

# A Study on the Logical Model of Aesthetic Behavior

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**ABSTRACT.** *Faced with the confusion that the diversity of art forms makes it difficult to define beauty, this paper attempts to derive a logical model of aesthetic behavior based on the transmission and matching of information from the perspective of epistemology and biology. It is defined that aesthetic behavior is the subjective experience obtained through the transmission and matching of sensory information when the person (subject) perceives the object (object) in the process of survival, and needs to make a “responsible” aesthetic argument (completed based on perception, channel and channel metric, and matching with the subject’s aesthetic information).*

**KEYWORDS:** *Aesthetics, Information, Aesthetic Identification*

## 1. Epistemological Analysis of Aesthetic Activities

Existing scientific research shows that modern humans are all migrating from Homo sapiens from Africa. There is no obvious difference in genetic information among various races, and the changes in genetic information of Homo sapiens can be ignored in thousands of years. Human beings as the subject of aesthetic behavior have not undergone mutations in genetic information, but aesthetics and art history have evolved in the time dimension. Different aesthetic concepts and art forms emerge in an endless stream, and civilizations in the spatial dimension also show their own artistic charm in the development and collision. Gombrich believes that there is no such thing as art, only artists. [1] Satiwell summed up the concept of beauty in different cultures: Beauty in English revolves around desire. The Hebrew word yapha revolves around growth and prosperity; the Sanskrit word sundara revolves around the sacred; the Greek word tokalon revolves around ideas; the Japanese word wabi-sabi revolves around humility and desire for lack; hozho in Indian Navajo is about health and harmony. [2] Waltersdorf said: Analytical aesthetics in a broad sense includes all the analytic philosophers in the 20th century to say about beauty. [3] However, it seems difficult for us to give a comprehensive and accurate definition of the question of “what is beauty” with analytic philosophy. The primary task of art history is to clarify the background knowledge of art [4], and

it is impossible to unilaterally interpret what caused the changes in aesthetic concepts, art media, and art styles through the reverse research of art history. With the development of human science and technology, new technologies will naturally produce new artistic media. However, the transformation of aesthetic concepts and artistic styles in the same medium has become a problem, because any piece of art cannot satisfy the arbitrary transformation of space-time dimensions and is universal.

Marx said: "People are also built according to the laws of beauty." [5] Human beings also generally agree that they build a beautiful world in accordance with truth, goodness, beauty and corresponding knowledge, affection, and intention.

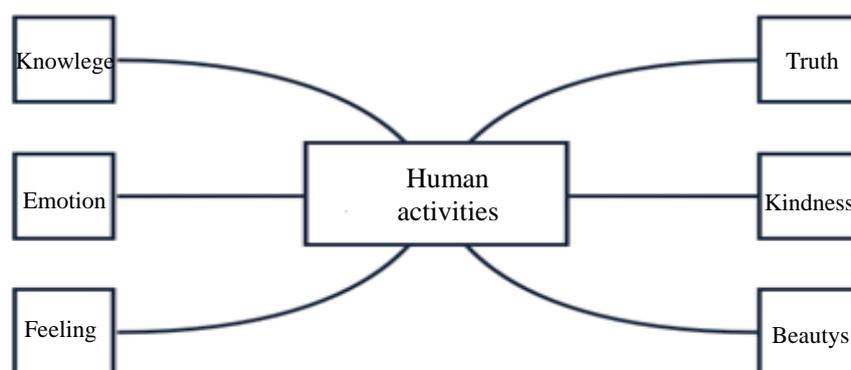


Figure 1. Human activities

However, human beings are currently facing serious problems such as ecological crisis, nuclear weapons threats, and fertility crisis and so on. In the inquiry of anthropology and ecology, this beautiful logical model has failed. The subjective and objective issues of whether beauty can be recognized and the existence of beauty have been debated in academic circles. To explain these two issues, we must first clear the boundaries of human cognition, that is, the discussion of materialism, idealism, and agnosticism in philosophy. The Chinese philosopher Wang Dongyue believes that human cognition is for the purpose of "existence" rather than "truth", because humans cannot determine that the sensory system is a "vacuum channel", and all information obtained by humans depends entirely on the sensory system. Sensors all have the composite nature of "materialism" and "idealism", and the nature of idealism is based on its materialism. Humans call the effective information organized by sophisticated logic knowledge. The reason why scientific knowledge is established is that science is an "effective" but "untrue" logical model established on the basis of realism. The human view of the universe ranges from the geocentric to the heliocentric. After the appearance of Newtonian classical mechanics, it has been

proved to be effective many times. Humans thought that the mystery of the universe was finally revealed. There is only one falsification between human “truth” and fallacy, and the failure of the logical model of relativity is also a matter of time. Einstein made a proper statement of this situation: “The universe is like a watch that cannot be opened. We can only guess its internal structure and operating mechanism from the outside.” The so-called objectivity and reality are nothing but a set of self-consistent subjective logical models consistent with observations.

It can be seen that human beings can only obtain the “objective” knowledge in the subjective logic model, but cannot truly recognize the attributes of Kant’s “thing in itself”. But the “human intuition” that has been acclaimed in the past is just a “recognition model”. [6] Therefore, aesthetic objectivity is based on the discussion of the subject’s identification and defensive behavior of the information presented by the object under the same biological sensory structure, which is mainly reflected in the transmission and matching of information. Because the objectivity of beauty depends on the coupling of the sensory information conveyed by the channel and the subjective aesthetic identification information, the identification source of the subjective aesthetic information is based on the “objective” information obtained by the sensory channel. Humans do build foreign objects according to the laws of beauty, but the beauty here is the beauty under the subject’s personal cognition model and does not have objective identity. The “objectivity” of beauty is reflected in the three levels of “community effect (painting school, nation, country, etc.)”: 1. Aesthetic convergence caused by the same genetic information and physiological structure (sensory system, sensory rhythm) of human beings, such as reproductive aesthetics, visual golden ratio, visual “distortion” brought about color perception, etc. 2. Since the early days of mankind, non-necessary historical cognitive information (culture) acquired by various communities based on survival and cooperation due to different geographical environments. 3. In order to maintain their own existence, the “communities” in the current imagination make dominant choices and judgments on different definitions of beauty, which then constitute the aesthetic assimilation effect on the individuals in the community. In the achievement probability of an individual’s aesthetic behavior, there is a phenomenon of decreasing information level matching: 1. Works that conform to the rules of innate genetic information shared by humans have the highest probability of matching with the viewer’s aesthetic recognition, such as realistic paintings and sculptures, golden ratio photography and framing methods that conform to the rules of innate information. 2. Aesthetic inherited works brought by the historical cognitive information of aesthetics have a higher degree of aesthetic recognition matching within the area where the information belongs (such as the Chinese people’s aesthetic preference for traditional Chinese painting landscapes and flowers). However, due to factors such as the strengthening of commodity circulation and network information sharing in the process of globalization, this phenomenon has gradually shown a state of declining times. 3. The degree of aesthetic recognition of emerging art forms that derive from culture is the least achieved, such as the process of denial to affirmation of the aesthetic value of Van Gogh’s works, and the public aesthetic confusion caused by the shift in the artistic language and expression of contemporary art. This kind of art often requires the identification of the authoritative system and the

"aesthetic formula" of the viewer's aesthetic identification information, in order to achieve a universal aesthetic match after a relative time.

In addition to the innate genetic information and the basic information acquired in the process of acquired life, the selective judgment of multiple aesthetic information is particularly important. The results are mostly sent by human influences. Analytical estheticians Danto and Dickey believe that the production of art is jointly decided by authorities, artists, critics, and curators. In the process of survival, mankind formed groups such as tribes, races, religions, political parties, and nations. Historian Yuval Harari called it an imaginary community in "Brief History of Humankind". These "communities" will interfere with individuals in many areas of cognition based on the need for survival and cooperation, and declare that they should and must be so to maintain the stability of their systems. In the act of aesthetic recognition, the "communities" of different temporal and spatial dimensions, based on different aesthetic recognition information and survival needs, transmit their respective aesthetic judgment information to individuals through education, selective propaganda, and law. This led to the assimilation of individual aesthetics within the "community".

## 2. Biological Nature of Aesthetic Behavior

Yuval Herali believes that the cognitive revolution is the starting point for history to separate and exist independently from biology. [7] But are we able to perceive objective and cognitive truths? Harari believes: We are still animals, and our physical, emotional and cognitive abilities are still shaped by DNA. [8] The basis of aesthetic behavior is the biological perception behavior formed by genes, which is mainly achieved through visual and auditory organs. Humans can only obtain external information through sensory organs (vision, hearing, smell, touch, taste). The information collected by the five types of sense organs is instantly sorted into a whole image (look and feel) in the brain. This momentary and unconscious process of sorting is called consciousness.

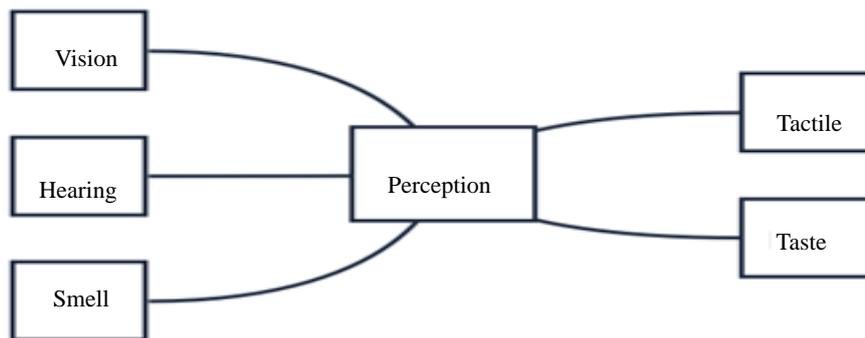
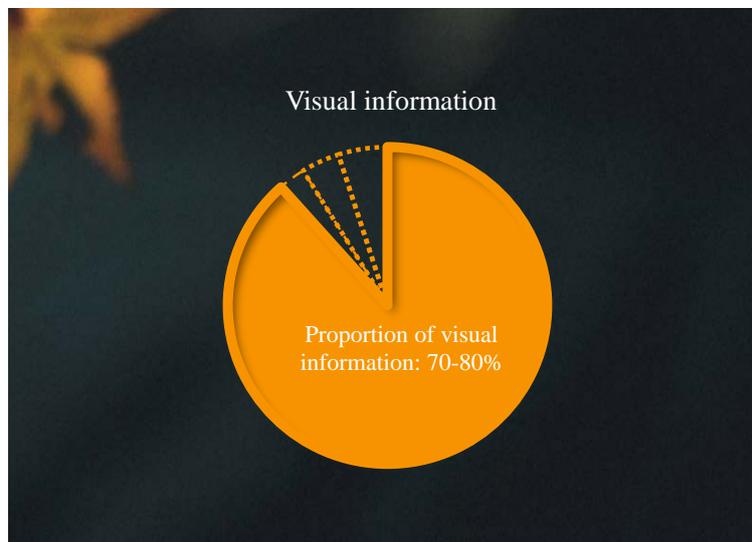


Figure 2. Perception

Vision occupies 70% to 80% of the total information collection. Its essence is a biological physiological light-sensing system, derived from the metabolic needs and phototaxis of photosynthesis of primitive non-sensory organisms. It can only sense light waves between 400 and 700 nanometers, accounting for one-100,000th of the entire lightwave spectrum. It appears insensitivity to the properties of objects outside the range. The world is colorless. Color perception is the product of sensory conversion of different wavelengths of light waves in the visual system, and white light perception produced by mixed light. As long as a single wavelength differs by 5 nanometers, the human eye can produce different color perception. Therefore, about 150 different “colors” can be converted from light waves between 400 and 700 nanometers. [9]



*Figure 3. Visual information*

Sound is an “illusion” caused by mechanical vibration waves of 16 to 20,000 Hz to stimulate the auditory organs. [10] The so-called “sounds and colors” are the specific induction and physiological structure that humans have to distort the dependent objects in order to maintain their existence. If the human sensory system is set for truth-seeking, it should feel the entire spectrum of light waves and sound waves, but it will also cause a lot of energy consumption and be unable to survive. From a biological point of view, when human beings face the object as a biological body, they are the biological experience caused by the alienation of sensory information in the rhythm and the arrival of the central information. From the perspective of physiological function, aesthetic activities must be jointly achieved by the aesthetic subject, information channel, and aesthetic object.



Figure 4. The Composition of Aesthetic Activity

### 3. Process Analysis of Aesthetic Activities

As an important part of aesthetic activities, the artist's art works have been in a complementary relationship between art and aesthetics for a long time in history. Compared with natural objects and practical objects, the artist's aesthetic transformation of external objects is the basic element of art history. Based on the epistemology of beauty and the biological nature of aesthetic behavior, a flow chart of aesthetic behavior based on information is derived.

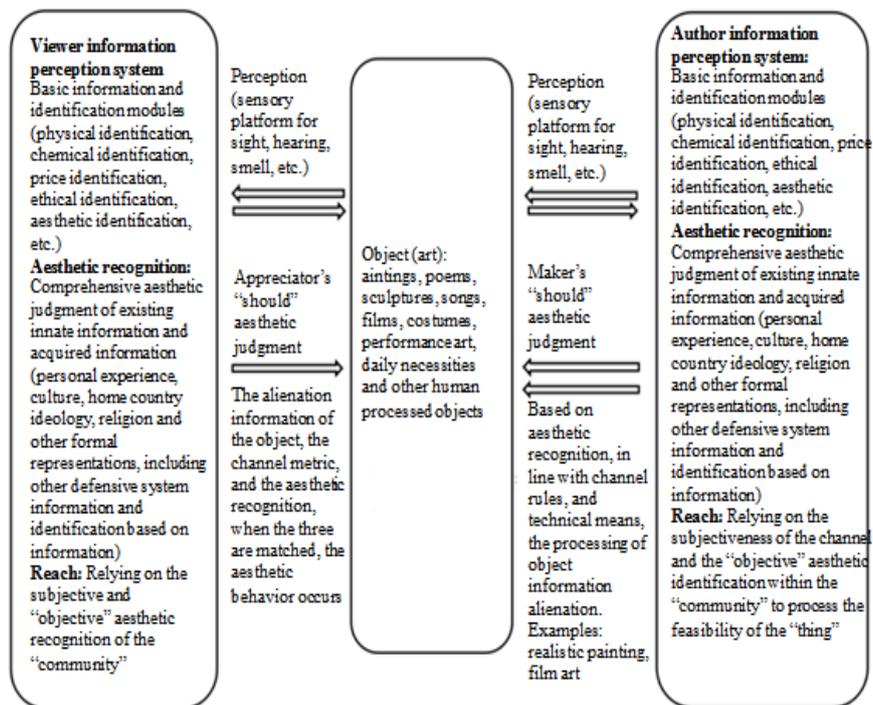


Figure 5. A flow chart of aesthetic behavior based on information

The human visual and auditory senses' information processing methods for light particles and vibration waves are similar to the computer system's 01 system virtual information processing methods, and they are both a modeled virtual and reproduced system of information. However, the carbon-based biological biochemical calculation method with life as the core is different from the electronic algorithm of silicon-based biological (computer). Human algorithms are based on survival and need to consider energy consumption. In addition, various internal cognitive systems can be contradictory but compatible, and can transform algorithms for weight processing at any time in the face of different survival needs. At the same time, it is not precise based on biological limitations. The flow chart of aesthetic behavior operation is divided into: the viewer, the object, and the author, and the "alienated" perception transmission of information through sensory channels between the three, which can be divided into two stages: First of all, the author (subject) starts the aesthetic debate, based on perception, channel and channel rhythm (visual, auditory, tactile, etc.). Restricted by technical means (painting tools, design software, multimedia technology, etc.), implement the process of information "alienation" of objects (paper, marble, film media and other objects), and complete "aesthetic alienation" works (paintings, sculptures, songs, literary works, films, costumes, performance artworks, daily necessities and other objects that have been processed by the subject's aesthetic perception). This process is called art. The processed object is called artwork. The producer can be called an artist. The compositional information of aesthetic recognition is the definition of beauty in the author's mind. The specific form of materialized expression of the definition of beauty can be called style. The implementation medium of technical means is called the type of art. Secondly, the audience (subject) is based on perception, channel and channel rhythm (visual, auditory, tactile, etc.). In this way, the "alienation" information conveyed by the "thing" (object) is matched and processed in the subjective aesthetic judgment and the aesthetic judgment of "acceptance" is made.

From the perspective of epistemology and biology, human aesthetic activities can be understood as an inauthentic and effective way of "information alienation" to maintain the survival needs of human species.

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