The Intersection of Art & Neuroscience

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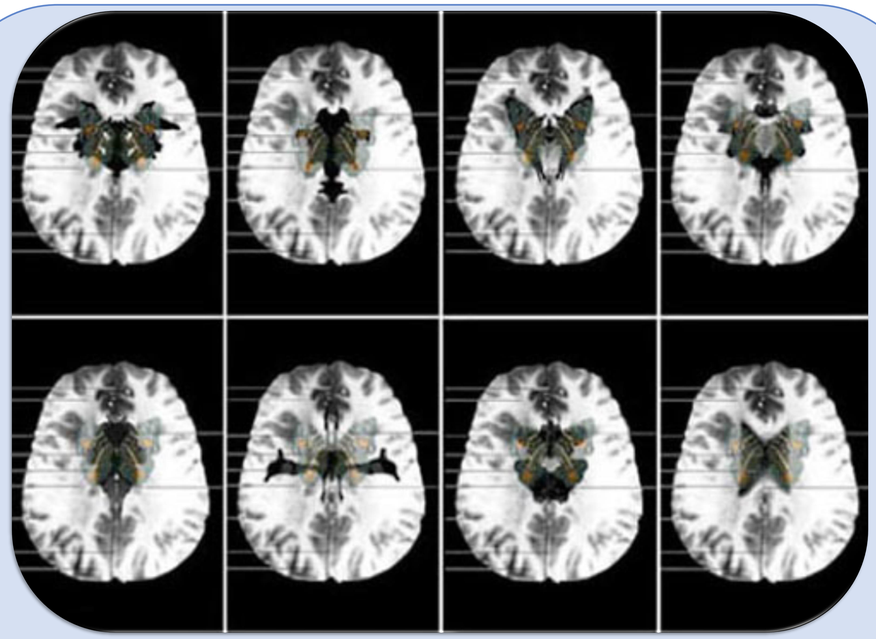
Introduction

Neuroscience can be defined as all sciences that involve the structure or function of the nervous system and brain. As I start my journey in the Neuroscience field, my curiosity peaked at how the different types of art intersect with it. By examining visual art from Anker and Cajal, musical art from Morris, and theatrical art from Kirschner and Riggin, I was able to see the grandiose effect it had in Neuroscience.



Suzanne Anker's MRI butterfly brain scans

Using Neuroscience as a subject of Visual Art

- The Father of modern neuroscience, Santiago Ramon y Cajal, changed the future of the field, as his sketches contributed to his research.
- During the 19th century, by using his drawing skills, he was able to capture precise details that when observed through a microscope, scientists weren't able to recreate on paper as he studied the cerebral cortex.
- He describes them as trees of the purjinke cells in the cerebellum, and flower gardens in the grey matter. This way of thought helped him simplify the brain and later he won a Nobel Prize with his partner Camile Golgi.
- To follow Cajal's footsteps, Suzanne Anker was intrigued by anything symmetrical along with the dendritic trees.
- Her thoughtful piece challenges you as they are Rorschach tests and some are butterflies and the scans.
- She describes it as "a way to picture a thought and it is like picking up a fantasy."(Anker)

Examining Music and its effects in the Brain

- More than 7 million people suffer from Parkinson's disease. This insidious disease attacks parts of the brain that allow movement.
- Fortunately, in the human movement lab in the La Trobe University, professor Meg Morris has been studying patient's movements for years and she has found a great solution.
- A lack of dopamine impedes them from moving normally and instead they have no control of their body.
- Professor Morris, however, discovered that playing salsa music brings their movements back to a controlled manner and they are able to walk, dance and even stand.
- The music allows for an external rhythm that compensates for the defective rhythm inside their brain.
- This was a safe way for these patients to live normally and be comfortable in their own skin.
- This experiment worked for patients that have early to mid-stage Parkinson's Disease.

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Theater and its impact

- From Boston College, Daniel Kischner, a biology professor and Patricia Riggin, a theater professor came together to explain what happens on theater, for the actor and the spectator.
- Kischner found that when people are watching a play, their brain will light up in the same way as the person that it is portraying.
- This demonstrates that we share the same thrill and magic of theater.
- The real emotions being portrayed captivate the spectator the same way.
- Additionally, people's personality impacts their talent.
- The way that the brain is organized in a certain way takes part in this, along with practice, repetition and passion, they are able to increase their craft and talent.
- Even in movies and tv shows, we act the same way, which is why we can't binge watch gruesome but realistic situations like in Black Mirror, the tv show. We have the risk of becoming depressed.

Conclusion

Not only is the intersection of neuroscience and art important in order to help research, but also to inspire people to wanting to know more about their body and mental health. Many other artists have been able to use their talent to show that you can be in the science field and be creatively active. You don't need to choose one or the other. With the help of the featured artists, I was able to see the depth of their work and that they change lives.