

The effect of nature on design rules and its role in aesthetic preference

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Abstract

God is the creator of the universe, and man did not create anything. His knowledge is nothing more than a collection of elements, materials and organizing these elements according to a pattern or approach that he saw expressing his tendencies and feelings. It is more than a grouping according to a certain order or arrangement that he saw or was latent in the subconscious.

Nature is the spiritual source of the rules, and nature may be represented in the human body, its habits and instincts, for man himself is a natural phenomenon of the phenomena of this universe that God has created, nature also is represented in the behavior of bees, ants or at the earth's rotation around the sun or in the shape of coral reefs and snails at the bottom of the sea. We see it, in short, it represents a part of what God created in this universe and nature is the niche that we turn to in art, and it is also the source of inspiration in artwork that we used to call arrogance to artistic creation, and nature is a rich and inexhaustible source.

Confusion may occur in the sense of aesthetic preference and psychological relief among viewers of artistic works, especially non-specialists also in applied arts and visual designs, whatever the form that expresses art, so we find that the viewer of aesthetic works and architectural designs does not realize why this is preferred and why is alienated from it? except that God Almighty has the creation of nature for us, it is the main source of the formation of human thought as it is the physical formation of the human being.

Key words:

nature - design principles - aesthetic preference - art and design

الملخص

الله خالق الكون ولم يخلق الإنسان شيئاً فعلمه لا يحد وأن يكون تجميعاً للعناصر والخامات وتنظيم هذه العناصر وفقاً لنمط أو نهج رآه معبراً عن ميوله وأحاسيسه فالفنون لا تخلق أنما تشكل العناصر، والطبيعة هي المنبع الروحي للقواعد والطبيعة قد تكون ممثلة في جسم الإنسان وعاداته وغرائزه فالإنسان نفسه ظاهرة طبيعية من ظواهر هذا الكون الذي خلقه الله، والطبيعة أيضاً تتمثل في سلوك النحل أو النمل وفي دورة الأرض حول الشمس أو في شكل الشعاب المرجانية والقواقع في قاع البحر فالطبيعة كما نراها هي باختصار تمثل جزءاً مما خلقه الله في هذا الكون والطبيعة هي المحراب الذي نتجه إليه في معبد الفن، وهي أيضاً مصدر الإلهام في العمل الفني الذي اعتدنا على تسميته غروراً بالخلق الفني والطبيعة منبع غني لا ينضب وقد يحدث الخلل في الإحساس بالتقبل الجمالي والارتياح النفسي عند المشاهدين للأعمال الفنية وخاصة غير المتخصصين أيضاً في الفنون التطبيقية والتصميمات المرئية أيا كان الشكل الذي يعبر عن الفن نجدان المشاهدين للأعمال الجمالية والتصميمات المعمارية لا يدرك لماذا يفضل هذا ولماذا ينفر منه غير أن الله سبحانه وتعالى قد خلق الطبيعة لناهي لمنبع الرئيسي لتكوين الفكر الإنساني كما هي التكوين المادي للإنسان

مشكله البحث: عدم وضوح الاسباب الرئيسييه للتفضيل الجمالي لدى المشاهد للاعمال التصميميه و الفنيه و خاصة الكتفير من الاعمال التصميميه الحديثه بدافع الغرابه والابتكار مما نتج عنها تكسير القواعد الاساسيه للتصميم الخلط بين اساليب الابتكار والحفاظ على قيم و قواعد التصميم الاساسيه والتي فطر عليها الانسان هدف البحث: الوقوف على اسباب التفضيل الجمالي للاعمال الفنيه وخاصه اعمال الفن التطبيقي كذلك اهميه دور الطبيعه واثرها علي وعى الفنان المصمم وكذلك المتلقي والمشاهد للفن منهج البحث: المنهج الوصفي التحليلي النتائج المتوقعة: للطبيعة اثر هام جدا على التصميم كمصدر للالهام فى اتصميم كذلك فى التقبل و التفضيل الجمالى للمشاهد و المتلقى للتصميم

الكلمات المفتاحية:

الطبيعه، اساس التصميم، التفضيل الجمالى، الفن و التصميم

Axis of the research:

The role of the arts in economic, social and cultural life

Research problem:

The lack of clarity of the main reasons for the aesthetic preference of the viewer for the design and technical works, especially the many modern design works motivated by exoticism and innovation, which resulted in the breaking of the basic rules of design. Confusion between methods of innovation and the preservation of basic design values and rules, which are instilled by humans.

OBJECTIVES:

Determining the reasons for aesthetic preference for artistic works, especially works of applied art, as well as the importance roles of nature and its impact on the consciousness of the designer artist as well as the receiver and viewer of art.

METHODOLOGIES:

Analytical, descriptive method.

Discovering beauty inherent in nature and the impact on designer and creation

The designer was influenced by nature, and human arts, and design in general are the arts combined elements to find a new composition, it can be said that the role of the artist is the tool of organizing these elements according to the pattern or approach he saw expressing his inclinations and feelings; so the arts do not create but form elements and it is not fair to attribute the designer to himself to the virtue of all the "artistic creation" for expressing his work according to a particular organization or order he saw or lurking in his subconscious, so that the assembly is successful or failed according to the extent to which the elements agree or dissonance? The natural characteristics of the elements are the key to this result.

Also the acceptance of the viewer or the user and his preference for design is originally due to the laws of nature and what God has broken down.

Nature has thus pioneered the combination arts, the composition arts we used to call "fine arts", as well as in the art of design.

The first is the infinite universe, of which science has identified little astronomical observatories, on the one hand, and what scientists have discovered in electron and ionic microscopes – on the other hand, the formation of atoms and their accumulation within materials.

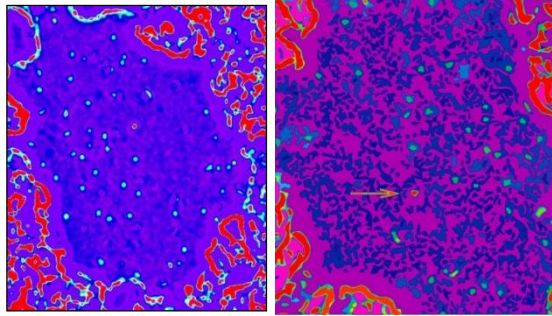
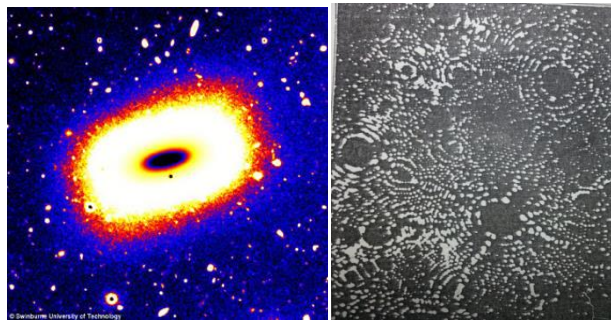


Fig (1) Electron microscopy photographs showing a large number of luminous points representing one of the atoms of the material under examination (FERRANIA color 1963)

We find an endless stock of natural designs developed by the Creator (Allah), for example we see the nebula known by astronomers as "Andromeda" millions of light years away from earth and consists of an endless preparation of celestial bodies and planets moving taking place in a specific path and in which the wonderful geometric designs are found, there is no doubt that they were and still are major source of thoughts, but may have planted themselves in the depths of the subconscious as we do not know how the human brain came (RIAD 1973), but we realize their effects at the artwork that lead to humanity. The designer is in fact a recording of what the Creator put inside the human mind.



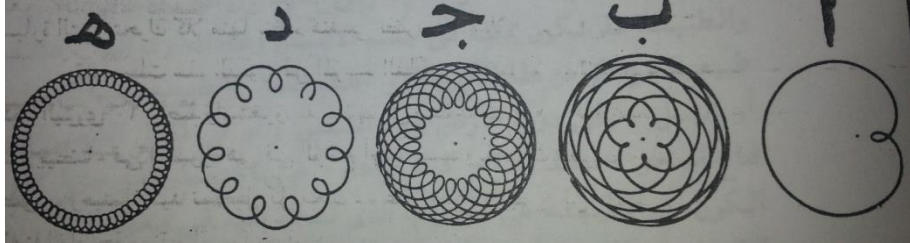
Fig(2) Right image from mount wilson observatory using the telescope for nebula, left is a picture of the rectangular galaxy from space (alburner telescope wilson mountain n.d.)

The artist, like all human beings, wishes to declare his freedom so that he can only be restricted by the principles he sets for himself to launch his ideas, and he believes that it is not the philosophers' business or the critics to set rules for him to follow. The rules are regulated by law, whether the artist him/herself, or whether he or she has been placed by the right freedom in any social activity, which is exercised within the framework of rules regulated by law and custom, and since art is a social activity, it must be practiced within the limits of rules as well.

Nature as a source of design rules

Nature is the spiritual source of rules and nature may be represented in the human body and its habits and even instincts.

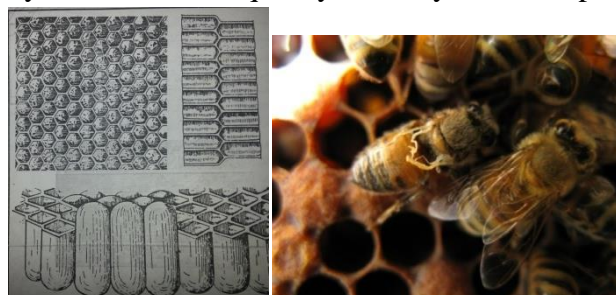
Man himself is a natural phenomenon of this universe created by God, and nature is also in the behavior of bees or ants and in the earth's cycle around the sun



Fig(3)The shape of geometric designs representing a little of the creator's miracle and showing the course of the movement of the planets around the sun A - Mercury B - Venus C - Mars D - Jupiter E – Saturn(lex)

Or in the form of coral and snails at the bottom of the sea, nature as we see is a part of what God created in this universe and nature is the niche that we are heading to in the temple of art, it is also the source of inspiration in the work of art, which we used to call ego by artistic creation and nature is a rich and inexhaustible source ;therefore a designer cannot be afraid to repeat an artist drafting an art preceded by another artist, or to repeat what he has already done himself and if we add to that difference the thought between one human being and another, and the evolution of the thought of one human over the days, the different human capacities, and the different societies and environments in which the human grows, we find that our fears of repeating the method of works of art are not based on any acceptable basis.

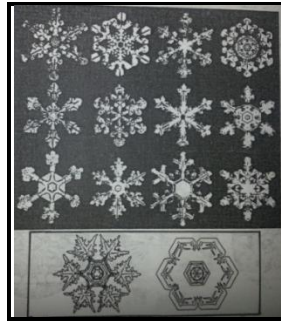
In design, when circumstances call for combining multiple visual elements in a single work of art, we do not consider the maximum number of visual elements that can be combined in a single work of art without exhausting the eye or exhausting the perception of their large numbers, nature has simplified the forms and the best of them is the one that depends on the maximum limits of the economy in the material with the most interconnected in the construction force (mahmoud n.d.). The minimum material with the maximum correlation of composition is a difficult equation that can guide us not only in the organization of the elements of composition, but also in estimating the number of visual units that can be covered by the work of art. Work on the sheet of the cell wax wall economically in material and voltage, and its ability to resist the high temperature that accompanies the process of building the cell despite the ability of the wax to liquidity or laxity if the temperature rises.



Fig(4)The sixth design of the hives and we also see the bottom of the walls of the cell that take the shape of a hermit and exceed its walls at the bottom with two inside angles 70 and 110 (RIAD 1973)

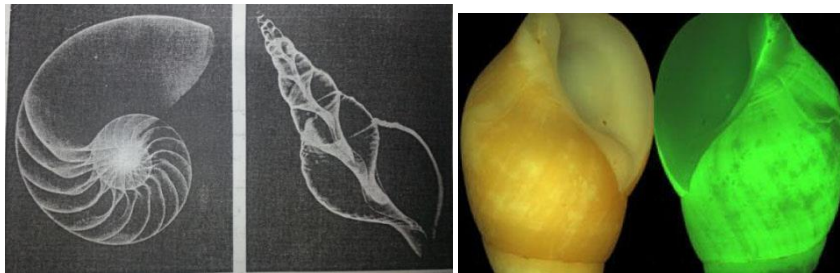
The example of hives is a simple, concrete case that can be seen with the eye, but there are millions of examples that can also be found in nature when visual tools are used to enlarge living and rigid organisms. The microscopic examination of ice crystals, such as Snow Crystals, or images resulting from the use of the x Ray diffraction phenomenon to identify the elements involved in the installation of a particular material, are all examples of natural sources of inspiration in design and are also standard for estimating beauty, which is about aesthetics.

We see the designs of three pieces of ornaments and it is quite clear that they do not depart from being a quotation or a quote about nature from the form of the shown frost crystals and it is strange that researchers mentioned that they have never seen a symmetry in the design between a form of ice crystals despite their complete symmetry in the regular hexagonal composition and in billions of such forms.



Fig(5)Microscopic images of the six-figure snow crystals, from which many designers were inspired in their designs (RIAD 1973)

But what is mentioned in the previous examples, in which we have seen regularity in the form and mathematical aspects calculated accurately, does not mean that the designs of nature have been limited only to a platoon of organized forms, the spiral snails that we see in nature are another example of compositions based on fixed mathematical laws, and their helical shape has occurred from the difference in the growth rate of the external surface relative to the growth rate of the internal surface, even if the growth rate in the two surfaces is consistent to become different (cylindrical or conical, for example).



fig(6)Two x-ray radiographs of marine snails showing their internal composition (htt6)

The skeleton in man or animal is an example of efficiency in performance with the economy of the type of materials, the greatness in the skeleton of the animal and the geometric solutions to problems of pressure and tension, for many structural geometric formations we find natural forms of the animal kingdom that there is no doubt it was and will remain a rich composition of artistic inspiration.

The leaf of the plant and its whiskers were an inspiration in the design of cities and the flowing pear shape of crockery or other, no doubt it was emitted from what was inspired by nature to the first man.

The lotus flower was alive in ancient Egyptian designs as well as Byzantine art relied on botanical drawings, human images and images of animals and birds, and Hellenistic art that was based on the tradition of nature, whether with animal, plant or human drawings. The simulation of nature was not a duty in this art, but often found decorations dating back to this era in which natural elements were used with decorative modification, we find, for example, a drawing of a mythical animal with a peacock body raised its wings and tail and has the head of a bird and the claws of a lion and has a tail like reptiles, as well as the Coptic art relied on plant elements such as leaves, grape clusters and palms.

If we notice that Islamic art was based on the artistic methods that prevailed in the countries that were entered by the Arabs, it is also not surprising to find that some Islamic art (at some periods) has been greatly influenced by the elements of nature, citing the byzantine art (sometimes known as the first Christian art) quoting the Levant, Coptic art in Egypt and Hellenistic art in the territory of Afghanistan and South Turkistan (Attiae 2005).

The primitive arts, whether in distant eras or in relatively modern but different societies such as bushman art or even children's art, all confirm that nature is the first source of artistic inspiration.

When we talk about "proportion", nature has been the first teacher of aesthetic proportions in the arts. The materials are found in the form of a special form or system, and in the case of river water lines or drag movement, the organization is generated by chance, and its beauty becomes itself without comparing it for a functional purpose. The artist prefers to organize his creativity on the basis of his choice and will. It arranges sensory qualities in a model of formal and chromatic relationships, in a special way that attracts the attention of the viewer easily and without affectation.

The great artists were interested in studying the relative relationships between the human body and the length of the arms and the extent of their movement and studying the relative relationships of the parts of the face and identifying this relationship of the size of the head relative to the length of the body in both men, female and child as well as a prelude to the benefit of these proportions in the field of artistic work.

Principles of design shown in Nature and the preference of viewer

balance and symmetry:

In the physical composition of human body, symmetry between the right and left sides without a symmetry between the upper and lower halves and hence we find an explanation of the approbation of symmetry between the right and left parts without approval of the symmetry between the upper and lower halves, this is in fact a reflection of the physical composition of man.

Also, we find that the movement of the eye and head from right to left and vice versa requires less effort than what is exerted in its movement from the top to the bottom or from the bottom to the top, that is also consistent with the instinctive desires of the human to provide effort to the extent that achieves his goals, we find god praise on the image of creation, symmetry between the right and the left for the symmetry between the upper part and the bottom.



Fig (7) A quote from Leonardo Da Vinci's drawings shows the square shape and the relationship between the length of the human body and the length of the horizontally extended arms

In the physical composition of man ratios which determines the size of the head to the body, and between the length of the body and the distance between the foot and the belly button and between the value and the point of fusion of the thighs, it has been shown from studies that these natural proportions in the physical composition of man have a great impact on the approbation of relations between lengths and spaces in the work of art.

The symmetry can be observed in the composition of the organ, as the human being is equipped to ensure a rebalancing and leveling, also the mind has a tendency towards composition, towards the synthesis of gathering of particles and elements, and towards the restoration of order from chaos, a desire to provide "all the order", which sometimes explains, the tendency of the viewer towards building the missing image, and his preference to enjoy the contemplation of the compositions he creates with his instinct.

In support of this, Dr. Zaki Najib Mahmoud mentions that if the man sees the right different from the left, he will be shocked, and if the cause of the difference is interesting, it will be the source of the beauty of (form) but if the difference that caused the shock is not interesting, it will be met with disappointment, and the form will lose all the beauty intentionally or unintentionally. (mahmoud n.d.)

So, then this work of art becomes special for the artist, as he did not only conveyed nature as he saw and realized it, but he poured into it his own feelings, so we find that each artist has a special character that distinguishes his work from that of others.

Hierarchy

Since childhood, man has been gradual in physical development, intellectual growth, form, age, and all stages of human development for one person is being carried out by gradation, in our vision of this hierarchy in the artistic work, it echoes the feelings of love and its responsiveness to the souls of human beings.

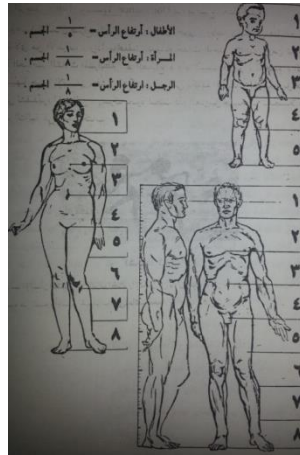


Fig (8) Growth in the female body and the gradient in the ratios

Variety

The human tends to diversify Variety in what he eats or drinks and diversify in the scenes he sees (the pleasure of travel and tourism is the manifestation of it) also remaining in a fixed position that does not change, gives him a feeling of boredom, hence we find that the variety of visual elements in form or in the work of art corresponds to an inherited desire in man.

Rhythm

The organization of units located in the visual field of man and harmony within these units when connected to each other are factors that will achieve intellectual comfort and reduce the effort exerted in cognition and therefore we will find that the simplest form is the most effective and responsive to the human.

On nature, the French example August Rodin gives his advice to the youth in two examples: "Nature is your only god." Let your trust in her be absolute and learn the knowledge of certainty that nature cannot be a tear and only you can limit all your concern to loyalty to it. Everything in existence is beautiful in the artist's eyes. His vision of access is discernible in all that exists, and in everything in which he is personal and what is "special" in it is the inner "truth behind the image. This fact is the perfect beauty. (Attiae 2005)

The "aesthetic ideals" change not only between successive generations, but they also change between races or individuals. Mountains were never an exciting source of aesthetic sensations until the dawn of the Italian Renaissance, when the artist Giotto began to use the image of the mountains as a backdrop to the alternative images of the traditional gilded background that prevailed in the art of the Middle Ages, but before that the mountains were only a source of dangers and obstacles in the way of man, his movements and hopes.

Nature certainly has a role in shaping the content of aesthetic topics, but contributes to the formation of feelings of satisfaction or aversion. One may find in the different night and day, and in the different seasons of the year, reflecting the sense of the element of balanced rhythm, as well as in the bodies of the sun and moon to find what provides it with the forms of circles. (Bassiouni - 1993.)

When Kant presented examples of pure beauty, which is the form of arabesques that are common in Islamic arts, pure music, and even in drag forms. He found that man tends to look at things and living with his idea of their purpose and usefulness in life. The user or viewer

may like the strength of a tree or its elegance or the speed of animal movement, so the beauty of things does not do it alone, but shares things with the artist's ability to simulate appropriate characteristics.

It is often human feelings that we rely on to judge the extent to which "form" is aesthetically accepted. Without causing confusion between the fact that the work of art depends on mathematical rules and calculations, the existence of these mathematical relationships may result in obstacles to the feelings and innovative abilities of some who are not attracted by this mathematics.

There is not really a conflict between feelings on the one hand and mathematics on the other, but it may be due to this misconception that we have learned mathematics in a vacuum, which has kept it far from its relations with human needs. Mathematics is a language developed by the human mind to express types of relationships based on fixed foundations, it is a language that has linked things that we depend on judging based on mere feelings, the forms that combine the vast majority of people as characterized by aesthetically acceptable proportions, it emerged after studying - thanks to the language of mathematics - that the reason for accepting them aesthetically is that the proportions of their parts are equal to simplicity or what achieves simplicity about ratios of "such to this" ratios. Mathematics is thus a language that has shown a specific relationship between things that we, in judging, depend solely on feelings. (RIAD 1973)

The golden ratio in the universe (the virtuous divine ratio) and its effect on the creation of design:

The golden ratio or the golden number 1.618, it is a simple number in its form and at first glance it is a very ordinary number, but in fact it is one of the most controversial figures in history, it is a percentage that earns every work we do in various areas of life - if we use it - beauty and mastery and make it a creative work. (It is one of the measures of beauty and one of the mysteries of beauty around us in this universe)

Creatures and proportionality in the details

From the past we see that this ratio in the creatures around us (human- animal- plant - and even inanimate) and the creative harmony in its creation demonstrate the existence of the God and his greatness Almighty in his creation and unity (سوره الرعد ايه ٨ بلا تاريخ) "وكل شيء عنده بمقدار" "Every single thing is before His sight in proportion".

This issue also concerns anyone with a hobby and artistic talents in photography, painting, architecture, decoration and others who create valuable and beautiful things.

It is the aesthetics of any innovative work to have a percentage and fit in even if it does not use the golden number, this make the work attractive and draws attention to it, it also gives a psychological relief in the areas of art.

It is also known that the ratio is not related to straight lines only, it has multiple shapes and different labels; for example, the famous spiral shape is based entirely on the gold ratio, but it employs it more than once overlapping with each curvature, with this we can measure in the vast artistic areas that can be exploited in its beautification, from drawings, sculptures, buildings and everything is meant to be beautiful.

Golden ratio in nature- :

It turns out that the golden ratio lurks and exists in nature amazingly, it is hard to believe, it's present in everything from man to animal to germination, as Allah is the creator of everything.

The human body is built by its basic structural divisions and external dimensions based on the golden ratio, in an amazing balance between all dimensions and divisions of the human body. " لقد خلقنا الإنسان في أحسن تقويم " (القران بلا تاريخ)
 "We created man in the best stature (mould)".

The distance between the top of the human head to the toes divided by the distance from the navel to the ground gives the golden ratio, and the waist of the ground divided by the knee to the ground achieves the golden ratio, the distance from the shoulder to the fingertips divided by the distance from the elbow to the fingertips gives the golden ratio.....etc.

The distance between the femur to the ground divided by the distance between the knee and the ground gives you the same golden figure.

Even in the face of man and the smallest details are subjected to the golden ratio.

All pieces in human body whether fingers, toes, spinal cord, and the ratio of the face to the body are all due to this ratio in amazing consistency of dimensions, so the human body with this consistency is a living example of the golden ratio.

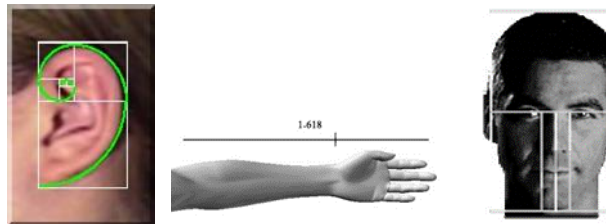


Fig (9) The golden ratio in the anatomy of the human body,

Golden ratio in plant and animal

It is strange to find in the study of the proportions of the golden sector that the mathematics base in the design of the human body in nature is the same as the calculations base on which the design of cochlear growth is built, and it is the same one that regulates the design of some flowers (sunflower flower) or fruits of plants (e.g. pineapple fruit).



Fig (10) The golden percentage in the creation of flowers and how they grow and harmonize

We also see the golden ratio in the animal body, biologists have discovered a strange characteristic related to bee communities, which is that the number of females in any hive exceeds the number of males by a fixed percentage and this percentage is 1,618, and we find

this consistent ratio also in the snail and in many animals such as dolphins, insects and ,butterflies.



.Fig (11) Best suited to the divine golden ratio in insects



Fig (12) Golden proportions in the distribution of colors in organisms

proportionality in general based on balance between lengths - even if not by following any relative rules - a secret followed by all those who aim to mastery and creativity and it gives beauty and special elegance and it is also eye-catching.

In an effort of man to reach a permanent measure of aesthetics; when discovering the golden ratio and discovering the scales of all what is attractive , beautiful and comfortable to the eye and it is a measure of how the creative steps to the art work ; He discovered that this ratio is present in everything around him in nature in an amazing way which gives nature a special elegance and beauty of God which is unmatched to any other beauty , even living beings in nature, in foremost human beings were built in their composition on the basis of creativity and consistency of the parts of their bodies in very large presence of the golden ratio and when looking closely at the major various things around us.

The symmetry between design and nature:

Since nature is the source of artistic inspiration, does this mean that the work of art must be matched with nature? we must first begin with a quick presentation of the methods of art, which, no matter how many, will not deviate from the outlines of the following methods

(a) Natural or realistic method :

The artist will strive to imitate nature accurately and depends on the observation, analysis and recording of objects in the field of visual perception, the image may then represent a natural view or the face of a particular human or animal. etc. At this stage, the artist works hard to convey what he sees as an honest transfer.



Fig(13)A painting by Rubens Illustrating the artist's transfer of nature as it is a natural (real) style (htt3)

The artist in this case does not depend on a particular philosophy and the evaluation of his work depends on his ability to convey the faithful copy of nature and to choose the view of the original subject that he is working on .

:b) Imaginative or ideal method)

In this style, the artist uses the natural origin to build on it a perfect imaginary reality from his photography, for example, Raphael or Michelangelo have tried to draw subjects in which feelings of transcendence, holiness, dedication, strength and love, etc. are expressed. They used the natural original image to achieve a work of art that expresses their imaginary ideals.



fig(14)A painting by Michelangelo that shows the fantasy doctrine or the ideal in the representation of nature(htt4)

In it the artist works to find a formative counterpart to his inner feelings, whether emotional or unconscious and his responses to a certain perception, he translates the subject in which he works into sensory pages that do not have the function of simulation in form, but works to evoke a similar feeling and not a similar image, the works of Van Gogh are an expression of what is going on inside his own self in the hope that his work of art reflects a sense of an opinion similar to his own feelings .



**Fig(15)Van Gogh's painting shows the representation of nature in expressive style (htt5)
Abstract style**

It is a method that avoids the collection of simulation elements and evokes aesthetic responses to purely formal relationships between spaces, dimensions, lines and colors, etc... This method is sometimes known as the absolute method. In this case, the artistic composition is far from being similar to any of the known objects .(Read n.d.)

The aesthetic preference of the recipient (viewer) for design according to his interaction with nature

The work of art is necessarily the product of a human effort prepared for a human being to enjoy. The human always wants to focus his idea - at a certain emotional moment - in one topic, and does not like to distract his mind in two or more subjects at the same time, so he sympathizes with the work of art which is characterized by the unity of the subject besides its distinction with the unity of form. The unity of the subject is an expression that means that the subject of the work is integrated so that its visual message does not carry a subject related parts.

The music is the media of sound and the photography or sculpture, their media is form and color. If the human ear has been trained since ancient times to accept the rhythmic compositions of sounds and accept musical works of art without attempting to link these sounds with the expressed meanings, the aesthetic training of the eye has neglected this relatively, since it is – instinctively making serious attempts to link the image or the statue and what they express in nature in the sense that it unconsciously tries to link the artistic work and the visual experiences stored in our minds about nature .

"Beauty" is sometimes understood as a certain reconstruction of reality based on the attribute of beauty, so that it provokes in the connoisseur a certain emotion. As the artist's activity is characterized by a focus, unlike the natural world, which limits its task to the study of phenomena by analyzing them, and therefore we find the aim of the artist's activity to recreate the subjects' aesthetics, as well as for the critic who tries to subject his material to analysis, but it recreates his material "aesthetically intuitively" and the value of this material, as the receiver does, while contemplating a painting or listening to a piece of music.

The agreement between people in enjoying beauty of artworks, or the fact that people who are similar in composition, with similar thoughts, it can be expected they will respond to the artwork similarly. However, people usually respond differently, and our feelings are not enough to judge the aesthetical value of artistic work, because appreciation requires justification. Some philosophers have taken a middle ground between objective theory by appreciating absolute values on the one hand, and preferences that lack justification on the other. Their theory is known as "relativism", and in this theory "aesthetic value" is not an absolute feature, but rather

a feature that belongs to something and appears as a result of the meeting of the viewer with this thing. And so the value of the thing depends on the perception of the viewer.

With the analysis of beauty to its elements, in aesthetic studies with the aim of finding the common aesthetic element, some philosophers have assumed the availability of the element of beauty in the nature of things that evoke a sense of beauty, but although the availability of that element is common to things described as beautiful, we sometimes refer the attribute of beauty to another element such as the usefulness of the thing .

Plato (428-347 B.C.)⁵ saw in "order", "balance" and "proportionality" values that strengthen the self, the principle of "stability ", he stated that "beauty" is available in "right" and "goodness" but good has many uses, and may mean "beneficial", or what satisfies the soul, such as health or good food.

Socrates⁶ has subjected the concept of beauty to the principle of exclusivity, thereby linking beauty to benefit, and his philosophy aims to reveal the moral aspect of the soul and its relationship to beauty, and get rid of this philosophy in love of spirit and transcendence .

Aristotle⁷ (384-322 BC). A solution has been found to the question of morality and its association with beauty, and his theory seemed acceptable, as he described art as an area in which emotions are being refined and purified, of what was attached to them from impurities. Art in Aristotle's philosophy is either at a lower level of nature or at a higher level .

The belief that beauty is "goodness" leads to the perception of beauty as a conscious organization of emotions, while "Aristotle", the beauty in his philosophy is "order", "coordination", "selection", "symmetry" and "unity" and all of them is understood as the order of parts in a non-arbitrary system. The beauty in this case lies in the infinite partiality and perceptible appearance, while Plato was looking for infinite kidney beauty. Aristotle's beauty is not just a description, but it is higher than reality, because it is a system, and in cleansing emotions, but it derives its origins from reality, seeking to modify it through art, in order to rise above its level and exceed it to the ideal world .(Attia 1998)

In his book *Modern Painters*, The English beauty "Rusken"⁸ studied the general principles of beautiful art and tried to apply them to the work of photographers. Nature was considered the artist's first model, and beauty in art is based on the principle of imitating the forms of nature. It is said that the rattles in the Greek column symbolize the bark of the trees, so art acquires the value of life.

Hugart, an 18th-century experimental philosopher, wanted to make difference between aesthetic sense and utility, revealing in his book "The Analysis of the Sentence" (1753) his preference for the wavy line is more than angles, and was considered by nature as the only source of judgment on art. Therefore, he calls for the reflection, simulation and sensory perception of nature, in order to see the thing through its inner sense, and to reach its truth using beauty criteria, such as "proportionality", "diversity" and "simplicity", which shows the influence of "Hogg art" by Aristotle's theory of Aesthetics, especially when beauty is linked to the criteria of proportionality and organic unity and to the sense of self-simulation, as well as when art is subjected to mental standards. The process of aesthetic sensation is required to provide the factor of diversity, rather than symmetry and repetition, which may make the receiver feel "bored", while the simplicity of Hogg art's theory is balanced with the state of the "complexity" that encounters the connoisseur while following the directions of zigzag and curved lines, which may give him a sense of aversion as it becomes more complex, then it will

be necessary to add a flow element between the lines, in an attempt to restore the element of agility, to attract the attention of the aesthetically connoisseur, and to ensure the enjoyment of the follow-up of linear curvatures in Movement Trends on the technical surface. As for "immensity" as an aesthetic characteristic characterized by high-rise subjects, the viewer feels awe and aloof, and this occurs in the case of contemplating towering temples and huge columns, but proportionality, will become its aesthetic importance when taken into account between the parts.

We see in all previous opinions that the concept of beauty is related to nature either in terms of form or feeling or the nature inherent in the subconscious

Factors affecting the sense process and the aesthetic preference of the recipient.

١ -Mental factor and sense:

The components of the visual process are 1/10 the physical side, but 9/10 is of a mental and emotional nature, during visual perception the eye receives sensory inputs in the form of patterns of specific meaning.

٢ -Artistic sense and the emotional aspect:

Includes the emotional aspect, personal qualities, motives, values, direction and tendencies, all these variables, be what is known as "personality" so that personality becomes what distinguishes the person from other people, with its individual organizations of these characteristics, which are a good degree of stability and consistency, passion directs the response of the connoisseur and the integration of the viewer within the artistic subject he contemplates, helps in his attempts to perceive the revelations, and the meaning of forms. The task of conscience is to strengthen the viewer's attention to focus on the impact of the object directly, to get him to reflect on the thing, and explain it .

٣ -The social aspect and artistic taste:

There is no doubt that the type of culture that the human is exposed to, contributes greatly to his conscience and values .

-٤ Artistic taste and aesthetic factor (beauty of form)

We mentioned that the effective foundation is a stable psychological condition. But it is an active case in dealing with reality, and as active and effective as it is, human behavior and the consequences of this behavior come and its role in the process of artistic tasting is undeniable, for example, Holman Hallman, 1966) found in his study about taste and creative experience that the connoisseur goes through the same stages as the creator.

Natural form as an approach for tasting and understanding of art and design

We can describe the shape of the design with the elements that form it .

The first thing that attracts the viewer towards the works of art is the beauty of the form, and people usually respond to the sensory nature of things and enjoy it, and the sensory character means arranging the parts or connecting the elements to each other. The triangular shape of the

pharaohs was perfect for the beauty of compatibility between the parts in the charts. It is the belief of the ancient Egyptian that the aesthetic ratio of the triangle is available in triangular forms whose sides are subjected to ratios: "3:4:5" or with equal legs, as in the case of the proportions of the Pyramids of Giza, because a triangle with equal ribs and angles is characterized by regularity and stability, so the self is satisfied and the sight improves.

It is noticeable that the form represents a bridge between art and science, if the task of the attractive points in each movement, to stimulate the eye of the viewer, so that its importance is equal, the receiver or viewer will not know the point to be seen, and the image will remain just a scatter of colors, unable to entertain the viewer, as well as it becomes repulsive.

Before all of this, the formation of an image depends on the discovering movements, carried out by the eye, whether the hierarchy on which the formation is based has been achieved through shapes, or shades, or in color, the important thing is the movement that will be imposed on the eye of the viewer.

There are vital energies of geometric shapes that have an effect on aesthetic expression, the vertical shape seems to rush and go upwards, and the horizontal line extends to the right and left sides. The sense of beauty can be influenced by the change in the direction of the lines movement, but the process of translating lines into feelings depends on the processes of "representation" and emotional participation that occur within the same viewer. In front of the vertical line, the viewer feels self-strength, reflecting something of his strength through the process of "symbolic empathy." The viewer understands the curvature of the line, if he feels curvature in his own sense, as well as these forms can be understood by their changes, either "light", "heavy" or "harsh)Attia 1998 ".(

The formulation that considering the arrangement in compatibility, turns into an artwork that the viewer feels satisfied, and according to the rules of the exact proportionality, the eye absorbs the shape without effort or confusion, which grants the viewer a sense of beauty, and when repeated in the work, a basic unit of composition is the "module" consisting elements of the work of art and its parts achieves the coordination of these components and their relationship to the surrounding parts, which may vary according to their functions, it takes into account that this coordination is related to a certain rhythm system visible or invisible, so that between parts and elements of a certain rhythm appearing or hidden, so that between the parts and elements of the total, the role of awareness of the element of rhythm in the process of taste is apparent in linking the stages of the artistic experience and unifying it, thanks to the connoisseur's recollection of the previous style, which he felt while meditating on a work of art, in other repetitions in the formation of that work of art, which contributed to the process of linking parts of the artistic experience, but moments of stillness and pauses that have a role in completing the structural composition of the work, which is the distances between the forms, acquire its characteristic in the dynamic experience .

The element of calligraphy and its sensitivity to movement and rhythm, when used to influence twisting, flowing or sliding energetically and impulsively, such as the compositions of the inscription in the botanical lantern in Islamic art, show a kind of exquisite beauty, it is based on ripples and bends in the plant elements, and makes a musical melody enjoying a joyful rhythm. Although we rarely recognize the line in nature, it is available in tree branches after being stripped of its leaves in autumn, or observed in the structures of microorganisms.

Human beings sympathize with abstract forms and put themselves in position, for example, they feel strong and hard when seeing vertical lines and architectural columns, or when seeing logs in the forest. The lines link the drawing of the subject to the expressive idea .

When curved lines are wide, a sense of calmness is created, while multiple angles are disturbing. Curves are useful in their ability to combine scattered elements, bringing them together in each of the unity. A curve can represent a line of two earths, or represent the sky that includes the earth and the sea .

The slanted or angled lines are common to a sense of upward, or downward movement, but if they change direction from stable conditions, in an unbalanced situation, this will push the viewer towards the search for the opposite direction, to restore a sense of balance in vision. When you see a building or a tree, its horizontal base, the earth, is required. Thus, the horizontal line determines the relationship between the earth and the sky .

Horizontal lines also have the benefit of feeling of increased horizontal expansion, unlike vertical lines that evoke the sensation of increased height.

When the receiver deeply looks at the Greek columns with the stolen circle section from the bottom up, it feels as if these columns push him to rise in order to realize the height of the column through this movement, as by integrating him into the process of meditation to feel the lines, as if making him lean with it in its slanted movement, and rushing with its vertical direction, feels billions with the direction of the curve of the lines, and feels calm lying with the square shape. In the 15th century, the Tverofius spoke of the statues bearing the ceiling in the Archaic temple known as "Caryatide", as if he were aware of the phenomenon of symbolic sympathy, when he described it as suffering under the weight of the roof loads .

Different paths of formation and abstraction in brain:

To understand the process of perception and aesthetic preference of the viewer or recipient of the design, there is much about the difference in meaning of "visual vision" and visual understanding, so we should talk about the units and neural pathways that are related to visual aesthetics. The kinetic art activates different areas of the brain from those that are activated by abstract works of art presented by Mondrian or those depicting portraits or those that belong to the brutal school in art that cares about colors and their swings, but we can also venture by saying that the areas that the abstract works are divided into the brain are different from those that are activated by diagnostic and natural works.

Visual thinking:

Thinking requires the presence of images, and the images include thinking, so visual arts are the cradle of visual thinking.

The eye is the symbol of the total briefing and the power of the esoteric intuition in the ancient mythology, which is the symbol of light, sunshine, imagination, alertness and observation, and the moon is the eye of the night and the sun is connected to the eye of the day and the eye is connected to the perception, and internal and external vision, horas or the eye of the falcon god sacred to the ancient Egyptians, a son of Isis and Osiris, the eye has appeared in many works of composition in strange forms, distorted forms of Picasso and the eye is the symbol or distinctive visual mark of the art and the era of the image of the art. (abdelhameed 2007)

The liberation of the eye from the traditional formal perceptions before an important stage in the history of modern art, but the relationship between eye and mind is neither fixed nor absolute, it is not necessary to do every new artistic adventure, seen by the eye, to challenge the mind, change it and impress, the mind without appropriate contents and processes developed or scalable within it, will realize this adventure as a kind of research and absurd experimentation, and then condemns and denounces its owner and denounces its action .

Thus, instead of depicting the shape of a human figure or a tree, the Impressionists provided approximations, approximate forms, a few strokes with a brush, which were not intended to give their own personality or form that was repeated or copied completely again, whether it was a human or a tree, but in order to employ a particular effect to create a certain effect, to produce the reduced brush pattern of strokes to recognize itself in identifying itself as an indicators of color and not for general outline planning and the viewer collects the colored strokes on the canvas to draw through a pattern of visual forces special forces in them, which provoke certain visual thinking processes for him .

We will not continue here in talking about the formation of the physiological eye or also about the formation of the brain, but we will only refer to some important information that has greatly influenced the development of modern art methods:

Retina is the most interesting component of the eye for art researchers and art psychology students, its function is to absorb light rays and convert them into electrochemical signals suitable for the way the brain works.

In addition to the processing of "vertical" form of signals from the eye to the brain, its processing of information also occurs in a horizontal way, a process that begins from the retina and passes through two types of cells: horizontal cells and supporting cells, and here horizontal cells allow the transfer of visual sensations from receiving cells (sticks and cones) and make them pass to the bipolar cells. "Supportive" cells bind the streptococcal cells to each other and thus allow communication among the nodal cells.

Thus, it is not possible to limit the perception of what the eyes record from the outside world only, but during the interaction of memory with perception and imagination, this cognitive process performs two processes, it summarizes the cognitive forms and turns them into the simplest and most regular compositions, and then they also maintain these essential characteristics of the form as well as provide the details and highlight its characteristics from others so the processes of abstraction and embodiment during the same moment within the human brain, that is processed simultaneously as it is carried out in a sequential manner as well as the sequence is performed to the emergence of the predominance of abstraction or embodiment within the work of art in the light of what the artist sees, and in the light of his preferred dominant style, and thus visual thinking in essence is representative and planed at the same time, abstract and embodiment at the same time. (Hanoura: n.d.)

This is the less mature concept of imagination, a concept or perception that makes the role of the human mind retreat and does not play a creative role except merely to be led. Limited to combining the mechanics of certain fragments and to producing copies or parts of reality that look new but neither creative nor unique.

Mental images play the same role as abstractions, but they are a kind of less primitive abstraction, but it is more free, moving and flexible, especially when driven by imagination.

Results and recommendations

- Nature is the main source of design.
- Using values of nature solves many design problems to fit all circumstances.
- Design emulates multiple problem-solving processes in nature in terms of economy, value, recombination, and consistency.
- Design impacts all aspects of human existence.
- Importance of Understanding nature's general process of efficiency and how it relates to design.
- The receiver of design prefers to see values of nature in design.

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¹ Zakie Naguib Mahmoud (February 1, 1905 AD September 8, 1993 AD), an Egyptian philosopher, writer, academic and professor of philosophy, among his books (Positivist Logic) in two parts, and (The Myth of Metaphysics) and (Toward Philosophy) Scientific) in addition to the important positions he held, the abundant and important writings he issued, and his influence on a large number of his students in Egypt and the Arab world to this day, Dr. and the myth of metaphysics, towards a scientific philosophy, and others, as he was the owner of a coherent and elegant literary style that creates a link between philosophical awareness and literary taste..

² François Auguste René Rodin (12 November 1840 – 17 November 1917) was a French [sculptor](#)[1] generally considered the founder of modern sculpture.[2] He was schooled traditionally and took a craftsman-like approach to his work. Rodin possessed a unique ability to model a complex, turbulent, and deeply pocketed surface in [clay](#). He is known for such sculptures as [The Thinker](#), [The Kiss](#), [The Burghers of Calais](#), and [The Gates of Hell](#).

Many of Rodin's most notable sculptures were criticized as they clashed with predominant figurative sculpture traditions in which works were decorative, formulaic, or highly [thematic](#). Rodin's most original work departed from traditional themes of mythology and [allegory](#). He modeled the human body with naturalism, and his sculptures celebrate individual character and physicality. Although Rodin was sensitive to the controversy surrounding his work, he refused to change his style, and his continued output brought increasing favor from the government and the artistic community.

³ Giotto di Bondone (Italian pronunciation: 1267 – January 8, 1337)

An [Italian painter](#) and [architect](#) from [Florence](#) during the [Late Middle Ages](#). He worked during the [Gothic/Proto-Renaissance](#) period Giotto's contemporary, the banker and chronicler [Giovanni Villani](#), wrote that Giotto was "the most sovereign master of painting in his time, who drew all his figures and their postures according to nature" and of his publicly recognized "talent and excellence" [Giorgio Vasari](#) described Giotto as making a decisive break with the prevalent [Byzantine](#) style and as initiating "the great art of painting as we know it today, introducing the technique of drawing accurately from life, which had been neglected for more than two hundred years".

⁴ Immanuel Kant (22 April 1724 – 12 February 1804) was a German [philosopher](#) and one of the central [Enlightenment](#) thinkers, Kant's comprehensive and systematic works in [epistemology](#), [metaphysics](#), [ethics](#), and [aesthetics](#) have made him one of the most influential figures in modern [Western philosophy](#).

⁵ Plato was an [Athenian philosopher](#) during the [Classical period](#) in [Ancient Greece](#), founder of the [Platonist](#) school of thought, and the [Academy](#), the first institution of higher learning in the [Western world](#).

He is widely considered the pivotal figure in the [history](#) of [Ancient Greek](#) and [Western philosophy](#), along with his teacher, [Socrates](#), and his most famous student, [Aristotle](#). Plato has also often been cited as one of the founders of [Western religion](#) and [spirituality](#). The so-called [Neo Platonism](#) of philosophers like [Plotinus](#) and [Porphyry](#) greatly influenced [Christianity](#) through [Church Fathers](#) such as [Augustine](#). [Alfred North Whitehead](#) once noted: "the safest general characterization of the European philosophical tradition is that it consists of a series of [footnotes](#) to Plato.

⁶ Socrates (c. 470 – 399 BC) was a Greek philosopher from [Athens](#) who is credited as one of the founders of [Western philosophy](#), and as being the first [moral philosopher](#) of the [Western ethical](#) tradition of thought. An enigmatic figure, he authored no texts, and is known chiefly through the accounts of [classical writers](#) composing after his lifetime, particularly his students [Plato](#) and [Xenophon](#).

⁷ Aristotle was a Greek [philosopher](#) and [polymath](#) during the [Classical period](#) in [Ancient Greece](#). Taught by [Plato](#), he was the founder of the [Lyceum](#), the [Peripatetic school](#) of philosophy, and the [Aristotelian](#) tradition. His writings cover many subjects; including [physics](#), [biology](#), [zoology](#), [metaphysics](#), [logic](#), [ethics](#), [aesthetics](#), [poetry](#), [theatre](#), [music](#), [rhetoric](#), [psychology](#), [linguistics](#), [economics](#), [politics](#), and government. Aristotle provided a complex synthesis of the various philosophies existing prior to him. It was above all from his teachings that the West inherited its intellectual [lexicon](#), as well as problems and methods of inquiry. As a result, his philosophy has exerted a unique influence on almost every form of knowledge in the West and it continues to be a subject of contemporary philosophical discussion.

⁸ John Ruskin (8 February 1819 – 20 January 1900) was the leading English [art critic](#) of the [Victorian era](#), as well as an art patron, [draughtsman](#), [water colorist](#), philosopher, prominent social thinker and philanthropist. He wrote on subjects as varied as [geology](#), [architecture](#), [ornithology](#), [literature](#), [education](#), [botany](#) and [political economy](#).

His writing styles and literary forms were equally varied. He wrote essays and treatises, poetry and lectures, travel guides and manuals, letters and even a fairy tale. He also made detailed sketches and paintings of rocks, plants, birds, landscapes, architectural structures and ornamentation.

The elaborate style that characterized his earliest writing on art gave way in time to plainer language designed to communicate his ideas more effectively. In all of his writing, he emphasized the connections between nature, art and society.