

Consideration Beneath the Notes: Understanding Composers from Carl Jung's Cognitive Functions

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Abstract: One of the most magical things about music is where it comes from. Many works of art are clearly not words; usually they come from an abstract world that cannot be described by words. In fact, different composers create music in different ways: Some start with a concept, some search for ideas by improvising on the instruments, and some may just look at music theory rules to see what is possible. Difference in how a music work starts and forms can reflect a lot of the psychological world including the way composers perceive and judge.

Therefore, it would be interesting for us to stand at the crossing of music and psychology to see which type of psychological tendency might be dominant for different composers from music composing point of view, leveraging Carl Jung's cognitive functions system.

Keywords: Music, Psychology, Carl Jung, Cognitive Functions, Composition.

1. Introduction

Cognitive functions, or psychological functions, first introduced by Carl Jung in 1921 in his book *Psychological Types*, are defined as particular mental processes within a person's psyche that are present regardless of common circumstances. In this book, he divided the psychological types into four basic functions—Intuition, Thinking, Feeling, and Sensing—and two attitudes—Extraverted (corresponding directly with objective facts and matters, externally focused tendency) and Introverted (processing information through inner values, internally focused tendency). These are further translated into eight cognitive functions that shape individuals' personalities: Extraverted Sensing (Se), Introverted Sensing (Si), Extraverted Thinking (Te), Introverted Thinking (Ti), Extraverted Intuition (Ne), Introverted Intuition (Ni), Extraverted Feeling (Fe) and Introverted Feeling (Fi).

According to Jung, psychological functions resemble the way information is received and expressed with two attitudes (Extraverted and Introverted), two sets of perceiving functions (Sensing and Intuition), and two sets of judging functions (Thinking and Feeling) [1]. In this sense, I believe that they should be applicable to various circumstances including music composition which can also be deemed as a process of taking information from outer and inner worlds and expressing them through musical notes. And composers, as different individuals, have all developed their own dominant functions which are echoed in their chosen perceptual and expressive techniques and sense of aesthetics.

In this paper, I will examine three cases from different periods of time. They are Johann Sebastian Bach (late Baroque), Claude Debussy (late Romantic), and myself (contemporary)[2]. For the two music giants I admire, I will try to work backwards through their music styles to speculate which cognitive function type each of them may fall into, taking historical context and their purpose of artistic creation into account. For myself, I will focus on the mental experience I have during my music writing process to explore how it relates to Jung's theory. In all three, a specific music piece of the composers will be scrutinized to underpin my argument.

This discussion of cognitive functions will be limited to the scope of music composition, not involving social life or other respects of the composers. And here, I refer to cognitive functions for their psychological meaning, not biological definitions.

2. Analysis of Composers from Different Periods

2.1. J. S. Bach

I believe that Jung's cognitive functions theory applies widely to all kinds of composers, including those highly influential in music history, for example, J. S. Bach. Bach (1685-1750) was a German composer known as the father of classical music and the greatest musician in the late Baroque period. In his time, religion played a crucial part in life and arts. Bach himself was a theologian and "a Christian who lived with Bible" and wrote music for God.

If religion can be understood as what Jung called the "reality of the object" in the physical world, I can reasonably assume that Bach drew inspirations largely from religious materials like churches, Bible, holy images, etc. which can be considered as what Jung called the "background of the physical world". He integrated his devotion to God, his understanding of Bible stories and his theological insights which can be deemed as "reality of subjective factor" into a music style emphasizing complex structure, meticulous arrangement and coherent flow that created a sensation of order, solemnness and glory. Given the above, Bach is well aligned with the Introverted Sensation (Si) type of cognitive function, since Jung put it as "Subjective sensation that apprehends the background of the physical world...The decisive thing is not the reality of the object, but the reality of the subjective factor [1]."According to Jung, "reality of the subjective factor" can be defined as "the primordial images, which in their totality represent a psychic mirror-world." It coincides with Bach's enthusiasm for creating perfect compositions to express his religious faith and sensing of the presence of God, just as John Eliot Gardiner wrote in the biography *Bach: Music in the Castle of Heaven*: "Bach understood that the more perfectly a composition is realized, both conceptually and through performance, the more God is immanent in the music [3]."

In Bach's well-known Chorale No.3 'Ach Gott und Herr', we can hear musical regularity with a religious touch. Sacred music of that era valued concordance and a sense of harmony that implies God's togetherness with humanity. According to Ruth Parrett's essay, *The Importance of Music in Different Religions*, "Music unites the congregation so that God is worshiped with one voice [4]." Bach attained this sense of harmony through his rigorous use of chords. In this piece, the majority of chords he used were major chords, which sound brighter and more positive. Dominant and tonic chords were used most frequently, while there were not many traditionally-known dissonances (twos, sevens and fours). Dissonances also immediately resolved to consonances. Even if minor or dissonant chords were present, they were followed by major chords. Bach's use of diminished seventh chords, for example, is very careful: they always resolve to a Dominant or a Tonic. His diminished seventh chords were also always in first inversion and only doubled the third to prevent from doubling the tritone—a strong dissonance that represented the devil. In measure 3, he started with a diminished seventh chord (B), but immediately resolved to a tonic (C). On a larger scale, Bach emphasizes major chords even in key areas. There was a key change in measure 7 to A minor,

but he very soon modulated back to C major by pivot chord d. This emphasis of major chords created a bright image of God being with humans in peace.

2.2. Claude Debussy

While Bach is acclaimed for "enriching established German styles through his mastery of counterpoint, harmonic, and motivic organization", Debussy is known as a rebel against German tradition [5]. Claude Debussy (1862-1918), was a French composer seen as the first impressionist and a link between Romanticism and Modernity, living in a time when debates and revolutions in technology, religion, literature, art and music profoundly transformed Europe.

Much of Debussy's music is emotional entirely based on feelings (eg., feeling of change of time or light) and invisible notions (eg., daydream, as I would elaborate later) he was trying to express in his works, as Debussy himself wrote: "Music is not just the expression of a feeling—it is the feeling itself." (1893) He described his composition goal as "to arrive at the naked flesh of emotion". Actually, Debussy denied the label of impressionist, but considered himself as a symbolist who had been heavily influenced by symbolist poets since he was a teenager. The difference between Impressionists and Symbolists, according to Dr. George Fee, is that: "The Impressionists portrayed objects. Debussy and the Symbolists expressed emotional reactions to objects [6]." Debussy also described himself as one who gave emotional response to a specific object instead of the one who created the specific object. In another word, he created music to manifest something intangible or even nonexistent in the outer world, like a connection, a mystery and "a process that takes place between the ego and a given content, a process, moreover, that imparts to the content a definite value in the sense of acceptance or rejection [1]." All these indications make Debussy lean towards Introverted Feeling (Fi) which is defined in Jung's theory as: "[Introverted feeling] is continually seeking an image which has no existence in reality, but which it has seen in a kind of vision. It glides over all objects that do not fit in with its aim. It strives for inner intensity, for which the objects serve at most as a stimulus [1]."

This is reflected in Debussy's works by his exquisite use of music structure. Debussy wrote his well-known piano piece—*Reverie*, which means 'a daydream'—in 1890. To give it a dreamy effect, he used a slow-moving melody and a sense of rhythmic irregularity (such as the three to four rhythm in measure 5), making listeners feel like they are wandering in an imaginary space. The harmony in the lower voice features a syncopated set of three notes that rarely land on the big beat. This creates a feel of unpredictability. Harmonically, Debussy used unconventional chords that were rarely used in classical music. For example, in measure 27, the chord consists of an F, A, C#, and a G, which is an augmented ninth chord. It is seldom seen in classical music because of its dissonances against both the tonic and the third, but the dissonance here provides a feel of fantasy. Luca Weller commented: "The use of 9th, 11th, and 13th chords create a dreamy and hazy sound [7]." Though there was never a definite image associated with this composition, Debussy, through his decisions of chords and rhythms, lets us walk into the dreamy scene he created with his music. It matches well with Jung's definition of "continually seeking an image which has no existence in reality, but which it has seen in a kind of vision."

2.3. Myself as a Composer

Finally it comes to my own case. I am an 18-year-old high school student with immense passion for music composition, living in the 21st century with extensive exposure to digital life, social media and subculture, etc.

As a young composer, I have always been interested in decoding the psychological process that impact the way I write music. Last year, I attended a summer camp where I met many other young

musicians from around the world. An interesting fact I discovered there was that, compared with my composer friends, I approached music composition in a "special" way. While many of them like to start with improvisation on their musical instruments, I often set out with certain imagery of things on my mind. It can either be a picture, or a scene, something that has nothing to do with music but embodies stories and ideas giving me a strong impulse to tell musically. That means I started my music with what Jung said is "inner objects", a proof of introverted tendency. Although this "inner object" may be associated with my experience with an "outer stimulus" such as an animation concept I like, a comedy show on YouTube, an architectural wonder I visit, etc., the stories and ideas represented by the imagery would grow wildly in my imagination without being confined by the stimulus itself. Magically, a melody emerges even before I know, flowing somewhere inside me. I capture it when my gut feeling tells me that it fits perfectly with the imagery. After I decide what the main melody I want to start with is, I dictate it on my laptop. Most of the time, I never get a chance to realize what the specific notes or even the rhythms are until I write them down, so I try intuitively for several times until satisfied. Then, I set the key and rhythm, and the structure of the initial part of my work is in shape. Following that, harmonies come. They may just be chords, or some kind of counter-melody, instead of detailed chord progression. I follow what "sounds right" to me—a subject criteria hard to describe by words—that is what I feel would set the right tone of the piece and what is in line with the imagery on my mind and the stories or concepts behind it. I go back to edit my chords and delete unneeded notes after I fill them all in. For the remaining parts, I will use the same method to determine where the piece should develop, how previous melodies can be best connected with the next, and ultimately when the whole piece ends. "Intuition", as defined by Jung as "a psychological function which transmits perceptions in an unconscious way" and which "is neither sensation, nor feeling, nor intellectual conclusion, although it may appear in any of these forms", plays a significant role throughout my composition process. Interestingly, since my intuition doesn't always work, there are typically big gaps in my composition work. I stop when my intuition leads to nowhere; I pick it up and spend a large chunk of time to work on it when I have the instinct about how to proceed. While I experience disconnections in composition, it gives me great opportunity to be experimental and innovative by bringing fresh and different elements to my piece. What I have experienced in my composition routine indicates that my cognitive function could be Introverted Intuition (Ni). Jung mentioned it like this: "Intuition, in the introverted attitude, is directed upon the inner object... Inner objects appear to the intuitive perception as subjective images of things, which, though not met with in external experience, really determine the contents of the unconscious... [1]"

Misty Bayside Moonlight is an experimental piece I wrote with piano, viola, cello and soprano saxophone. At the beginning, all I had was the imagery of a maverick sitting on the shore above rumbling sea waves with which the moonlight danced, smoking and reminiscing. It felt like a lot had happened, and more was coming. It was like a scene of a movie which was only shown in the theatre in my inner world. The first thing I wonder was what kind of melody would illustrate this scene best. What flew into my mind were regularly riffing low chords in the bass clef of the piano. The echoing low sound perfectly fit with sea waves bellowing at night, and meanwhile, foreshadowed that something was going to happen. In addition to that, I wrote instructions to have the two string instruments knock or stomp. The percussive effect would enhance the tranquility by creating a sense of disturbance, and suggest the unruly restlessness hiding behind the scene. Then, a hunch told me that a soprano saxophone melody would help unfold the story in my vision from there. Led by the "inner object" and my intuition, I transformed the imagery part by part into a complete piece of audible music. I had no idea of what I would write before I started writing, and simply wrote down what my instinct told me to. When I lost my instinct, I put the piece away and went back later. The scene was always there though, and the story evolved in an unconscious way

on my mind. I would experiment with something dramatically different from what I had already written, as long as it went well with the scene and the story. It created a contrast with other methods that had melodies set and harmonies written down first.

3. Conclusion

Through the examples of three composers, we have investigated how music works and the way they are created can reflect composers' psychological tendencies or mental processes, which are explicable in Jung's terms of cognitive functions. As an Introverted Sensor (Si), Bach was inspired by physically existing religious materials ("the background of the physical world") to create music based on his theological understanding and sensibility of the presence of God ("reality of subjective factor"), and as a result, his music was meticulously structured to highlight regularity, harmony and reverence. As an Introverted Feeler (Fi), Debussy was obsessed with expression of feelings or portrayal of images "which have no existence in reality", and thus his music is closer to a free sketch of his inner emotion, and is set to break away from traditions and rules. In contrast to Bach's music which has clear beats, Debussy's compositions sound vague and leave music with much more freedom. As a composer myself, I fall into the Intuitive Intuition (Ni) type. Driven by certain imagery ("inner object") and my intuition, I experiment with unlimited possibility of sounds, rhythms and melodies to tell stories with musical language. Cognitive functions can dictate the way composers perceive and judge, and consequently, the way they write music.

Certainly, this study is subject to some limitations: All the musicians discussed in this paper except myself have passed away, so personal interviews or surveys on personality types and composition processes are impossible; all the arguments made above are based on secondary research such as literature review and personal views deriving from chord analysis. How to interpret these composers' cognitive functions and music works remains debatable. This paper is not intended to arrive at a definite conclusion. Nevertheless, I hope that my attempt to understand the role of cognitive functions in music making process and outcome can somehow open a new window for contemporary musicians, scholars and audience to better appreciate historical composers and their works, and furthermore, to inspire ourselves to learn and create.

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