck’s general factor of aesthetic appreciation.
The second limitation is that cross-cultural agreement seems to have been moderated by the complexity of the stimuli and tasks. Eysenck’s studies used simpler images than McElroy (1952) and Lawlor’s (1955): Whereas Eysenck used geometric designs of one sort of another, McElroy (1952) and Lawlor (1955) used sets of artworks, following Eysenck’s (1940) original approach. In addition, fewer stimuli were presented on each trial in Eysenck’s tasks than in McElroy (1952) and Lawlor’s (1955): Whereas Eysenck asked participants to rate individually presented stimuli or to choose one out of pairs of very similar designs, McElroy (1952) and Lawlor (1955) asked participants to rank order or choose among entire sets of between 8 and 15 simultaneously presented images.

The third limitation is that, although participants seemed to generally agree in their responses to simple object features, it is not entirely clear what these features were. Birkhoff’s (1932) polygons vary quantitatively in order and complexity, but Eysenck and Iwawaki’s (1971, 1975) designs included qualitatively different classes of items, and although the VAST stimuli were designed to vary in harmony or “good Gestalt,” the test itself is psychometrically weak (Myszkowski and Storme, 2017), and people’s performance is related to their personality, intelligence, and creativity (Myszkowski et al., 2014, 2018). The VAST, therefore, does not provide evidence for a specific ability for aesthetic appreciation. It actually proves that aesthetic preference arises from the interaction of many general cognitive, affective, and experiential factors (Leder et al., 2004).

In sum, the eight studies reviewed in this section suggest that there is moderate agreement between people from Great Britain and people from Egypt, Japan, and China in their preference for simple geometric figures, when presented on their own or in pairs. Contrary to Eysenck’s (1940) hypothesis, this agreement does not owe to a specific ability for aesthetic appreciation. Rather, it reflects the influence of general cognitive abilities, creativity, and personality traits.

### 4 CROSS-CULTURAL COMPARISON OF EXPERT ART KNOWLEDGE

Eysenck’s notion of the general factor of aesthetic appreciation, and his cross-cultural work, rested on the assumptions that the average ranking of images in a set represented their aesthetic value, and that the extent to which people’s preference agreed with the average constituted a valid measure of their aesthetic sensitivity. Child (1962) was skeptical of these assumptions and set out to test them experimentally. He used 12 sets of 60 pictures depicting groups of people, landscapes, abstract art, still lives, religious pictures, and so on. Child (1962) asked 14 art or art history students to divide each of the sets into 10 piles of approximately 6 pictures each according to their aesthetic merit. He then asked 2 different groups of 22 students with little or no artistic training to distribute each of the sets into 10 piles of approximately 6 pictures each, from those they liked least to those they liked most. Child’s (1962) results revealed only very small correlations between aesthetic merit rank.
and preference rank, and no clear relation between individuals’ agreement with
group preferences and their agreement with the external criterion of aesthetic value.
Together, these results suggest that it is wrong, as Eysenck had, to equate group
averages of preference with aesthetic value, and similarity to average preferences
with aesthetic sensitivity.

Aesthetic sensitivity, Child (1962) concluded, is properly measured in relation to
an external standard set by experts, not in relation to group averages (Fig. 3). Accord-
ingly, individual differences in aesthetic sensitivity reflect differences in familiarity
with and acceptance of the tradition of aesthetic evaluation. In Child’s (1962, 1965)
view, aesthetic sensitivity is cultivated with practice and is the result not of a specific
ability, but of general cognitive style and personality. High aesthetic sensitivity is the
manifestation of an “actively inquiring mind, seeking out experience that may be
challenging because of complexity or novelty, even alert to the potential experience
offered by stimuli not already in the focus of attention, interested in understanding
each experience thoroughly and for its own sake rather than contemplating it super-
ficially and promptly filing it away in a category, and able to do all this with respect
to the world inside himself as well as the world outside” (Child, 1965, p. 508).

Child’s (1965) humanistic approach to psychology led him to expect high agree-
ment in aesthetic valuation among experts from different cultures, given the com-
monalities among the traditions of aesthetic assessment around the world, and the
openness of art experts to the aesthetic features of other cultures. He began his
cross-cultural studies by comparing the responses of African and North American
participants to a set of 39 photographs of BaKwele tribal masks (Child and Siroto,
1965). Specifically, their sample included 16 male members of the BaKwele tribe in
Africa between the ages of 17 and 70, who had carved masks, participated in rituals
involving masks, or showed great interest in masks. Each participant chose the four
he most preferred from the 39, then the next preferred four, and so on until all the
masks had been selected. The second group of participants included 13 advanced art
students from Connecticut. These participants, considered expert aesthetic judges, were asked to rate the aesthetic value of the masks, or “how good they were as works of art.” Child and Siroto’s (1965) results revealed a reasonable agreement between both groups of participants: the images that had been judged as having greater aesthetic value by American experts were also those which BaKwele judges tended to prefer. The authors interpreted these results as a preliminary indication that the masks “do really vary one from another in general suitability for arousing and sustaining interest in anyone who enjoys visual art, and both sets of judges are sensitive to this variation” (Child and Siroto, 1965, p. 357).

Child’s next experiment (Ford et al., 1966) can only be regarded as a pilot study. They compared the judgments of 15 other Connecticut art experts—in this case, art teachers and professional artists—with preference ratings awarded by potters, carvers, and weavers relatively unfamiliar with Western culture. Six of these were from Fiji and four from the Western Cycladic Islands in Greece. The participants viewed 11 trios of pictures of masks, still-life drawings, and/or abstract paintings from Western culture. North American experts were asked to judge the relative artistic merit of the materials, whereas the Fijian and Greek participants were asked to order the images in each trio according to their personal preference. The results showed that Fijians’ preference significantly correlated with the US experts’ assessment. There was no significant correlation between Greek participants’ preference and US experts’ assessment.

In two subsequent studies, Child compared the aesthetic judgments of Japanese and American art experts (Iwao and Child, 1966; Iwao et al., 1969). Participants viewed pairs of black and white photographs of artworks of the same type, style, and content, and pairs of full-color artistic abstract paintings. Each pair represented artworks that had been judged as unequal in artistic quality by at least 12 out of 14 American experts. Iwao and Child (1966) asked traditional Japanese potters to choose the item in each pair that was better artistically. Iwao et al. (1969) presented the same materials and task to other Japanese participants related with the practice or teaching of at least one Japanese artistic tradition, including flower arranging, the tea ceremony, textile dying, manufacture of dolls, woodcutting, painting, and calligraphy.

Iwao and Child (1966) found that American and Japanese experts agreed on 61% of the pairs of black and white reproductions of artworks, and on 57.5% of the color artworks, and Iwao et al. (1969) found that they agreed on 58.5% of the pairs of black and white reproductions of artworks, and on 51.5% of the color artworks. Iwao and Child (1966) and Iwao et al. (1969) concluded that the data reflect a tendency of people interested in art to agree on their aesthetic judgment, irrespective of their particular traditions.

These studies had demonstrated that, to a certain extent, people from different parts of the world who are interested in art tend to show agreement as to what constitutes good artwork. But what about the sort of cognitive style and personality traits Child (1965) had linked with aesthetic sensitivity? Child and Iwao (1968), Anwar and Child (1972), and Haritos-Fatouros and Child (1977) sought to determine whether the same relation between aesthetic preference and personality traits could
be found in diverse cultures. They showed university students in Pakistan (Anwar and Child, 1972) and people with diverse educational and occupational backgrounds in Greece (Haritos-Fatouros and Child, 1977) 100 pairs of slides containing two artworks differing in artistic merit, and asked them to judge or guess which one of the artworks in each pair was generally considered to be better than the other by people with interests in art. Child and Iwao (1968) followed the same procedure, but used only 80 pairs of images. Participants in the three studies also answered a 49-item questionnaire measuring three personality traits: tolerance for complexity, independence of judgment, and regression in the service of the ego. The results showed a strong tendency for the Pakistani, Greek, and Japanese participants to agree with the US experts. Also, in Pakistan, Greece, and Japan, as in the United States, individual differences in aesthetic preference correlated with a pattern of self-characterization that indicates a liking for autonomy, variety, and intellectual and perceptual challenge (Anwar and Child, 1972; Child and Iwao, 1968; Haritos-Fatouros and Child, 1977). The authors concluded that these results constitute evidence for common aesthetic judgment in people with interest in aesthetic values and that, despite all cultural differences, there is a great resemblance in the personal tendencies that lead people to develop interest in art (Anwar and Child, 1972; Child and Iwao, 1968; Haritos-Fatouros and Child, 1977; Table 2).

Child’s (1965) cross-cultural studies reviewed in this section were motivated by the hypothesis that people with a strong background and interest in art and aesthetics would agree in their assessment of artistic value, regardless of culture. He believed that such cross-cultural agreement was not the result of a specific innate ability to detect beauty, as Eysenck had postulated. In his view, cross-cultural similarities in judgment owed to cross-cultural similarities in the way extensive experience with art, independent thinking, openness to new experiences, and attraction to challenges influence appraisals of art. Child’s (1981) summary of his own studies indicated that 92.5% of cross-cultural correlations were positive, and that the average correlation across studies was 0.295. He believed this was proof for an overwhelming cross-cultural agreement in artistic merit.

There are, however, several factors limiting Child’s (1981) conclusions. First, they are based on very few studies with sample sizes that were often small. It is uncertain whether the judgments obtained from such samples are representative of the populations they were selected from. Second, all his studies took North American experts as point of reference (Fig. 4). This problem is exacerbated by what seems to be the repeated use of the same assessments by North American experts in several studies. Third, in some of his studies Child asked all groups of participants to rate artistic merit, but in other studies he asked North Americans to rate artistic merit and non-North Americans to rate preference. Showing that two groups of experts agree in their assessment of artistic merit is different to showing that one group of experts prefer what another group of experts regards as artistically valuable. It is uncertain whether such studies can be combined to support a single argument.

Taken together, the cross-cultural studies carried out by Irwin Child and his colleagues provide limited evidence for a moderate agreement in judgments of the
<table>
<thead>
<tr>
<th>Study</th>
<th>Materials</th>
<th>Participants</th>
<th>Task</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child and Siroto (1965)</td>
<td>39 photographs of BaKwele tribal masks</td>
<td>BaKwele, West Africa (16), with knowledge of masks United States (13), advanced art students</td>
<td>North Americans judged the masks’ aesthetic value (how good they were as works of art). Africans chose the masks they found more beautiful or liked more</td>
<td>Significant agreement between North Americans and Africans in their choices</td>
</tr>
<tr>
<td>Ford et al. (1966)</td>
<td>11 trios masks, still-life drawings, and/or abstract paintings from Western culture</td>
<td>United States (15), professional artists and art teachers Greece (4), craftsmen, viewed 5 trios Fiji (6), craftsmen, viewed 11 trios</td>
<td>North Americans judged the materials’ artistic merit. Greek and Fijians ordered the images in each trio in order of preference</td>
<td>Significant agreement between the Fijians and North Americans (correlation of 0.56). Nonsignificant trend toward agreement between Greeks and North Americans (correlation of 0.28)</td>
</tr>
<tr>
<td>Iwao and Child (1966)</td>
<td>51 pairs of b/w photographs of artworks, one aesthetically better than the other 16 pairs of color postcard reproductions of abstract artworks</td>
<td>Japan (60), potters, judged 25 or 26 pairs United States (14), professional artists and art teachers</td>
<td>Indicate which in each pair was better as a work of art</td>
<td>Some agreement in judgments between the samples</td>
</tr>
<tr>
<td>Iwao et al. (1969)</td>
<td>51 pairs of b/w photographs of artworks, one aesthetically better than the other 16 pairs of color postcard reproductions of abstract artworks</td>
<td>Japan (31), teachers of at least one Japanese artistic tradition</td>
<td>Indicate which in each pair was better as a work of art</td>
<td>Participants agreed with Iwao and Child’s (1966) North American sample on 58.5% of the trials for b/w photographs, and on 51.5% of the trials for color abstract artworks</td>
</tr>
<tr>
<td>Study</td>
<td>Materials</td>
<td>Participants</td>
<td>Task</td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Child and Iwao (1968)</td>
<td>7 different sets, each consisting of 130 pairs of diverse artworks (paintings, architecture, glassware, metalwork, etc.) one aesthetically better than the other</td>
<td>United States (72), secondary school, grades 7–12&lt;br&gt;Japan (131), male college undergraduates, saw only 80 of the pairs</td>
<td>North Americans and half of the Japanese indicated which in each pair they prefer. The other half of the Japanese indicated which was superior aesthetically. Answered a 49-item personality questionnaire</td>
<td></td>
</tr>
<tr>
<td>Anwar and Child (1972)</td>
<td>100 pairs of artworks, one aesthetically better than the other</td>
<td>Pakistan (231)</td>
<td>Indicate which one experts judged as the better artwork. Answered a 49-item personality questionnaire</td>
<td></td>
</tr>
<tr>
<td>Haritos-Fatouros and Child (1977)</td>
<td>100 pairs of artworks, one aesthetically better than the other</td>
<td>Greece (34 art experts, 28 architects, 64 architecture students, 74 engineering students, 60 secondary school boys, 56 factory workers)</td>
<td>Indicate which one experts judged as the better artwork. Answered a 47-item personality questionnaire</td>
<td></td>
</tr>
</tbody>
</table>

**Results**

- Similarity between the samples in the relation between personality (cognitive independence and openness) and aesthetic sensitivity
- Agreement with United States experts
- Personality (cognitive independence and openness) predicted aesthetic sensitivity in a similar way
- Global agreement with United States experts of 54.7% ranging from 72.9% (art experts) to 41.4% (young boys)
- Personality scores correlated with aesthetic sensitivity in general (0.43), but varied greatly, from −0.12 (young boys) to 0.59 (older boys)
artistic merit of visual artworks between North American art students, teachers, and artists, on the one hand, and West African, Greek, Pakistani, and Japanese craftsmen and artists, on the other. Additionally, there is also some evidence for the common influence of certain personality traits, including independent thinking, openness to experience, on aesthetic judgment across cultures.

5 CROSS-CULTURAL STUDIES AFTER THE NEW EXPERIMENTAL AESTHETICS

During the 1960s and 1970s empirical aesthetics was transformed by Berlyne’s (1971, 1974) program of psychobiological aesthetics, which set the trend for the field in the following decades. Berlyne conceived aesthetic activities as intrinsically motivated stimuli-seeking behaviors that are reinforced by exposure to stimuli patterns. The rewarding potential of a stimulus, that is to say, its capacity to generate preference or pleasure, depends on the amount of potential information transmitted to the organism through psychophysical, ecological, and collative features. Such features, including novelty, surprise, complexity, ambiguity, or asymmetry, are the prime constituents of the aesthetic aspect of objects. One of Berlyne’s (1970, 1971) main predictions was that people, like all organisms, find the maximum of positive hedonic tone with intermediate levels of arousal, and that therefore they should prefer stimuli representing intermediate levels of collative properties, such as complexity. He created several sets of materials varying in different dimensions of visual complexity, and showed that people’s preference is indeed influenced by variations in complexity (Berlyne, 1970, 1971).

Berlyne’s explanation of aesthetic appreciation relied on basic functions of brain reward and aversion systems. It followed, therefore, that regardless of culture people would respond in the same way to variations in complexity. Testing this prediction
has been the goal of a number of cross-cultural studies. Despite this common objective, such studies varied substantially in their materials and methods (Table 3). Farley and Ahn (1973) used polygons varying in complexity, measured as the number of sides, from 4 to 160. Berlyne et al. (1974) and Berlyne (1975) used simple designs varying in eight different forms of complexity (irregularity of arrangement, amount of material, heterogeneity of elements, irregularity of shape, incongruity, number of independent units, asymmetry, and random redistribution). Uduehi (1995) used the Maitland Graves Design Judgment Test, which consists of 90 pairs or triplets of abstract geometric designs. Bode et al. (2017) used 60 abstract patterns varying in complexity and symmetry. The tasks included choosing the most and least liked stimuli (Farley and Ahn, 1973), selecting an item in a pair to be the most attractive, pleasing (Berlyne, 1975; Berlyne et al., 1974), or preferred (Uduehi, 1995), or rating the beauty of individually presented items (Bode et al., 2017). The compared samples include natives of Korea (25), India (25), Turkey (15), Hong Kong (25), and United States (25) studying at the same North American University (Farley and Ahn, 1973), 300 Ugandans and 30 Canadians (Berlyne et al., 1974), 60 Indians (Berlyne, 1975), 516 North Americans and 510 Nigerians (Uduehi, 1995), and 200 Egyptians and 200 Britons (Bode et al., 2017).

Almost all of these studies report that complexity influenced responses of participants in all samples. But the results differed in the specific way complexity influenced those responses. Farley and Ahn (1973) found no significant differences in the average level of complexity of the four figures most preferred by the participants in each of the groups, which tended to be intermediate (between 64.12 and 84.40). Berlyne et al. (1974) found that Ugandan and Canadian participants tended to prefer the simpler item in each pair, with correlations between both samples of 0.82 with regard to attractiveness and that of 0.89 with regard to pleasingness. Uduehi (1995) found that North Americans preferred the regular and simple designs whereas Nigerians preferred the irregular and complex designs. Bode et al. (2017) found that although there was a large correlation in responses from both countries (0.89), British participants’ beauty ratings were uninfluenced by complexity, whereas Egyptians’ ratings were inversely correlated with complexity.

Berlyne’s (1970, 1971) framework predicted common responses across cultures to other variables besides complexity. Symmetry is one of these variables. Three studies, including two of the aforementioned ones, examined the influence of culture on preference for symmetry and regularity. Uduehi’s (1995) results showed that Nigerians and North Americans prefer symmetry. Bode et al. (2017) showed that Egyptian and British participants agreed in their preference for reflectional and rotational symmetry. Makin et al. (2018) asked 50 British and 50 Egyptian participants to rate how much they liked a series of regular and random patterns using a 0–100 Likert scale. Their results show that participants in both samples rated symmetric patterns higher than the random ones. Moreover, in both samples the relative preference for the patterns was linearly related to the amplitude of the sustained posterior negativity EEG component, which is generated by the extrastriate visual cortex in response to symmetry.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Study</th>
<th>Stimuli</th>
<th>Participants</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity</td>
<td>Farley and Ahn (1973)</td>
<td>Polygons varying in 12 levels of complexity, measured as the number of sides, from 4 to 160</td>
<td>Korea (25) India (25) Turkey (15) China (25) United States (25) All attending the same US university</td>
<td>Common preference for intermediate complexity levels</td>
</tr>
<tr>
<td></td>
<td>Berlyne et al. (1974)</td>
<td>16 pairs of visual patterns with one simple and one complex pattern</td>
<td>Uganda, urban (100) Uganda, intermediate (100) Uganda, rural (100) Canada (30)</td>
<td>Urban Ugandans and Canadians prefer the simple patterns, while Rural Ugandans prefer the complex patterns</td>
</tr>
<tr>
<td></td>
<td>Berlyne (1975)</td>
<td>16 pairs of visual patterns with one simple and one complex alternative</td>
<td>India, urban (30) India, rural (30)</td>
<td>Urban Indians, like Canadians, prefer the simple patterns, while rural Indians prefer the complex patterns</td>
</tr>
<tr>
<td></td>
<td>Uduehi (1995)</td>
<td>90 pairs or triplets of abstract geometric figures</td>
<td>United States (516) Nigeria (510)</td>
<td>Americans showed greater preference for simple figures, and Nigerians for complex ones</td>
</tr>
<tr>
<td></td>
<td>Bode et al. (2017)</td>
<td>60 abstract patterns varying in complexity and symmetry</td>
<td>Britain (200) Egypt (200)</td>
<td>British participants’ beauty ratings were uninfluenced by complexity. Egyptians’ ratings were inversely correlated with complexity</td>
</tr>
<tr>
<td></td>
<td>Bode et al. (2017)</td>
<td>60 abstract patterns varying in complexity and symmetry</td>
<td>Britain (200) Egypt (200)</td>
<td>Common higher beauty ratings for symmetric patterns</td>
</tr>
<tr>
<td>Regularity</td>
<td>Makin et al. (2018)</td>
<td>Abstract patterns varying in regularity</td>
<td>Britain (50) Egypt (50)</td>
<td>Common higher liking for regular patterns. Common relation between liking and SPN amplitude</td>
</tr>
</tbody>
</table>
Table 3 Cross-Cultural Studies Within the New Experimental Aesthetics—cont’d

<table>
<thead>
<tr>
<th>Feature</th>
<th>Study</th>
<th>Stimuli</th>
<th>Participants</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion</td>
<td>McManus and Wu (2013)</td>
<td>21 rectangles varying in height–width proportion</td>
<td>Britain (20)</td>
<td>Common preference for proportions close to the golden section and squares. Common meanings conveyed by the stimuli</td>
</tr>
<tr>
<td>Curvature</td>
<td>Gómez-Puerto et al. (2018)</td>
<td>36 pairs of images of objects varying in the curvature or sharpness of their contour</td>
<td>Mexico (23)</td>
<td>Common preference for curved contours</td>
</tr>
<tr>
<td>Contrast</td>
<td>Van Dongen and Zijlmans (2017)</td>
<td>80 pairs of artworks, one with high contrast, the other with low contrast</td>
<td>United States (150)</td>
<td>Common higher liking for the high-contrast alternatives</td>
</tr>
<tr>
<td>Brightness</td>
<td>Berlyne (1976)</td>
<td>10 postcard-size colored reproductions of Western paintings varying in brightness and abstraction</td>
<td>India, urban (10)</td>
<td>Indian villagers preferred brighter paintings than the Canadian students, who preferred brighter paintings than the Indian students</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Berlyne (1976)</td>
<td>10 postcard-size colored reproductions of Western paintings varying in brightness and abstraction</td>
<td>India, rural (10)</td>
<td>Preference of Canadian students for nonrepresentational artworks was significantly higher than that of Indian villagers, while the preference of Indian students for those images is intermediate between both other groups</td>
</tr>
</tbody>
</table>
The cross-cultural similarities in the way proportion, curvature, contrast, brightness, and abstraction influence aesthetic preference have also been examined, though to a lesser extent than complexity and symmetry. McManus and Wu (2013) tested the responses given by a sample of 20 British and 20 Chinese participants to rectangles varying in proportions (height vs width). Their results showed that rectangle proportion influenced British and Chinese participants’ preference, that both groups had a bimodal preference distribution favoring squares and rectangles close to the golden section, and that both groups agreed on the meanings conveyed by rectangles of certain proportions. Thus, across cultures, (a) people take proportion into consideration when asked to express their aesthetic preference for geometric figures, (b) certain proportions are preferred to others, and (c) certain proportions convey specific meanings.

Gómez-Puerto et al. (2018) studied cross-cultural similarities in the influence of contour curvature and angularity on aesthetic preference. They asked 23 Mexican, 13 Ghanaian, and 20 Spanish participants to perform a two-alternative forced-choice task consisting in choosing between photographs of curved and sharp-angled versions of the same real objects presented for 80ms. Their results showed that participants in the three samples chose the curved-contour alternative significantly more often than the sharp-angled one. Moreover, there was no significant difference in the extent to which people from different cultures preferred the curved alternative.

Van Dongen and Zijlmans (2017) aimed to determine whether visual contrast influences preference across cultures. They carried out an online study recruiting a sample of 150 United States and 150 Indian participants who viewed pairs of images varying in contrast and were asked to pick the one they liked better. Their results showed that participants in both samples liked high-contrast versions more than the low-contrast versions of the artworks.

Berlyne (1976) carried out a series of studies aimed at comparing Canadian students, Indian students, and Indian villagers’ aesthetic preference for stimuli varying in brightness and abstraction. The materials consisted of 10 postcard-size colored reproductions of Western paintings presented in all 45 possible pairings. In the study comparing preferences, 10 Indian villagers (all men), 10 Indian students (5 women and 5 men), and 10 Canadian students (7 women and 3 men) were asked to indicate the image in each pair they most preferred. The results of this study revealed that Indian villagers preferred brighter paintings than the Canadian students, who preferred brighter paintings than the Indian students. Also, the preference of Canadian students for nonrepresentational artworks was significantly higher than that of Indian villagers, while the preference of Indian students for those images was intermediate between both other groups. Despite these differences, Berlyne (1976) argued that the preferences of the three groups of participants were influenced by how representational and how bright the paintings were.

The studies reviewed in this section support Berlyne’s (1980) conclusion that “Art all over the world, it appears, exhibits a common dependence on certain dimensions of variation related to collative stimulus properties, even if the preferred segments of these dimensions vary from society to society” (Berlyne, 1980, p. 354).
They provide converging evidence that across cultures aesthetic preference is influenced by complexity, symmetry, proportion, curvature, and other collative variables. These seem to be the sort of basic features that convey information relevant to aesthetic preference. The precise nature of their influence, however, is far from clear. Although complexity determined aesthetic preference, it did so inconsistently. In some cultures participants preferred low levels of complexity, in others they preferred intermediate levels, and in some others they preferred high levels. Symmetry, on the other hand, seems to have highly consistent effects on aesthetic preference. All studies reported that participants in all samples preferred symmetrical or regular stimuli to asymmetrical or irregular stimuli.

Although these studies compared samples from countries in Africa, Asia, Europe, and North America, providing a broader coverage than the studies included in the previous two sections (Fig. 5), sample sizes tended to be small, including fewer than 50 participants in most cases. Additionally, the amount and strength of the evidence for the role of the different collative variables in aesthetic preference are unequal. Complexity and symmetry/regularity have received most of the attention, with several studies conducted using samples from different countries. The remaining collative variables have received much less attention, with only single studies comparing samples from two or three countries, making it impossible to assess consistency across studies.

Taken together, the cross-cultural studies that followed Berlyne’s (1971) approach provide convincing evidence that aesthetic preference across cultures is influenced by a common set of visual features. This evidence is currently strongest for complexity and symmetry. Although there is cross-cultural agreement on the formal dimensions that people rely on when expressing liking or preference, there seems to be some cross-cultural disagreement on the preferred values of some of these

![Sampled participants and number of studies](image-url)

**FIG. 5**
Number of studies and sample sizes of cross-cultural studies after the new experimental aesthetics.
dimensions. It remains to be explained why preference for symmetry/regularity is so consistent across cultures, whereas preference for complexity seems to be so inconsistent across cultures. It is currently not possible to determine whether this disparity owes to differences in the way people process complexity and symmetry, or to differences in the way they have been manipulated and measured in the studies reviewed here.

6 CONCLUSIONS

One of the major goals of empirical aesthetics is to determine the way in which object, person, and context attributes contribute to aesthetic appreciation (Jacobsen, 2006; Pearce et al., 2016). A century and a half worth of research has produced a complex picture of how such attributes are processed and integrated. Among many other lessons, we have learnt how art knowledge influences people’s aesthetic appreciation by modulating psychological processes, from perception to affect (Leder et al., 2014; Pang et al., 2013; Wiesmann and Ishai, 2010), how framing changes the way people look at and value art and other people (Kirk et al., 2009; Leder et al., 2010; Locher et al., 2015), and how context influences people’s expectation and heightens or attenuates their enjoyment of art (Brieber et al., 2015; Pelowski et al., 2017a).

Such conclusions derive from studies conducted on European or North American samples. But we assume that knowledge, framing, and context have similar effects on people’s aesthetic appreciation, independently of country of origin and cultural background. Given the scarcity of cross-cultural studies, we can only assume that the findings of empirical aesthetics apply to all humans; to those living in large-scale industrialized and small-scale nonindustrialized societies alike. This is not an unreasonable assumption. After all, the studies reviewed in the preceding sections seem to prove that certain aspects of aesthetic appreciation are common across cultures. On the other hand, the evidence supporting the assumption of cross-cultural extensibility is uneven, scarce, and weak.

The unfortunate bottom line is that cross-cultural empirical aesthetics can claim few solid general principles. The main reason for this is the field’s inconsistency and disjointedness. Cross-cultural empirical aesthetics is more a rough patchwork of different research programs than it is an organized and integrated field. Each program grew with its own particular set of theories, goals, methods, materials, and interpretations. Eysenck aspired to confirm his faith in a general objective factor of aesthetic appreciation, inherent to humans’ biological constitution and, thus, common to all. Child found Eysenck’s biological determinism arbitrary and unpersuasive and aimed to show how in all cultures art experience and a certain cognitive style nurture an eye for excellence in art. Berlyne endeavored to prove that collative variables influenced aesthetic appreciation through basic reward and aversion systems common to all human brains. The materials, samples, and procedures were tailored to suit each program’s purpose. Eysenck used materials stripped of any cultural or personal
relevance to seek common formal determinants of aesthetic preference in general populations. Child used original and altered artworks to study consensus on artistic merit among people with careers in art. Berlyne designed sets of materials that varied along specific collative dimensions to ascertain their impact on preference in general populations.

All three programs were successful in their own way. Eysenck found similarities across cultures in the sort of basic features that influenced preference. Child found similarities in the way experience, cognitive style, and personality shape appraisals of artistic merit. Berlyne found that collative variables have similar effects on aesthetic preference across cultures. When considered together, however, their success actually highlights the equivocal relation between theory and evidence in cross-cultural empirical aesthetics. The same sort cross-cultural agreement was presented as evidence for a genetically determined specific ability to appreciate beauty, for the common effects of general learning abilities and experience, and for common information processing and motivational brain mechanisms. It seems anything can be proven with some cross-cultural data, suitable methods, and a slack enough theory.

At this point, therefore, any conclusion should minimize theoretical interpretation and keep to the facts. These suggest a moderate cross-cultural agreement in aesthetic appreciation for simple visual materials, owing to general perceptual, cognitive, and affective processes common to all humans. If there is anything universal about aesthetic appreciation is its reliance on certain formal dimensions, especially complexity and symmetry, but also proportion, contour, brightness, and contrast. These seem to be among the basic object features that contribute to aesthetic appreciation across cultures. The explanation for the universal relevance of such features for aesthetic appreciation is found in the comparative study of visual preferences across species.

Visual preference is not unique to humans. Primates and other orders of animals have strong preferences in their attention, choices, and behavior toward socially informative stimuli. But nonhuman animals also attend to and prefer certain nonsocial visual features (Premack, 1984). Pigeons (Columba livia), sparrows (Padda oryzivora), and laboratory mice are sensitive to the sort of features that distinguish painters’ styles, and they are able to use such features to discriminate their artworks from those by other artists (Ikkatai and Watanabe, 2011; Watanabe, 2001, 2013; Watanabe et al., 1995). Animals also show certain preferences for formal features that constitute artworks’ design elements (Feldman, 1971), and which commonly drive aesthetic preference in humans (Meier, 1942; Valentine, 1962). These include color, brightness, shape, regularity, symmetry, proportion, or contour curvature. For instance, rats (Rattus norvegicus) prefer to explore rounded objects than cylindrical ones, and objects with a proportion of 1.2 than those with proportions of 1.6 or 1.8 (Winne et al., 2015). Birds (Coloeus monedula, Corvus corone) show a preferential selection for regular and symmetrical geometrical patterns, though fish (Cichlasoma bicellatum, Carassius carassius, Macropodus opercularis) do not (Rensch, 1958; Tigges, 1963).

Several studies have examined primates’ preference for visual features. Using a self-exposure paradigm, Humphrey (1971, 1972) showed that the time four monkeys
Macaca mulatta) chose to expose themselves to plain color fields increased with brightness. Such preferences were highly consistent in the four tested monkeys. Rensch (1957) studied the preference of a capuchin monkey (Cebus apella) and a vervet monkey (Chlorocebus aethiops) for geometric patterns. Both primates preferred stimuli that contained lines with good continuation, radial and bilateral symmetry, regularity, and repetition of patterns than similar stimuli that lacked these features, and were, thus, irregular. Anderson et al. (2005) replicated and extended Rensch’s (1957) original observations: when presented with a pair of geometric patterns differing in regularity and symmetry, primates—capuchin monkeys (C. apella) and squirrel monkeys (Saimiri sciureus)—systematically approached the regular and symmetrical ones first. Munar et al. (2015) showed that, like humans, chimpanzees (Pan troglodytes) and gorillas (Gorilla gorilla gorilla) prefer objects with curved contours than equivalent ones with angular contours.

In short, human and nonhuman visual preference is attuned to common dimensions. Variations in symmetry, regularity, proportion, and contour influence the behavior, choices, and viewing time of animals, from mice to humans. Humans even share with some other animals a marked preference for certain values along those dimensions: symmetrical and regular designs, curved contours, and bright colors. Noticing symmetry, regularity, proportion, and contour; processing this information; and using it to guide behavior and select among options seem to be general features of animal perceptual and cognitive systems. Aesthetic appreciation relies, thus, on basic systems, common to many animals, that detect and process informative visual features of many kinds of objects and appraise their value relative to the organism’s current state and goals. Such basic information processing and valuation become full-fledged aesthetic appreciation when humans use them to bring meaning to objects, their features, and their value, based on expectations and predictions (Egermann et al., 2013; Salimpoor et al., 2011), beliefs (Kirk et al., 2009; Locher et al., 2015; Pelowski et al., 2017a), prior experience and expertise (Harvey et al., 2010; Pang et al., 2013), currently available information (Swami, 2013), and context (Brieber et al., 2015; Pelowski et al., 2017b).

We set out to determine what—if anything—about aesthetic appreciation is universal. The evidence indicates that, regardless of culture, people base their aesthetic preferences on the same formal dimensions, including complexity, symmetry, proportion, contour, brightness, and contrast. The reason is that aesthetic preference draws upon basic processes that extract and assign value to informative features of the environment. Such processes are common to all humans and to many other species of animals.

ACKNOWLEDGMENT

This research was supported by research grant PSI2016-77327-P (AEI/FEDER, UE), awarded by the Spanish Ministerio de Economía y Competitividad (MINECO).
REFERENCES


References

Chapters 5

102 CHAPTER 5 Cross-cultural empirical aesthetics


