

The Psychology Behind Art:  
Can Art Benefit Mental Health?



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*Writers Note: This paper explores the way that art interaction can be utilized for self expression as well as a tool for emotional stimulation and relaxation. Learning about the human brain's psychological reactions in response to art allows us to better appreciate the profound impact that art has on a society.*

She stood before the painting, her eyes glistening with tears. She had never felt such a deep and profound emotion before and wasn't quite sure how to process it. The painting before her was a masterpiece of color and form, a swirling mass of reds and grays that seemed to evoke the very essence of chaos. As she stared at the painting, the girl felt as though she was being pulled into a vortex of emotion. She felt a sense of sadness, of longing, of hope, all jumbled together in a confusing tangle of feelings. The colors seemed to swirl and dance before her eyes, each hue evoking a different tingling sensation, a different personal experience. The girl closed her eyes, trying to make sense of the flood of emotion that was overwhelming her. She blinked hard, squeezing her lids over her pupils in an attempt to rationalize the stunning scene before her. When she opened her eyes again, the girl saw the painting in a new light. She saw the beauty and complexity of the brushstrokes, the way each one seemed to tell a story, to convey a feeling that was beyond words. It was a language. A language both universal, but unique to the viewer. She felt as though she was experiencing something sacred, something that had the power to transform her in ways she couldn't yet understand. As she stood before the painting, the girl felt a sense of release. She felt as though she was finally able to let go of all the emotions that had been weighing her down, to allow herself to be swept away by the beauty and power of the art. She felt a sense of connection to the artist, to the person who had created something so beautiful and so wondrous. When the girl finally turned away from the painting, she felt as though she had

been through a transformative experience. She felt lighter, more free, more open to the world around her. She knew that she would carry the memory of that moment with her for the rest of her life, and that she would always be grateful for the beauty and power of art.



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<sup>1</sup> "The Slave Ship" By Joseph Mallord William Turner

“One of Turner’s most celebrated works, *Slave Ship*, is a striking example of the artist’s fascination with violence, both human and elemental. The painting was based on a poem that described a slave ship caught in a typhoon, and on the true story of the slave ship *Zong* whose captain, in 1781, had thrown overboard sick and dying slaves so that he could collect insurance money available only for slaves ‘lost at sea.’ Turner captures the horror of the event and terrifying grandeur of nature through hot, churning color and light that merge sea and sky.”<sup>2</sup>

That girl was me. Standing in the middle of the Museum of Fine Arts on a miserable rainy afternoon. I didn't plan to end up at that specific museum, I didn't plan to come across that specific gallery, I didn't know the experience I was going to have with Turner's work of art. I didn't even know the historical power that it held when I felt the anguish emanating from the painting. However, I am glad I had this experience because that was the moment that I realized art wasn't just a physical piece, but also an emotional journey that has the capability to make you feel that which we cannot explain with our words. This brings me to the core of my research: How can art make us feel this way? Why do we think something is beautiful or ugly, sad or happy, confusing, maybe even angry? What chemical reactions give you the potential to connect emotions to a physical piece? What does the body view as “beautiful” about art? Why? Even as I sit here writing this I'm struggling to find the words to describe the emotions that I was feeling and the personal journey I experienced with that artwork. I had never in my life witnessed something that beautiful and tormented. I was captivated. From that moment on I developed my practice of painting and have longed to create something that was even half as stunning as Turner's work.

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<sup>2</sup> Turner, Joseph Mallord William. 'Slave Ship (Slavers Throwing Overboard the Dead and Dying, Typhoon Coming On).' Museum of Fine Arts, Boston, <https://customprints.mfa.org/detail/476114/turner-slave-ship-slavers-throwing-overboard-the-dead-and-dying-typhoon-coming-on-1840>. Accessed 11 May 2023."

The experience of viewing a beautiful piece of art can be a powerful and immersive one that engages multiple regions of the brain and body. When we encounter art that we find aesthetically pleasing or emotionally resonant, our brain and body can undergo a range of reactions, both conscious and unconscious. One of the first things that happens when we view a beautiful piece of art is that our visual cortex, which is located at the back of the brain, begins to process the visual information presented in the artwork.<sup>3</sup> This region of the brain is responsible for recognizing shapes, colors, textures, and other visual elements, and helps us to perceive the artwork as a cohesive whole piece.<sup>4</sup> As we continue to view the artwork, other regions of the brain may become activated, including those involved in emotion, memory, and cognitive processing. For example, the limbic system, which is responsible for the regulation of emotions, may become engaged, causing us to experience feelings of pleasure, awe, or wonder in response to the artwork. This physiological reaction was occurring in my brain as I was viewing the artwork at the MFA. The prefrontal cortex, which is involved in higher-level cognitive functions such as decision-making and planning, may also become activated, as we begin to analyze and interpret the artwork.<sup>5</sup>

The limbic system, which is also known as the "emotional brain," plays a critical role in our emotional response to art. This region of the brain is responsible for processing emotions such as pleasure, joy, and wonder, and becomes activated in response to interacting with aesthetic qualities in art. For example, when we view a painting with vibrant colors and intricate details, our limbic system may become engaged, leading to the somewhat euphoric feeling.

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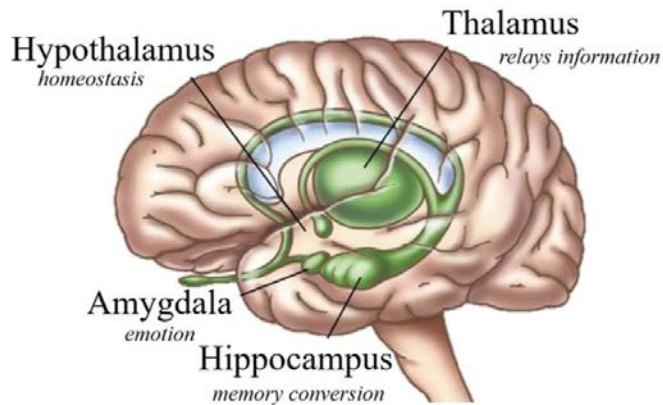
<sup>3</sup> Smith, K. C. "Can Brain Scans Really Tell Us What Makes Something Beautiful?" *Smithsonian Magazine*, Smithsonian Institution, 23 May 2012, <https://www.smithsonianmag.com/innovation/can-brain-scans-really-tell-us-what-makes-something-beautiful-64840556/>.

<sup>4</sup> "What Is the Connection Between Artworks and Emotions?" *Understanding Art: A Comprehensive Guide*. Edited by Rebus Community, Rebus Community Press, Accessed 1 April, 2023. <https://press.rebus.community/understandingartsociety/chapter/what-is-the-connection-between-artworks-and-emotions/>.

<sup>5</sup> Smith, K. C. "Can Brain Scans Really Tell Us What Makes Something Beautiful?" *Smithsonian Magazine*, Smithsonian Institution, 23 May 2012, <https://www.smithsonianmag.com/innovation/can-brain-scans-really-tell-us-what-makes-something-beautiful-64840556/>.

Similarly, when we view a sculpture that evokes a strong emotional response, such as sadness or pain, our limbic system may become activated, causing us to experience those darker emotions in response to the artwork.<sup>6</sup>

## The Limbic System

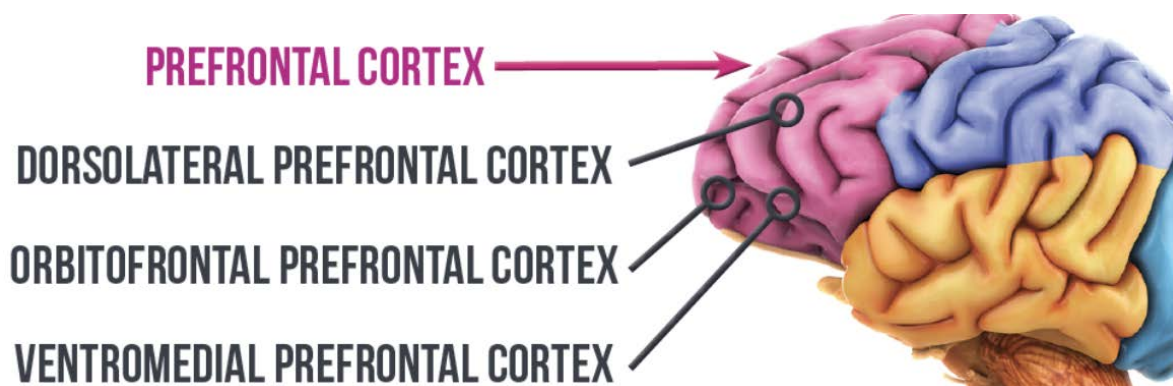


Another region of the brain that is involved in our response to art is the prefrontal cortex. This region of the brain is responsible for higher-level cognitive functions such as decision-making, planning, and problem-solving, and can become activated when we view a beautiful or complex piece of art. The brain finds beauty in things that are complex and ordered, as this can stimulate cognitive processes and lead to a sense of intellectual pleasure. When we engage with complex art, we tend to analyze more considering it engages our brain. It forces us to form an opinion on the piece and interpret the artwork, striving to understand its initial intent created by the artist, before molding its meaning to you, for every art has a personal meaning depending on your own life experience. This process of cognitive analysis can help us to develop a deeper

<sup>6</sup> "How artists have learned to titillate our limbic systems." The Irish Times, The Irish Times DAC, 12 February 2013, <https://www.irishtimes.com/news/how-artists-have-learned-to-titillate-our-limbic-systems>.

<sup>7</sup> "Limbic System Diagram." Google Images, Google, Accessed 28 April, 2023, <https://www.google.com/search?q=limbic+system+diagram&source>.

appreciation for the artwork and its aesthetic qualities, leading to a greater sense of enjoyment and satisfaction.<sup>8</sup>



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In addition to these neural reactions, viewing a beautiful piece of art can also have physiological effects on the body. For example, studies have shown that exposure to art can reduce levels of the stress hormone cortisol and increase levels of the feel-good hormone dopamine, leading to feelings of relaxation and pleasure.<sup>10</sup> Other studies have suggested that viewing art can also reduce blood pressure and heart rate, leading to a sense of physical calm. One theory that has been proposed to explain our response to art is the concept of "aesthetic pleasure."<sup>11</sup> This theory suggests that we experience pleasure in response to the aesthetic qualities of art, such as its beauty, harmony, and symmetry.<sup>12</sup> When we view a beautiful piece of art, we may experience a sense of harmony and balance in the composition, leading to feelings of

<sup>8</sup> "Art and Emotion." Internet Encyclopedia of Philosophy, University of Tennessee, Martin, Accessed 9 May 2023, <https://iep.utm.edu/art-and-emotion/>.

<sup>9</sup> "prefrontal cortex diagram." Google Images, Google, Accessed 28 April, 2023, <https://www.google.com/search>.

<sup>10</sup> "Art Makes You Happier and Healthier." Oilpixel, Accessed 1 April, 2023. <https://oilpixel.com/blog/art-makes-you-happier-and-healthier/>.

<sup>11</sup> Giulia Bonasio. "Aesthetic pleasure: cognition and emotion in the aesthetic concepts. Remarks after Sibley's works." *Estetica: Journal of Aesthetics and Art Criticism*, vol. 2, no. 1, 2023, pp. 50-65. <https://journals.openedition.org/estetica/1013>. Accessed 11 May 2023.

<sup>12</sup> "What Is the Connection Between Artworks and Emotions?" *Understanding Art: A Comprehensive Guide*. Edited by Rebus Community, Rebus Community Press, Accessed 1 April, 2023. <https://press.rebus.community/intro-to-phil-aesthetics/chapter/what-is-the-connection-between-artworks-and-emotions/>

pleasure and satisfaction. Similarly, we may find beauty in the intricate details or vibrant colors of a painting, leading to a sense of pleasure and enjoyment.<sup>13</sup>

Another theory that has been proposed to explain our response to art is the concept of "empathy." This theory suggests that we experience emotional responses to art because we are able to identify with the emotions and experiences depicted in the artwork.<sup>14</sup> For example, when we view a painting that depicts a scene of sadness or grief, we may experience those emotions ourselves, as we are able to empathize with the individuals depicted in the painting. I experienced strong emotions when I was gazing upon Turner's *The Slave Ship* in the MFA. That was, in part, due to my empathy towards the drowning people and the feeling of pure chaos in the piece.

Neurotransmitters are also responsible for feeling emotions. They are chemical substances that play a crucial role in transmitting signals within the nervous system. They are released from neurons and act as messengers between the neurons, allowing them to communicate with each other and with other cells in the body. Neurotransmitters are essential for various functions in the brain and body, including feeling happy.<sup>15</sup> We may experience feelings of joy or happiness when we view art. Viewing art can release dopamine in the brain. Dopamine is an example of a neurotransmitter that is specifically associated with pleasure and reward. It will be released within the brain in response to various stimuli, which happens to include interaction with art. Dopamine is released in larger amounts when people view a particular piece that they find aesthetically pleasing. The chemical release of dopamine is what can contribute to

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<sup>13</sup> "What Is the Connection Between Artworks and Emotions?" *Understanding Art: A Comprehensive Guide*. Edited by Rebus Community, Rebus Community Press, Accessed 1 April, 2023. <https://press.rebus.community/intro-to-phil-aesthetics/chapter/what-is-the-connection-between-artworks-and-emotions/>

<sup>14</sup> "Art & Empathy." School of the Art Institute of Chicago, Marketing & Communications, n.d., <https://www.saic.edu/news/marketing-communications/art-empathy-0>. Accessed 11 May 2023.

<sup>15</sup> Berry, Jennifer. "What are neurotransmitters?." *Medical News Today*, January 12, 2023, <https://www.medicalnewstoday.com/articles/326649>.



a sense of pleasure and satisfaction meaning viewing beautiful art results in positivity in our body.<sup>16</sup> Additionally, the level of dopamine release may be influenced by factors such as the individual's personal preferences, the novelty of the artwork, and the context in which it is viewed. For instance, I happened to be enthralled by Turner's *The Slave Ship*, but that doesn't necessarily mean everyone would have the same chemical reaction. My perception of beauty is shaped by my personal preferences and experiences. Someone else could find an artwork extremely pleasurable while another individual could find the same disconcerting and unsatisfactory. Overall, dopamine release is just one of the many physiological and psychological responses that can occur when viewing art, and it can contribute to a sense of enjoyment and positive emotions. Vilayanur Ramachandran, a neuroscientist at the University of California, San Diego, conducted research on how the brain reacts to art, specifically exploring the phenomenon known as "neural hijacking." In his research, Ramachandran found that the brain's responses to art are similar to those experienced during emotional arousal, which suggests that the experience of art is not just a purely intellectual exercise but also an emotional and physical one.<sup>17</sup>

Similarly, Semir Zeki, a neurobiologist and professor of neuroaesthetics at University College London, has conducted extensive research on the neural basis of aesthetic experiences. Zeki's findings suggest that when we view art that we find beautiful, certain areas of our brain associated with pleasure and reward are activated.<sup>18</sup> Additionally, Zeki found that the brain processes visual art in much the same way as it processes other types of visual stimuli, such as

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<sup>16</sup> Berry, Jennifer. "What are neurotransmitters?." Medical News Today, January 12, 2023, <https://www.medicalnewstoday.com/articles/326649>.

<sup>17</sup> "this is your brain on art." The Smart Set, n.d., <https://www.thesmartset.com/article03161101/>. Accessed 11 May 2023.

<sup>18</sup> Smith, K. C. "Can Brain Scans Really Tell Us What Makes Something Beautiful?" Smithsonian Magazine, Smithsonian Institution, 23 May 2012, <https://www.smithsonianmag.com/innovation/can-brain-scans-really-tell-us-what-makes-something-beautiful-64840556/>.

faces and landscapes. Overall, Zeki's research suggests that our brains are wired to respond to beauty in a deeply emotional and rewarding way.<sup>19</sup> This helps explain why viewing art can evoke such strong feelings and why it can be such a powerful experience.<sup>20</sup> Additionally, Zeki's work highlights the important role that art plays in our lives, providing not just aesthetic pleasure but also emotional and psychological benefits. Art has the power to inspire, to connect us with others, and to offer us new perspectives on the world and ourselves. By understanding how the brain reacts to art, we can better appreciate the profound impact that art can have on our lives and our well-being.<sup>21</sup>

Due to the fact that our response to “beauty” is emotionally rewarding, color can be a big factor when it comes to tone in art. Colors can evoke different emotions depending on the context, culture, and personal experiences of the viewer. However, some general associations with certain colors are the following. For example, red is often associated with passion, love, and anger and it has the potential to evoke excitement and stimulate the senses.<sup>22</sup> On the other end of the spectrum, blue is often associated with calmness, serenity, and sadness. It can create a sense of relaxation or mourning. It is important to note that these associations with colors can vary depending on the cultural context and personal experiences of the viewer. For instance “South Africa associates red with mourning” whereas in more “Western cultures, red symbolizes excitement, passion, love, and danger. Red is powerful and sexy”(Fussell). Additionally, an individual's personal experiences may also shape their associations with certain colors. For

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<sup>19</sup> "Is Beauty in the Brain of the Beholder?" ArtNews, n.d., <https://www.artnews.com/art-news/news/is-beauty-in-the-brain-of-the-beholder-267/>. Accessed 11 May 2023.

<sup>20</sup> Smith, K. C. "Can Brain Scans Really Tell Us What Makes Something Beautiful?" Smithsonian Magazine, Smithsonian Institution, 23 May 2012, <https://www.smithsonianmag.com/innovation/can-brain-scans-really-tell-us-what-makes-something-beautiful-64840556/>.

<sup>21</sup> Smith, K. C. "Can Brain Scans Really Tell Us What Makes Something Beautiful?" Smithsonian Magazine, Smithsonian Institution, 23 May 2012, <https://www.smithsonianmag.com/innovation/can-brain-scans-really-tell-us-what-makes-something-beautiful-64840556/>.

<sup>22</sup> "What Is Color Psychology?" WebMD, WebMD LLC, Accessed 9 May 2023, <https://www.webmd.com/mental-health/what-is-color-psychology>.

example, someone who had a negative experience associated with the color red may not feel the same emotions typically associated with that color. These associations can help transform art into something personal that resonates with you.

One artist who incorporates color with a heavy desire to evoke emotion from the audience is Mark Rothko. Mark Rothko is an influential American abstract expressionist artist who has a deep commitment to exploring the emotional and spiritual dimensions of art.<sup>23</sup> His goal was to create works that elicited powerful emotional responses from viewers and provided them with a “contemplative” experience, similar to the experience that I had when presented with *The Slave Ship*. Much of Rothko's art was characterized by large, colorful paintings consisting of simple rectangular forms. These forms had soft, diffused edges to convey a sense of depth, luminosity, and intensity within the art piece. Rothko believed that color, form, and composition could communicate universal human emotions and tap into the subconscious.<sup>24</sup> He wanted his art to evoke emotional states and encourage a personal, almost meditative, response. Rothko once remarked, "The people who weep before my pictures are having the same religious experience I had when I painted them." Rothko's approach to art was rooted in his belief in the power of abstract expressionism. He sought to surpass the limitations of verbal communication that we are confined to and engage with raw fundamental aspects of human existence. His overall intention was not to dictate specific meanings or narratives in his work but to provide an open space for viewers to connect with their own emotions and experiences through the color displayed on the canvas.<sup>25</sup>

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<sup>23</sup> "About Mark Rothko," MasterClass, accessed 3 May 2023, [www.masterclass.com/articles/about-mark-rothko](http://www.masterclass.com/articles/about-mark-rothko).

<sup>24</sup> "About Mark Rothko," MasterClass, accessed 3 May 2023, [www.masterclass.com/articles/about-mark-rothko](http://www.masterclass.com/articles/about-mark-rothko).

<sup>25</sup> "About Mark Rothko," MasterClass, accessed 3 May 2023, [www.masterclass.com/articles/about-mark-rothko](http://www.masterclass.com/articles/about-mark-rothko).



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No. 3/No. 13, 1949



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<sup>26</sup> "Mark Rothko - Google Images," Google, accessed 9 May 2023.

## No. 61, 1953

I was drawn into the topic of psychology behind art because my experience as a teen thus far has been one hammered with school work and stress, hence my desire to find an outlet for relaxation and positive cognitive stimulation. I have noticed that engaging in the creative flow of producing my own art works wonders on my positivity and self esteem. Whether the cause was the extreme disruption of the COVID-19 pandemic or the decaying state of our world, mental health needs are at an all-time high and many are without help. Life gets hard causing people to look for escapes in unhealthy behaviors, whether its substance abuse, disordered eating, or self harm. As someone who has struggled with many of these challenges, art has always been a happy place for me. Whenever I interact with art I find that it adds positivity to my day. This is why I researched the intersection between mental health and art. Going into this project I was filled with wonder about how art could elicit such a powerful emotion. I was curious about the psychology behind it as well as the impact it could have on my own life. My brainstorming was filled with questions such as, "What makes something beautiful? What gives art emotion? Can colors imply emotions?" I wanted to know the science behind it. I wanted to know what chemicals react in your brain to make you feel peace and pleasure from one art piece, while rage and chaos in another. I wanted to understand how to utilize art as a tool, as a therapy. Art can be a safe space for everyone and even just a small change to your environment can have a significant impact on our mood, behavior, and overall well-being. This is why I decided to create a mural for my room as my final show art piece. When we surround ourselves with things that

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<sup>27</sup> "Mark Rothko - Google Images," Google, accessed 9 May 2023.

we find aesthetically pleasing, it can have a positive effect on our mood and help us feel more relaxed, calm, and content. In particular, creating a visually appealing and comfortable living space can help reduce stress and promote a sense of comfort and relaxation.<sup>28</sup> This can be achieved through adding personal touches, such as decorations or artwork that are meaningful to us, using colors that we find soothing, and organizing our space in a way that feels inviting and comfortable.<sup>29</sup> After completing my research I can now understand why some art pieces make me emotional. I understand the psychology behind why we perceive art as “beautiful”. I understand the personal effect art can have based on individual experiences. I understand how to incorporate art into my living space and use it as an effective tool when I experience stress. My goal in writing this paper is to now inform other teens or young adults who feel in need of an outlet for self expression and release. My hope is with this information now you can go create a more artistic living space and incorporate art into your everyday experiences. Art is a language that reflects us as individuals and unites us and if more people learn how to utilize this tool it is possible to better ourselves and better the world.

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<sup>28</sup> Rattner, D.M. *Creative Space: Urban Homes of Artists and Innovators*. Schiffer Publishing, 2016.

<sup>29</sup> Sikes, Mark D. *More Beautiful: All-American Decoration*. Rizzoli International Publications Inc, 2020.

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