How can music and visual art come together to have a proven effect on people, specifically psychologically and therapeutically? I have always been especially in tune with music. Often times in movie theatres, I will begin tearing up when an especially beautiful piece of music plays. Perhaps it's just that the sound is so loud in movie theatres, it overwhelms your senses. The bright colors of the screen and the dark surroundings only amplify its effect, making you feel like you're the only one watching, even in a crowd of people. The colors and lights fly across the large screen, in time with the music. Every aspect of the experience is tailored to immersion, and you are guided through the emotions of the movie's creator in addition to your own. Outside the movie theatres, the emotional effects of music and art are still one-of-a-kind. They can change your mood, and alter the way you perceive your surroundings.

Often times when people are disconnected from their emotions, music can bring them back to reality. *Musicophilia: Tales of Music and the Brain* describes the experience of having a song jolt you out of a feeling of depression, "This sound, which like all music—indeed, like all pleasure— I had been numbly unresponsive to for months, pierced my heart like a dagger, and in a flood of swift recollection I thought of all the joys the house had known: the children who had rushed through its rooms, the festivals, the love and work..." Music can spark a change in people's mood, emphasize already existing emotions, and create new feelings that weren't there before. Deep down we instinctively recognize music's power to manipulate emotions; it's why people create playlists of songs to suit their moods. It seems almost ethereal, but there are very real and scientific reasons behind it.

In a clinical setting, music can be used in therapy with licensed professionals to help people struggling with anxiety, depression, and various other mental health issues. A scientific study titled *The effects of music on pulse rate and blood pressure in healthy young adults* came to the conclusion that "...when we are exposed to slow beat music the parasympathetic nervous system is stimulated decreasing the heart rate and while listening to fast beat music the sympathetic nervous system is stimulated and increases the heart rate." If you've ever listened to a slow, calming song when you were stressed and found yourself beginning to unwind, you know this concept. Music therapists use this reaction to music to help their patients develop better coping methods. It's a very personalized experience. Cathy Wong explains how a music therapist might prescribe certain types of music for a patient to listen to, "For example, if you have depression and feel "down and out" most days, you may hope to use music to naturally lift your mood." A music therapist might even have their patients make music themselves in order to release pent up emotions or express themselves.

Working on homework, or any kind of work in general, used to make me incredibly anxious. In middle school, there were many nights I spent silently toiling over math worksheets and practice problems. The pure monotony of it was almost unbearable for me, and if I was struggling with the content it felt like pure torture. When I got my phone and realized that I could listen to music while doing homework, things immediately got so much easier. Now, you'll rarely see me doing any kind of work without my earbuds in, my foot bouncing to the beat of whatever song I'm in the mood for that day. Each stroke of my pencil, click on my keyboard, and bounce of my head becomes a part of the music. It's easy to move in rhythm to a song, no matter what you're doing. Music simply has that effect; it sparks motion, lifts your spirit.

So how is making music different than simply listening to music? Susan Kuchinskas from Webmd.com writes that making music can have even more benefits mentally than just listening to it. It's not an instant fix, she writes, "It does take time for the benefits of

music-making to create lasting changes in your cells," but Susan states that "Studies have found that playing an hour a week for six weeks can lower the stress response." There is a difference, however, between creating music solely to create a product versus playing music casually to improve ones mood. Putting pressure on oneself to create an appealing, complete song can be stressful. Still, it is possible to have the best of both worlds, if one tackles the creation of music with an exploratory attitude while still attempting to produce an appealing result.

I would say that I went through two breakthroughs before I really began to enjoy creating music as a hobby. The first came after I picked up the ukulele my freshman year. Like a lot of children, I started taking piano lessons when I was 8 years old. While I'm glad that I did so, since it gave me a good understanding of music theory that I use to this day, I think the best way to start learning music is to approach it loosely and with the intention of simply enjoying oneself. Like learning a language, music should be learned both by independent practice and interacting with others. The ukulele had an advantage in that it was transportable. Suddenly, I could bring it with me to a friends house and play together. I've learned more from those experiences than I ever did on my own. There was also the fact that playing more than one instrument expanded my understanding of music as a whole; translating ukulele chords to piano and vice versa. The second breakthrough occurred when I started to share the music I listened to with my friends. I had never thought of myself as having a specific taste in music, if anything I thought my understanding of music was quite limited. The songs I listened to were restricted to video game and musical soundtracks, a few pop songs I found online, and the occasional random classical music piece. Still, sharing music with people is therapeutic in its own way. Sometimes you end up loving a song even more.

One of the most overlooked benefits of creating music, in my opinion, is the tactile aspect of it. Sure, music is incredibly stimulating auditorily, but the feeling of playing an instrument can be very soothing. When I am feeling especially anxious, sometimes I will play the piano in our basement back home. I will turn up the volume until it is incredibly loud, and play a song I know well as fast and as frantic as possible. It is cathartic to hear my own nervous emotions in the music, and it is lovely to feel the keys underneath my fingers, steady, solid, and real. My muscle memory takes over and it's not *me* moving my fingers anymore, not really.

Visual art is similar to music in its therapeutic application, but it has some unique aspects as well. Color theory, as it relates to emotions, has been used by artists for ages. Meanings can often be ascribed to colors, and those meanings can be solidified by cultures that reinforce them. Blue is often seen as sad or calm, red as fiery or passionate, and yellow as cheerful or sunny. These meanings, however, are not backed by science. The meaning a color can have varies intensely for each individual. Another article on color psychology called "Can Color Affect Your Mood and Behavior?" explains that "Most psychologists view color therapy with skepticism and point out that the supposed effects of color are often grossly exaggerated. Colors also have different meanings in different cultures." That said, the power of color cannot be underestimated either. Artists have been using colors in movies for many, many years. Gloomy, sad scenes often have little color or cooler colors, while happier scenes are bright, warm and vibrant. Because of how often the meaning of certain colors are enforced in our society since childhood, most of us adopt at least some of these "default" meanings into our own color vocabulary of sorts.

Outside of a clinical setting, music and art can be found manipulating people all over the place. Think back to the last commercial for any medication that you might have seen on television. What colors played when the prescription was brought up? What kind of music

played in the background? A particularly interesting example of the effect music can bring about relates to the introduction of elevator music into many American buildings in the 1920's. When elevators were being popularized, many people were afraid to ride in them due to the space being so confined and isolating. Music was introduced in hopes that it would make people associate more pleasant emotions with elevators. Such mood music is an especially fascinating topic when it comes to music in general. Before electronic music, the only way to have access to music was if someone went to see a group of musicians playing or if they played music themselves/as a family. Now that music can be widely distributed, the concept of background music or mood music is more prevalent than ever. Malls, hotels, classrooms, the list goes on. Music is played everywhere, all the time. Does this devalue musicians in our culture today? Do we appreciate our musicians enough? How to Make Electronic Music, a book by Russell Drake, says that with the invention of electronic music, even amateurs can compose music as opposed to years ago when composing music required an intense understanding of music theory and notation. Personally, I wouldn't say that this has cheapened our cultures music. Rather, it has given us an abundance of it. You will rarely find someone who has listened to every single song you have. Someone's taste in music has become incredibly personal, with how specific it can be.

So music can produce an emotional effect on people. How do everyday content creators harness this? What specific factors make a song more emotional? An article titled *Why Music Makes us Feel Emotions* by Rosie Pentreath says that "If a song is loud throughout, there's not a lot of dynamic variability, and the experience will not be as powerful as if the composer uses a change in loudness... As well as dynamics and rhythm changes being picked up by the brain, according to this study, it's the changes in textures – in orchestral music especially, we can think of the entry of new instruments – that excites the brain." Unexpected changes in music are appealing to people.

Music can completely change our perception of a piece of art, but ordinary noise does this as well. A book written on how audio and visuals intersect titled Echo: The Images of Sound explains, "You get a completely different impression of a sculpture standing in the street than when it is in a quiet museum. The sound that surrounds us continuously influences the perception of what we see." Of course, the concept of "ordinary noise" itself is incomplete in a way. Music itself can incorporate everyday sounds on its own. The noise surrounding music can even become a part of it.

Though powerful on their own, when music and visual art come together, they can have an intense effect. Since their creation, animation and live action movies have been tied to music. Back when silent films were created, they weren't really "silent". Live musicians often played while the movie ran. How does music manage to make scenes so emotional in media? In real life, we don't truly have background music running during important parts of our lives. Theoretically, you'd think it would break the immersion, or seem out of place. An interesting phenomenon that has taken the world by storm in recent centuries is the concept of original soundtracks. Video games, movies, tv shows, they all have original music composed to go along with them. You'd have a difficult time finding a single movie in recent years that doesn't include some form of music. How has music become such an integral part of most movies, so much so that we barely register it in the moment, unless we are particularly enjoying the music itself, enough to comment on it? Background music, or mood music, can subtly influence people's emotions without being overpowering. The switch between quiet, unobtrusive background music and loud dramatic tracks can be stimulating auditorily.

On a larger scale, I think moments in our lives can be influenced by the music we listen to and make. I've never engaged in music or art therapy as an official practice, but music and art have most definitely had a therapeutic effect on me. I want to use that and try to extend it to other people. There's no one, specific, scientific way to compose music or create art in such a way that it benefits everyone, least of all in the same way. Still, we have generations upon generations of artists who have come before us and their techniques to study and build upon when it comes to creating emotionally impactful art. If music can impact me and my future, then I hope desperately that I can do the same for someone else.

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