

# The Relationship Between Trait Mindfulness and Aesthetic Preference

Binquan Liu

Beijing Normal University-Hong Kong Baptist University United international College, Quanzhou, China

**Abstract.** Aesthetic preference has always been considered to be subjective and its influences have been studied for a long time. One of the most discussed is the relationship between individual traits and aesthetic preference. Although some traits have been proven to contribute to aesthetic preferences, the exact mechanism of their influence is unclear. The research on the relationship between trait mindfulness and traits has become more refined, and some of these traits, such as spatial perception and memory, have been shown to be related to aesthetic preferences. Thus, it seems feasible to improve trait levels through mindfulness training to influence aesthetic preference, which means that the relationship between trait mindfulness and aesthetic preference is worth studying.

**Keywords:** Aesthetic preference; Mindfulness; Trait mindfulness.

## 1. Introduction

Observing a painting, we can perceive several attributes, e.g., color richness and stroke thickness, that can be included in a bottom-up process involving thinking of the painting. The quality of the attributes leaves us with the first impression or intuition about the painting. Then we may judge the type of the painting and use the corresponding criteria to evaluate the painting, which can be included in a top-down process. The demand for beauty increases with the improvement of material living standards. Aesthetics is more of a top-down process, and mindfulness is focused on this process. The aesthetic mindset should focus on a specific goal and avoid having a specific goal orientation. Langer(2014) defines mindfulness as the simple act of actively noticing things, which means that aesthetics is associated with mindfulness in the processing mechanism. Harrison & Clark (2016) has proven that the trait mindfulness is associated with the aesthetics of the art. To be sure, many researchers believe that the increase in mindfulness contributes to aesthetic preference. However, the specific mechanism of how mindfulness affects aesthetics is still a question worth exploring.

## 2. Aesthetic experience

As mentioned above about the relationship between aesthetics and the top-down process, the top-down process is based on aesthetic experience which has been described as a significant part of perception and emotion in human life, such as hunger, thirst, love, and aggression (Hagman, 2005). There are currently three main directions of research on aesthetic experience: 1) Preference, 2) Emotional states, 3) Unusual states.

### 2.1 Preference

The first one is that Berlyne(1971) proposed favorite preference, emotional pleasure, and the beauty of things. For example, people will prefer a certain painter's painting, a certain color, some people like landscape scenery but others like urban landscape. But a person's aesthetic preference is always relatively fixed, the object properties change because of the change in fondness. Color is a very typical attribute. Albers et al. (2020) explored the importance of color in aesthetic preference based on several abstract paintings. The main operation of the experiment is the rotation of paintings through the L\* axis in CIELAB space, which scrambled the spatial structure of the paintings. The operation can maintain lightness and saturation but change the hue. To explore the influence of the change in spatial structure and color, The experiment processed the paintings into three different

conditions: (1) the original format(O-image), (2) only spatial scrambling(S-image), (3) both chromatically and spatial scrambling (control condition SC-image). For the details of the scramble, they rotated the angle of paintings in the range of -100 degrees to 100 degrees in 20 degrees of a step, in a total of 11 conditions of a picture. They used two-interval-forced choices to ask participants to choose a preferred one under the comparisons of two images derived from the same painting. For the experiment results, the aesthetic preferences of O-image and S-image were similar, indicating that spatially structure did not influence the overall paintings. In addition, there was a significant difference between them and SC-image. The participants tended to select an image similar in rotation degree to the original one. It indicated that color occupies a key position in aesthetic preference.

Nascimento et al. (2021) used a similar methodology to the above, while they aimed to explore the naturalness preference, which refers to the extent that people think a painting seems nature. They used five alternative-forced choices for the procedure to ask the participants to choose the most natural one. The results indicate a strong relationship between perceived naturalness and preference.

## 2.2 Emotional states

The second direction of aesthetic experience research is dominated by emotional states, such as interest and disgust (Silvia, 2005, 2009). Throughout history, aesthetics has emphasized the need to evoke, shape and improve people's emotional experience. An outstanding work must be able to have the effect of moving people. Stimulating human aesthetic emotions is the medium through which art works (Berlyne, 1971).

Firstly, aesthetic emotions are not the same as art-induced emotions. Many people have a very limited perception of aesthetic objects, thinking that only works of art, architecture and landscapes can be used as aesthetic objects. Imagine that you spend hours solving a mathematical algebra problem and then discover an extremely convenient and simple solution, would you marvel at and appreciate it as a beauty. When you learn about Newton's second law and Einstein's mass-energy equation, do you feel shocked and admire the outstanding intellectual achievements of your predecessors. The range of aesthetic objects is very wide, and there is no upper limit to the aesthetic experience each object can bring.

It is worth noting, however, the emotions expressed in a piece do not inspire consistent emotions in all appreciators. A painting depicting the brutality of war can make the viewer feel sad or even weep, but it can excite the militant. Art works can drive people's emotions but everyone's emotions may not be the same. What makes this type of emotion unique is that each person has specific aesthetic criteria, including the pleasure, fear, and shock that the aesthetic object brings. But not all works achieve such standards. In a comedy work, for example, each person has a different laughing point making it difficult to predict the overall appreciation of the comedy.

## 2.3 Unusual states

The third direction of study is unusual states, such as the chills, emotions, loss of time, and awe that people experience when they see an aesthetic object. Music is one of the most likely aesthetic chills, often with unexpected harmonies, sudden changes in volume, or an unexpected solo. In general, it is about bringing the viewer a feeling that exceeds expectations. Again, this state of affairs is subject to individual aesthetic differences (Grewe et al., 2007). Silvia & Nusbaum (2011) explored the inter-individual differences of aesthetic chills personality from the perspective of personality. Participants were asked to take a scale of creativity and personality. In fact, the study firstly asked each participant about their aesthetic areas of daily life and measured each person's related aesthetic chills status through a scale of 12 items. To measure personality and chills accurately, the research used Big Five Aspects Scale(BFAS) (DeYoung et al., 2007) and Revised NEO Personality Inventory(NEO-PI-R) (Costa & McCrae, 1992) to improve the accuracy of the result, to verify chills. In addition, BFAS distinguishes Openness to Experience into Openness and intelligence, making the results more discriminative. Then, the research measured intelligence and art experience using several methods, including The Aesthetic Fluency Scale, which measures art expertise (Smith & Smith, 2020).

The result indicated that people with high openness, aesthetic fluency have high aesthetic experience scores, while people with high intelligence have lower aesthetic experience scores. This means that people with higher openness to experience tend to have richer artistic talent, stronger imagination, and more experience of aesthetic chills.

Aesthetic theory has been considered to be a highly subjective theory by most since its inception, but there is growing evidence that beauty seems to be shaped by laws, just as we can follow a formula to calculate the density of water. For example, some singers like to create songs that have no meanings but are popular, and some readers like to read online novels that are superficial and have no literary level. Just because these songs and novels capture people's immediate needs, they can satisfy people for a short time, but they will be tasteless when they are deeply examined. The fact that the public likes the same beautiful thing or person at the same time shows that the standard of beauty is regulated by social and cultural norms. van Leeuwen et al. (2009) asked participants to imitate the paintings from others to create their own paintings, the research indicated that people tend to follow someone who is evaluated more beautiful, which is also known as chameleon effect. This applies not only to adults, but also to infants who prefer more beautiful-looking people, as evidenced by longer gaze times (Dion, 1972; Langlois et al., 1991). This suggests that aesthetic standards are the common result of long-term human evolution and social and cultural norms, and seem to be regulated.

In my opinion, without the clear mechanisms of these aesthetics, preference should be the most priority research direction. As the experimental design mentioned above, the study of aesthetic preference can be quantified into color, saturation and other attributes to study its value, which can be objectively calculated and the results would be more convincing.

### 3. Mindfulness

Originally from Buddhist meditation, mindfulness was introduced into clinical psychology in 1979 by Kabat-Zinn, who defined mindfulness as the objective perception of the present moment (Kabat-Zinn, 2003), and that meditation is only a way to maintain and improve mindfulness (Kabat-Zinn, 2005). In recent studies, mindfulness has been divided into trait mindfulness - a stable mindfulness with individual differences (Whitehead et al., 2020), and state mindfulness- an experience of entering a state of mindfulness at a given time (Hülshager et al., 2018).

Researchers of state mindfulness believe that mindfulness fluctuates from moment to moment and influences the next state. Researchers of trait mindfulness believe that mindfulness promotes wisdom, self-actualization and self-transcendence (Whitehead et al., 2020).

Langer (1989) defined mindfulness as a flexible cognitive state that results from drawing novel distinctions about the situation and the environment. Combined with scholars' definitions of mindfulness, it is clear that mindfulness represents a person's cognitive level, and its most significant role is to predict a person's performance through various traits. However, mindfulness is not quantified like IQ. We cannot say that if the person has a mindfulness quality of 100, then he is competent for a specific task. Because the level of mindfulness is independent of the individual, a person with a superb memory may not have a high attention span. Thus, there are many factors missing from the quantification of mindfulness that are also missing from the study of its mechanisms. These are the ones that need to be studied at present.

In Clinic Psychology, Martin (1997) believed that mindfulness was a common factor in all psychotherapies. Mindfulness Based Stress Reduction has been proven to be effective (Grossman et al., 2004). And mindfulness can promote individuals' work-related well-being (Reb et al., 2015), Improve work performance. However, because mindfulness training can divert a person's attention, it may also reduce the individual's work motivation (Hafenbrack & Vohs, 2018).

In Cognitive Psychology, Grundy et al. (2018) believed that Mindfulness improves focus by keeping attention on a specific object, thus achieving control. This improves the recovery process after cognitive conflict and helps to enhance inhibition (Gallant, 2016). Besides that, Melen et al.

(2017) pointed out that mindfulness was the mediating variable between attachment and its resulting outcome.

Obviously, mindfulness plays a crucial role in many areas, and overall, mindfulness promotes the ability to observe objects or situations from multiple perspectives, to change opinions according to the actual situation, and to receive guidance from routines and rules, that are all somewhat connected to aesthetics. Mindfulness can enhance sensitivity to internal and external stimuli, which may lead to enhanced subjective responses of individuals to aesthetic objects (Harrison & Clark, 2016). Aesthetics should have a mindset away from goal orientation and focus on a target object (Cupchik & Winston, 1996). This is consistent with the mindset and attention in mindfulness training. As mentioned above, mindfulness also contributes to an attitude of openness to experience, and an increased receptivity to aesthetic objects may improve the ability to perceive and respond to them (Anicha et al., 2012). The above mentioned proves that Aesthetics is more of a top-down thinking process, and top-down control of concentration has been proven to be enhanced by mindfulness training. (Tang et al., 2015).

The above overview illustrates the connection between mindfulness and aesthetics. Mindfulness contributes to the aesthetics of many works of art. Diaz (2013) indicated mindfulness increased the intensity of the aesthetic response, and subjects generally believed that mindfulness increased their attention. Harrison & Clark (2016) researched the relationship between trait mindfulness and aesthetic experience, the research used the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006), Aesthetic Experiences Scale (AES; Silvia & Nusbaum, 2011), and Aesthetic Fluency Scale (Smith & Smith, 2020) to measure dispositional mindfulness, the frequency of aesthetic experience, and familiarity with the arts respectively. The result indicated that mindfulness positively predicted the frequency of aesthetic experience, and subjects who scored high on the FFMQ usually had more aesthetic experience.

#### 4. Conclusion

As mentioned above, aesthetic preference is currently the most important research priority, because we can study several quantifiable attributes such as color and spatial structure. The relationship between mindfulness and aesthetic preference by quantitative analysis is more convincing.

Surprisingly, there is still not much research on the relationship between mindfulness and aesthetic preference. However, we believe that mindfulness does not directly affect aesthetic preference but indirectly by regulating emotions, attention, self-acceptance, and other internal or external traits. Therefore, the study of the relationship between the two should be combined with the relationship between mindfulness and trait, and then exploring the mechanisms that influence aesthetic preference should be investigated in the context of the relationship between mindfulness and trait. For example. Carson & Langer (2006) researched some basic principles of mindfulness applied to self-acceptance. When people are in a state of positive mindfulness, they should have subjective judgments about their environment, rather than changing their image to gain positive evaluations from others or to maintain self-esteem. Simply, when people are actively focused on their environment, they are truly living in the present moment. Conversely, when individuals blindly accept what others think of them, they will have a hard time accepting themselves. Other people's evaluations may be based on their own needs and experiences, rather than on objective truth. In conclusion, the article suggests that self-accepting people look at themselves from multiple perspectives to discover their potential, and when they look at the world and themselves mindfully, they are able to accept themselves unconditionally. Tarrasch et al. (2017) show that mindfulness could improve visual and motor accuracy, and even academic performance.

Research on the relationship between mindfulness and trait has been well established, but the relationship between trait and aesthetic preference is still unclear, and we should use trait mindfulness to study aesthetic preference, which is currently the most scientific and feasible way to study aesthetics.

Currently, aesthetic preference is more concerned with the subjective perceptual pleasure of a particular aspect of something, a process that incorporates sensory perception. This means that aesthetic preference is closely linked to these personal traits. Once we understand the relationship between mindfulness and these traits, we can better investigate the specific mechanisms of influence by examining the connection between these traits and aesthetic preference.

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