



Grupo de Astrofísica Relativista  
y Radioastronomía

# Scientific Philosophy



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# Aesthetics



*Art* is the result of a human activity. As any product of what human beings do, art can be studied using the tools of science and philosophy. The outcome is *scientific aesthetics*. Art, certainly, is not scientific, but its investigation can be scientific.

I claim that there are not **beautiful things**, there are just things deemed beautiful by some individuals in some context at some instant. And things are considered beautiful because they produce a **positive aesthetic experience** in the individual.

The task of philosophical aesthetics is to elucidate the nature of this experience, as well as the related concepts of aesthetic appreciation, art, work of art, and other meta-artistic ideas.

# Aesthetic experience

Aesthetic experiences are **processes** taking place in the human body, especially in the **brain**. These processes are **triggered by interactions with an object (either artwork or a natural item)** and depend on its objective properties, the art related knowledge of the individual, his or her emotional and physical state, the ambient conditions, and the disposition of the subject.

The aesthetic experience seems to be a multilevel and complex process that exceeds the mere cognitive and sensorial analysis of appreciation of artworks and relies upon visceromotor and somatomotor resonances in the beholder with major emotional centers, such as the insula and the amygdala, involved. The nature and depth of the experience depends strongly on the knowledge, training, and life-style of the subject, along with the external physical conditions (environment, illumination, ambient temperature). The aesthetic experience, then, emerges from the relationships among a sentient subject, an object, and the context in which they are embedded.

The concepts of aesthetic experiences and aesthetic values are linked to each other by means of the following logical necessity:

***An experience of an object is aesthetic if and only if it ascribes a value to the object, and that value is aesthetic.***

Any person unable to have aesthetic experiences will be indifferent to aesthetic judgments. ***Beauty is not found, it is experienced.***

The aesthetic appreciation of different types of objects leads to **aesthetic judgements**. We say that an object, event, or process is beautiful iff it produces in us a particular kind of positive aesthetic experience.

An experience is said positive if, under ideal conditions, makes the subject feel good and creates a desire to continue or repeat the experience.

Specifically,

**Definition:** An item **a** is aesthetically valuable in its aspect **b** for organism **c** in the circumstance **d**, and in the light of the body of knowledge **f** iff a produces a positive aesthetic experience in **c**.



# Beauty

An individual might have a positive aesthetic experience but the cause might not be deemed as beautiful. For instance, some objects might cause disgust or even repulsion, but nevertheless they might trigger cognitive and other brain processes regarded as aesthetically valuable and positive by the individual. So, the relation between positive aesthetic experiences and beauty is not a one-to-one relationship. Beauty is just a subset of all possible aesthetically positive experiences for an individual. **The distinctive characteristics of the elements of the subset is that they induce an experience that is not only deemed positive, but delectable for the subject.**

# Beauty

Beauty is simply the set  $B$  of all objects deemed beautiful by an individual  $b$ , under conditions  $c$ , at a given instant  $t$ . The intersection of  $B_i$  for objects of class  $\mathbf{x}$  in a group  $\mathbf{G}$  of individuals  $i = 1, \dots, n$  in a society  $C$  is the ideal of beauty of  $\mathbf{x}$  in that group.

Not only artworks can be aesthetically valuable. Landscapes, human faces, natural objects, animals, technological artifacts, scientific theories, and many other items can be regarded objects of beauty.

# Art and artworks

'Art' is a polysemous word with multiple referents. It is used to refer to artworks, but also to describe the activity of artists, the evaluation of works of art, their distribution, exhibition, and more. Many of these activities are associated with institutions, foundations, universities, schools, and commercial organizations. The concept of art is clearly multileveled and complex.

# Art movements

Since movements are more homogeneous than art in general, I will attempt at a characterization of the former first.

A specific art movement  $A_i$  can be represented by 11 components  
as:

$$A_i = \{C_i, S, D_i, F_i, O_i, B_i, T_i, M_i, E_i, P_i, V_i\}$$

# Art movements

- $C_i$  is a community of artists. These are individuals that can design and construct artificial objects (either conceptual or material) called artworks or perform representations of works of art.
- $S$  is a society that hosts (or at least is not hostile to) the members of  $C_i$ .
- $D_i$  is the set of artworks.
- $F_i$  is the set of material resources accessible to the members of  $C_i$  for creating, exhibit, and trade their works or execute performances (it includes workshops, theaters, art galleries, museums, etc).
- $O_i$  is the set of artistic goals of the members of  $C_i$ .
- $B_i$  is the total knowledge available to individuals in  $C_i$  to achieve their goals.
- $T_i$  is the specific technical means available to those in  $C_i$  (it includes musical instruments, writing equipments, film industry, painting technology, and so on).
- $M_i$  is the collection of rules, prescriptions, conventions, and instructions adopted by the members of  $C_i$  in connection with the movement  $A_i$ .
- $E_i$  is the set of experts that make aesthetically sound judgments about objects in  $D_i$  in accordance with the rules of  $M_i$ .
- $P_i$  is a collection of individuals that are exposed to the effects of the artworks created by the artists of  $C_i$  (the 'public').
- $V$  is the value system (axiology) adopted by the persons of  $C_i$ , which is based on the ethics shared by the society  $S$ .

# Art movements

- An artistic movement is a material social system.
- Artistic movements can interact with other sub-systems of a society and play an active role shaping historical processes.
- Artists, critics, and public in general are linked by complex relations that go beyond the mere production and passive perception of artworks.
- Artistic ideas can pervade influential groups in a society and may help to shape the worldview of large social systems in some historical periods, as it was the case of Romanticism.

# Art

Once we are in possession of a tentative definition of art movement, we can define art as the set of all art movements.

$$A = \{x / x = A_i, i = 1, \dots, n\}.$$

Then, art is a concept, not a material system

# Art

The study of art is the study of art systems, i.e. artistic movements. Each movement has its own specific features, with its artworks, rules and conventions, public, experts, etc.



# The ontology of art

I subscribe that works of art are cultural artifacts, i.e. intentional constructions (either material or conceptual) created by human beings with the goal of producing aesthetic experiences.

Hence, artworks are not independent of humans in the sense that they are created by intentional activities, and exist only as long as socio-cultural actors are aware of them. Works of music and literature, for instance, are created by the authors at a certain time and context, and then reproduced by a variety of means, including printed books, pdf files, audio books, sheet-musics, performances, recitations, etc. The artwork will last till the last score, recording, printing or memory of it be obliterated or forgotten.

**Summing up:** Aesthetic experiences are a type of biological processes mediated by the senses that occur in certain (evolved) organisms, mainly involving the brain. These processes depend on both the external stimulus produced by the object (either natural or artificial) and the state of the organism. If the experience is positive, the organism deems the aesthetic object as aesthetically valuable (e.g., as beautiful). Aesthetic experiences are the roots of aesthetic valuations. There are not beautiful things or events in themselves: aesthetic values, as all values, are fictions attributed to some objects by some organisms in a particular state. Artistic movements are material socio-cultural systems that include artists, experts, critics, and the material and conceptual items associated with their specific activities. Art is the class of all art movements. Artworks can be material, such as paintings and sculptures, conceptual such as literary works, processual as musical plays, or mixed, as a stage performance. Aesthetics is the philosophical study of aesthetic experiences and art. Art is not scientific, but aesthetics can become so.

For more see:  
Gustavo E. Romero - forthcoming -  
Foundations of Science:1-13.  
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