**The *Fundamental Interrelationships Model* – An Alternative Approach to the *Theory of Everything,* Part 4**

**Subtitle: The Nature of Beauty and *Fundamental Interrelationships***

**Abstract:** This article is Chapter 21, titled The Nature of Beauty and the Fundamental Interrelationships, from the book Behind Civilization. It posits that the nature of beauty is rooted in one of the fundamental interrelationships: order. Beauty is perceived as a response in the human brain to this fundamental interrelationship. This article provides evidence that the order theory uniquely explains all forms of beauty and reaffirms the IRM's ability to offer a comprehensive framework for the *Theory of Everything*.

Throughout human history, the enchantment of beauty has continually wielded its power to bewitch us. Driven by its irresistible temptation, we have been drawn into an endless pursuit of its forever phantom illusion, inspiring various spectacular phenomena in our civilization: the resonance of Beethoven's symphonies in concert halls, the graceful ballet of Swan Lake performed in theaters, the emotive arias echoing in opera houses, and the splendid art exhibited in national galleries. These are testaments to the pursuit of beauty, which enriches the mundane lives of humanity.

While admiring the arts created by humans, we also marvel at the miracles of beauty that nature presents: fluffy clouds drifting across an azure sky, a colourful rainbow arching after a shower in sunshine, birds singing, and flowers blooming in the wild.

Even more miraculous is the way art captures beauty: mirrored in an artistic depiction, a voluptuous body reveals its attraction. It radiates charm and seduction, arousing the beholder’s imagination. We cannot help but wonder whether this beauty is a fleeting fantasy or a profound illusion, yet we must admire it as a masterpiece of nature’s creation. However, no matter how glamorous beauty may be, each blossom eventually succumbs to wilting; as time passes, even the brightest stars lose their lustre, leaving no trace of their former splendour.

So, what is beauty? Many hypotheses have been proposed to explain the nature of beauty. Axioms such as 'beauty is in the eye of the beholder' have traditionally been used for this purpose. Currently, the most popular explanation revolves around the notion of symmetry. This theory suggests that a symmetrical body displays beauty, whereas an asymmetrical body does not. While this hypothesis does explain some phenomena, it falls short in accounting for many beautiful instances that lack symmetry.

The most compelling argument against this hypothesis is that if symmetry is the basis of beauty, then changing an asymmetrical part of the human body, such as one foot or one hand, to be symmetrical would theoretically enhance its beauty. However, this is untrue; it would only result in ugliness. Additionally, the beauty found in logic, music, and various asymmetrical objects cannot be explained solely by the notion of symmetry. Despite numerous hypotheses, the nature of beauty remains as elusive as ever. Nevertheless, a new explanation has been introduced to encompass all forms of beauty.

Let’s conduct some interesting experiments. Firstly, play Beethoven’s Symphony No.6. This masterpiece is well-known for its finesse and elegance; you will be stirred by its spectacular melodies. Then, play another masterpiece, 'The Blue Danube' by Strauss. Once again, you will be overwhelmed by the beauty of this piece. However, when these two pieces of music are played simultaneously, there is no beauty at all. If Beethoven’s Symphonies No.1 to No.9 are played together, they will only create noise.

Now, let's delve into another experiment. Collect a number of toothpicks and spread them on a table without any specific order or arrangement. Then, collect another bunch of toothpicks, but this time arrange them carefully into patterns such as squares, triangles, rows, etc. You will notice that the orderly patterned toothpicks are more pleasing to the eye than the disordered ones, as we perceive beauty in orderly, structured patterns, but not in disarray.

Based on this, we may state that humans favor ordered patterns and tend to perceive orderly objects as beautiful, considering disorder as ugly. In other words, order is one of the basic factors enabling human brains to perceive beauty.

Similarly, Symphony No. 6 is an ordered arrangement of sounds from a variety of instruments, organized in a specific order that evokes a pleasing and beautiful aural experience. When two symphonies with different orders are played simultaneously, the disruption of their ordered arrangement creates disorder. From these observations, we can conclude that order is a fundamental factor in our perception of beauty. This conclusion will be further explored in the following discussion.

A phenomenal display of beauty in our current times is the Miss World Competition. Undoubtedly, the finalists are all physically stunning, exuding the irresistible charm of their angelic faces and seductive figures. But why does nature bestow such beauty upon this fortunate few? Does this phenomenon have anything to do with order?

Let’s examine the relationship between facial features and beauty, as the geometrical shape of the eyes, nose, ears, mouth, and cheeks defines the beauty of a face. Generally, noses are expected to be straight and of a certain length; a short nose is not considered beautiful. While this concept holds true for some individuals, increasing the length of one’s nose excessively, such as to touch the ground like that of an elephant, can be counterproductive. Surgical intervention to reduce the nose to just one millimeter also fails to restore beauty. Therefore, we can assert that the length of a 'beautiful' nose falls within a certain range, and anything beyond or below this range is not considered beautiful.

Similarly, the size of eyes influences the beauty of a face, with larger eyes generally considered prettier. However, if the eyes are larger than watermelons, occupying most of the face to the extent of popping out, it would not be considered beautiful either. Shrinking those eyes to the size of sesame seeds through surgical intervention would not be beautiful either. This once again suggests that the size of the eyes needs to be within a certain range, as anything outside this range is not beautiful.

In conclusion, it can be reasonably stated that each human facial feature needs to be within a certain range to be perceived as beautiful."

Why would facial features outside a certain range be considered unattractive? The hypothesis posits that individuals encounter numerous people in their living environment, most of whom possess facial features falling within specific parameters of shape and size. Through continuous observation, the memory system registers a range of shapes and sizes of facial features, forming a set of 'patterns' or 'orders' for human facial features within the brain.

When an individual's facial features stimulate the viewer’s visual sensory system, it generates corresponding electrical activity within the viewer's neural network. If this electrical activity aligns with the 'order' stored in the viewer's memory, it results in harmonious and orderly neural activity, evoking a sense of beauty. In contrast, if the order of the instantly generated electrical activity does not align with the 'order' stored in the viewer's memory, it creates conflict and disorder, leading to the loss of the sense of beauty.

In essence, the perception of beauty in a set of facial features depends not only on their inherent order but also on whether that order aligns or conflicts with the 'order' of facial features stored in the viewer's brain.

The order of facial features not only depends on their size but also encompasses considerations of shape, orientation, skin texture, and the relationships between different parts, including distance, ratio, and position. Smooth skin, for instance, can be viewed as an orderly presentation in two dimensions. However, when wrinkles occur, the once orderly surface becomes disordered.

The geometrical shape of the face is constructed by subcutaneous fatty tissue, muscles, other soft tissues, and bones. Their orderly arrangement defines the overall presentation of the face, ultimately determining its beauty. It's not just about individual features but also the specific relationships between them. For example, a longer nose may be more aesthetically pleasing when paired with a longer face as opposed to a round face. Additionally, if specific lines of the nose align with other lines on the face, it enhances the overall appeal.

The relationship between different parts of the face is crucial. Symmetry between the left and right sides of the face is considered orderly, while asymmetry is perceived as disordered. An imbalance such as having one eye larger than the other disrupts the sense of beauty. In essence, the various components of the face - its different parts, the distances between them, and the arrangement of skin, muscles, and bones - all contribute to the overall orderliness that forms a beautiful face.

Individual beauty is not solely dependent on facial features; it extends to the harmony and order of the entire body. Considerations such as body lines, surface, the size of each part, the length of individual components, and the relationships between them - symmetry, proportion, distance, and overall positioning - all contribute to an individual's beauty.

For instance, a face with the upper part wider than the lower part is often considered more attractive, mirroring the natural proportions seen in the human body, where the shoulders are wider than the feet. The connective tissues, fatty tissues, muscles, and bone structures collectively contribute to the orderly arrangement of body parts, further influencing the physical beauty of an individual. It becomes evident that order is a key factor in the manifestation of an individual's beauty.

The physical orderly arrangement of a body serves as a stimulus to generate a sense of beauty in its viewers. However, the ability of viewers to sense this beauty hinges on whether the stimulus triggers an orderly electrical activity in their brains. If the order of electrical activity created by the stimulus aligns with the previously registered order of electrical activity, then a sense of beauty is generated. Otherwise, there is no sense of beauty.

This hypothesis can help explain intriguing phenomena. For instance, gorillas are typically furry, while humans are not. If one encounters a hairless gorilla or a furry human, the immediate reaction is often a perception of ugliness. This response stems from repeated visual exposure, which registers the features of gorillas and humans as specific concepts - 'furry gorilla' and 'hairless human being' - with distinct orders in the human brain.

When a hairless gorilla or a furry human are presented, conflicting electrical activities in the brain arise, disrupting the established order and resulting in a sense of disorder. This is why a hairless gorilla or a furry human is perceived as unattractive. A similar mechanism explains other cases: while many find rainbows beautiful, someone with rainbow-colored hair may be deemed unattractive. Hypothetically, if everyone were born with rainbow-colored hair, mono-colored blonde hair might be considered strange. Similarly, an azure sky is calming, but an individual with blue skin might appear frightening, particularly at night, akin to a ghost.

Subjective order is not solely shaped by the individual's developmental environment; it is also influenced by the entire evolutionary process of a given species. These evolved orders are imprinted in our biological genes. For instance, the association of sugar with a sweet taste is deeply ingrained in our biological makeup. Thus, certain visual features of the human body may also be imprinted in our biological genes too."

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Order serves as the foundation for beauty not only in individuals but also in groups. A striking illustration of this can be observed in the group performances at an Olympic opening ceremony, where all presentations are based on a shared order, resulting in a display of spectacular beauty.

Furthermore, there are instances where an individual's disorder, when integrated into the order of the entire group, gives rise to beauty. Consider the example of a soldier with a beret slanted to one side - individually, this may appear asymmetrical and untidy. However, when a group of soldiers all wear their berets slanted to the same side, the perceived 'untidiness' disappears. The slant of the berets becomes an ordered pattern within the group, eliciting a sense of beauty. Once again, this example underscores that order among objects or within a group is a fundamental element shaping human aesthetic perceptions.

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Order plays a pivotal role in achieving beauty across various art forms. Consider a symphony performance, where a conductor orchestrates the musicians in orderly actions, following the musical score. This adherence to order results in a beautiful and harmonious performance. If individual performers were to deviate from the conductor's direction and follow their own rhythm, the established order would crumble, turning the collective symphony into discordant chaos.

Overall order is a crucial element for the success of artistic performances. In figure skating, for example, the rhythm of the skaters' movements must align with the music to captivate the audience and judges with a sense of beauty. Russian figure skaters excel in this regard, particularly in pairs skating, where the synchronization of movements between the two artists and their coordination with the music are exceptional. The facial expressions and body language of the performers coincide with the emotional nuances of the music, creating a harmonious and orderly performance that exudes beauty and elegance. This cohesion not only stems from the high level of difficulty in their movements but also from the deep understanding of the music by both coaches and skaters. Thus, a superb artistic performance is achieved through the combined interaction of perfect harmony in body language, facial expressions, and movements between the pair.

From the aforementioned group performance, it can be extended to a society in which cultural beauty depends on whether it creates an orderly or chaotic environment.

Artistic performances, whether in a symphony orchestra or pairs figure skating, may appear to be controlled by conductors or coaches, but ultimately, they are guided by the fundamental interrelationships. A symphony orchestra operates as a hierarchical system with the conductor at the apex, wielding the power to direct all members of the team. This hierarchical structure mirrors broader systems where higher levels exert more influence over the lower levels. Without this order, the performance would devolve into disarray, producing noise rather than harmonious music.

Interestingly, at the very top of this system is not the conductor but an invisible element - the music score. The score effectively 'directs' the conductor, organizing every member to produce sounds in an orderly manner, thereby creating music. To convey the beauty of music, the score itself must be in order. An orderly performance wouldn't be achievable if the music score were written in a disorderly manner.

Similarly, pairs figure skating operates as a hierarchical system. While there may not be a visible top, as each partner plays an equal role, the 'invisible' top is the music score. Beneath the music, performers artfully direct their movements in harmony with the melody, presenting beauty and grace to the audience. In these artistic performances, the music score is akin to the invisible social values governing social activities and shares similarities with the fundamental interrelationships governing the universe.

The preceding discussion underscores that the beauty of an artistic performance is ultimately governed by fundamental interrelationships. Similarly, these relationships play a crucial role in the transformation from beauty to ugliness in the human body. Typically, individuals are considered most beautiful in their youth. As a person ages, each part of their body undergoes the natural process of aging, leading to a gradual decline in youthful attractiveness. This has given rise to expressions such as 'the young and the beautiful.' But why is a youthful appearance considered beautiful?

In youth, an individual's bodily systems and features are in good order. The cells that constitute the body are in good condition and properly arranged. However, as the aging process unfolds, cell function changes, and collagen fibers rupture, resulting in flabby tissue and wrinkles. This histological change causes facial tissues to transition from 'ordered' to 'disordered,' transforming skin from smooth and silky to rough and flaccid, muscles weaken, eyelids swell, necks lengthen, and the body progressively loses symmetry. These 'undesirable' features disrupt the initially orderly physical appearance.

If the aging of the skin can be viewed as disorder on a small scale, then the aging of the entire body can be considered disorder on a larger scale. This process is driven by changes in cell function during aging, which then affect the body as a whole. Localized, specific disorders eventually contribute to an overall sense of disorder, transforming the individual from a state of grace, elegance, and beauty to a state of disorder or ugliness. As mentioned earlier, the order within an object is the primary factor shaping our perception of beauty. Aging, therefore, entails a loss of attractiveness as the shift from order to disorder unfolds. This trend is observable when comparing the glamorous youthful days of many Hollywood stars with their later years, highlighting how numerous beautiful stars undergo a transformation in appearance as time progresses.

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In the book Behind Civilization, a model is proposed to represent the fundamental interrelationships that govern not only lifeless objects but also human civilization, including technological revolutions and social changes. Through the exploration of beauty, a further conclusion is drawn: the transition from beauty to ugliness is essentially the transition from order to disorder - one of the fundamental interrelationships in the universe. Thus, the fading of beauty in the human body is also governed by these universal principles.

The passionate pursuit of beauty is an innate aspect of human nature that remains ceaseless. This drive has fueled the creation of great poetry, crafted by renowned poets through the orderly arrangement of words, and continues to be treasured by countless people across generations.

The beauty of a scientific paper depends on how effectively it presents abstract interrelationships in an orderly manner.

The beauty of literature comes not only from its phonetic organization but also from its alignment with human nature. A poignant example of this enduring human fascination with beauty is found in Hans Christian Andersen's fairy tale, 'The Little Match Girl.' More than a century after its publication, the tragic beauty of this tale still resonates so profoundly that millions of readers and TV viewers cannot help but shed tears.

In the fairy tale of Cinderella, the power of her beauty plays a pivotal role in capturing the heart of the prince and securing her happily-ever-after. This narrative archetype represents a dream sought by many. Indeed, beautiful individuals are often perceived as luckier than their plainer counterparts, seemingly positioned to attain happiness more effortlessly. The allure of beauty grants individuals a certain power and influence over others. Some may even be able to summon the storms and turn the tide.

The pursuit of beauty is not merely instinctive but also serves as a means of survival. Individuals who possess beauty often strive to retain it, those who have lost it seek to reclaim it, and those who never had it aspire to create it. Consequently, a range of approaches is employed, from simple makeup to extreme cosmetic surgery, all with the common goal of maintaining the body in a state of order.

Consider the extent to which people are willing to go, cutting off or undergoing procedures to enhance their appearance, all in pursuit of one word: beauty. Beauty, perceived as a means of power and, ultimately, survival, drives individuals to these measures.

While beauty can be artificially created, it remains subject to the fundamental interrelationships governing the universe. Surgical procedures altering facial features constitute a unique form of physical 'phase transition' in the human body, aligning with the *Interrelationships Model*. The moment of undergoing cosmetic surgery can be seen as a 'critical point.' Preceding this 'critical point,' the old 'phase' is the original face; post-surgery, the new 'phase' emerges as the altered face. The individual, having undergone surgery, enters a new phase in life with enhanced power - an expression of expansion!

Stories abound of individuals transforming into beautiful figures resembling Barbie dolls after cosmetic surgery and attracting millionaire partners. This represents an entirely new phase in one's social life. The concept of 'phase transition' in physics extends to human lives as 'face transition,' and the critical point in physics becomes a 'face transition point.'

While 'face transition' may seem to offer obvious benefits, caution is warranted, as the outcome is subject to the law of symmetry. A successful surgery positively changes the individual's face, making it more beautiful, but symmetrically, it may result in disfigurement. Fortunately, a fundamental interrelationship, asymmetry, intervenes, as positive outcomes are more likely than negative ones with modern technology.

Yet, the law of expansion-contraction prevails: artificially created beauty diminishes over time, and things revert to their original state. Subsequent surgical procedures become necessary, reflecting the concept of continuity-discontinuity in a serial relationship. This repetitive cycle embodies periodicity. However, this repetition is not infinite, and a day will come when the procedure is no longer desired. This represents the end - an expression of one of the fundamental rules, limitation. All of these observations align with the *Interrelationships Model*, illustrating that everything, including beauty, is governed by fundamental interrelationships."

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From this discussion, it becomes evident that symmetry is not the mechanism directly related to beauty. In essence, beauty is the human brain's specific response to order. Order, as one of the fundamental interrelationships, stands as a cornerstone in the fundamental mechanism governing everything in the universe.

The following video provides a dynamic explanation of beauty:

https://www.youtube.com/watch?v=x6exRH15ioY