

What is musical genius?

When the term ‘genius’ is investigated, one will receive multiple definitions from the same dictionary. The *Collins English Dictionary* defines genius as “a person with exceptional ability, esp. of a highly original kind” yet under a different entry it also describes genius as “the guiding spirit who attends a person from birth to death”. This outlines a conflicting idea in defining inherently what genius is. One famous anecdote describes Paul Hindemith’s ability. Whilst rehearsing a new symphony, he was unable to find a score to conduct from so wrote all the parts out from memory to work from instead¹. The fact that no one understands what it is that gives this gift to Hindemith and others is the basis of the main argument in this essay. Musical genius manifests itself differently in different composers; opinion as to what constitutes musical genius is subjective by definition and therefore impossible to define. Human intelligence does not have the capacity to explain why Mozart and Bach could master the tools of composition to such a high degree, and why some will find one composer’s music beautiful, whilst another will find it horrendous. This essay will not be defining musical genius, and instead will be exploring what it is that gives us the ability to create beautiful music, including the effects of history, genetics, intelligence, upbringing and faith.

Claims of ‘nature over nurture’ or ‘nurture over nature’ have always been subjects of debate amongst both mothers and scholars. It has now, after many years of research, been scientifically proven (through studies of twins separated at birth) that neither party is right: nature accounts for roughly only 50 per cent of a child’s ability², be that musical or not. There are, of course, musical families, such as the Bachs (so musical that the name Bach came to mean musician), Mozarts and the Jacksons, but not all musicians have musical children. George Dyson’s son, Freeman, is a theoretical physicist and mathematician³, famous in his own right for works, not in the musical

1 <http://www.minotaurz.com/minotaur/articles/genius.html> (retrieved 25/02/2011 1719 hours)

2 Levitt, Steven D; Dubner, StephenJ, *Freakonomics* (Penguin, 2006, revised edition) p.140

3 <http://www.thebulletin.org/content/about-us/board-of-sponsors> (retrieved 24/02/2011, 1710 hours)

world, but the scientific. I think it highly unlikely that the Director of the Royal College of Music⁴ would not introduce music into his son's life and it is peculiar for his son not to have embraced it further. If being inherently musical yourself does not promise musical children, it would be assumed that providing a child with a musical upbringing and surrounding them with music of all forms would ensure the formation of a musical ability. However, a famous study of children adopted soon after birth, the Colorado Adoption Project, found no correlation between a child's personality and ability and those of his adopted parents.⁵ Judith Rich Harris argued in *The Nurture Assumption* that parents are incorrect in assuming that the way they bring up their children has a profound effect on their lives, and that the powers of peer-pressure and non-family related experiences play a far greater role in the outcome of their child's talents. So if musical ability does not originate completely from upbringing or genes, how do we explain musical geniuses? Brian Wilson, chief song writer for *The Beach Boys*, is an example of a composer, producer and arranger who is a popular musician hailed as genius. A young Brian Wilson could repeat the melody to *When the Caissons go marching along* prior to his first birthday,⁶ and was instantly captivated after hearing a recording of Gershwin's *Rhapsody in Blue* at the age of two.⁷ One cannot ignore the similarities between the young Wilson's abilities and those of a young Mozart. Mozart is claimed to have "spent much time at the clavier, picking out thirds, which he was always striking, and his pleasure showed that it sounded good."⁸ Mozart is also famous for his dictation of Allegri's *Miserere* after just two hearings. These examples of ability and musical maturity, of which there are many more, I believe to be un-teachable. You can teach a singer to have a good vocal technique, but you cannot teach them to sing in tune. In the same way, musical genius must be

4 *Illustrated Dictionary of Music & Musicians* (Harrap, 1989)p.144

5 Levitt, Steven D; Dubner, StephenJ, p.140 (third paragraph)

6 Carlin, Peter Ames, *Catch a Wave: The Rise, Fall and Redemption of the Beach Boys' Brian Wilson* (Rodale Inc., 2006)p.11

7 Carlin, Peter Ames, p. 10

8 DEUTSCH, OTTO ERICH, *MOZART: A DOCUMENTARY BIOGRAPHY* (STANFORD UNIVERSITY PRESS, 1965) p.455

inherited from an interior stimulation, which could either be a fortunate mix of upbringing, evolution and inherited genes, or something far more profound.

Heinrich Schenker believed that Music (with a capital M) created by whom he regarded as ‘genius’ composers resided in a higher dimension, completely unrelated and independent of any other areas of human existence. Schenker claimed that music used genius ‘as a medium, so to speak, quite spontaneously.’⁹ In other words, he claimed that ‘normal’ musicians could write their music and it would be perfectly acceptable but never hailed as genius. He went on to explain that in the case of genius composers ‘the superior force of truth – of Nature as it were – is at work mysteriously behind the consciousness, guiding his pen, without caring in the least that the happy artist himself wanted to do the right thing or not.’ This explains our second definition of genius: ‘the guiding spirit who attends a person from birth to death’ and offers a completely different perspective on genius: moving from the analytical to the devout. Faith has always been an important part of music making, ranging from Byrd and Tallis’s highly sacred Renaissance polyphony to Britten’s *War Requiem*. Many composers have taken inspiration from faith: Haydn is claimed to have ‘leapt for joy’ at the mere thought of God¹⁰ and Britten, whilst not believing in the ‘divinity of Christ’ believed that his ‘teaching is sound and his example should be followed.’¹¹ Of course, not all composers are devout, and Britten is a composer who is acknowledged by many to be a British genius yet who did not believe in a divine entity which supplied him with his excellent musicianship. It was Albert Einstein himself who said that ‘as an artist, or a musician, Mozart was not a man of this world’¹² but whilst faith offers many answers to many questions for many people, it does not hold the conclusive proof which genetics offers. Whilst Freeman Dyson did not inherit the passion for music his father possessed, it is not surprising that he didn’t end up

9 Cook, Nicholas, *Music: A very short introduction* (Oxford University Press, 2000)p. 30

10 Wigmore, Richard, *Haydn* (Faber and Faber, 2009)p.259

11 Matthews, David, *Britten* (Haus, 2003)p.68

12 <http://www.guardian.co.uk/uk/2006/jan/01/arts.music> (retrieved 28/02/2011 1723 hours)

working in a laborious non-intellectually stimulating job. This is because music and intelligence go hand in hand, and Dyson may have inherited more than we think.

The enigma in Elgar's *Enigma Variations* is something that has always been highly disputed. Elgar himself stated that the theme "went with" another melody and was not immediately noticeable in listening¹³. Analysts have discovered mathematical functions within the enigma theme. If we take the first seven bars of the enigma theme:



(source: http://upload.wikimedia.org/wikipedia/commons/d/d2/Enigma_theme.png)

we can identify some noticeable features which portray Elgar not only as a musician but also a mathematician. If we take Pi to be 3.142, we can see the third, first, fourth and second degrees of the scale all in this same order in the first bar of the theme. If we take Pi in its fraction form (22/7) we can then apply this also to the *Enigma* theme. Following the first 11 notes in the piece there are two sequential major sevenths. We can express this as $11 \times 2/7 = 22/7$.¹⁴ This analysis may seem a little far-fetched, but it offers an example of composers which include intellectually stimulating exercises within their works, creating an overlap in fields of study. This Pi 'enigma' is not the only example of a composer showing polymathic tendencies. Iannis Xenakis, a Greek avant-garde composer was not only a music theorist and composer, but also a mathematician and engineer. He implemented mathematic models such as game theory and set theory into his music. This meant that Xenakis' work was highly unconventional, containing devices such as parallel 5ths and extended notation. Arthur Honegger, a Swiss composer, refused to teach Xenakis because he claimed that his compositions were "not music."¹⁵ Borodin, famous for his wide range of

¹³ Sadie, Stanley; Latham, Alison, *The Cambridge Music Guide* (Cambridge University Press, 1985) p.409

¹⁴ Santa, Charles Richard; Matthew, Santa, *Solving Elgar's Enigma* (2010)

¹⁵ Xenakis, Iannis; Brown, Roberta, *Xenakis on Xenakis: Perspectives of New Music* (1987)p.20

work, is renowned for saying: “Music is a pastime, a relaxation from more serious occupations.”¹⁶ This may seem a strange opinion from a composer, but Borodin is also famous for his chemistry and scientific discovery. It is somewhat ironic that a chemist who practised music as a pastime is hailed as a brilliant composer, and his chemistry is often overlooked. These are only a few of many examples of composers who have also excelled in scientific and analytical thought. As the fundamental aspects of music are built around physics and maths, this is not surprising (see the aforementioned Freeman Dyson). Of course, it would be close-minded to claim that a genius composer has to straddle many strings of academic study, as most composers can be seen as musical geniuses in their own right.

In 1980, Philip Glass’s opera *Satyagraha* was first performed. Personally, I believe it to be one of the greatest operas ever written, and my sentiment is shared by others: ‘It’s a must-see for anyone who missed the first run, and a landmark in recent London opera.’¹⁷ The minimalism movement has been controversial, it has been criticised for being too simple and plain, and still Adams, Glass and other minimalist composers are still regarded as genius amongst certain circles. Minimalism is simply a natural progression of music-making, much like romanticism or expressionism were progressions from conventional forms of composition present in the baroque or classical movements. The question to be raised is: would minimalism still be hailed by genius by any if it were transported back to the 18th century? The answer is that it probably would not. 300 years ago, the reserved life that Europeans led was transferred onto the music of their period, and when the romantic movements within art and literature began, it is no surprise that music followed too. Serialism is the prime example of music that was not initially accepted by many, but has grown to be accepted by many in the 21st Century. However, famously, Schoenberg believed that his music would restate Germany as the supreme race in musical composition for the next 100 years.¹⁸ Whilst this was not the case it does show us that people’s view of

16 Alexander Borodin (1833-87) *Letter to V.A. Krylav* (1976)

17 <http://www.guardian.co.uk/music/2010/feb/28/satyagraha-eno-review> (retrieved 28/02/11 1759 hours)

18 Ross, Alex, *Listen to this* (Fourth Estate, 2010) p.219

genius changes significantly throughout the years. Music should be seen as a cultural artefact, rather than natural phenomena. It is true that musicians from the East have learnt Western traditions, but how many westerners would be able to perform music from China and Japan? Music relies heavily on culture for understanding, and when music travels from culture to culture, genius is often 'lost in translation' as it no longer follows conventions laid down through culture and tradition. The fact that different cultures will have different views on all manners of life will also mean they have differing views on beauty and subsequently music, and what constitutes a music genius.

Musical genius cannot be defined. Attempting to reach a conclusion in defining it is a fruitless exercise which will lead to several conclusions and no definitive answer. It is far more satisfying and important to understand how musical genius manifests itself in musicians and how it originated in the first place. There have been many explanations, but ultimately the origins of musical genius are organic. Music can be explained and described using scientific reasoning, but this does not make musicality also analytical; what gives human beings the ability to create music using this scientific foundation is subjective. Music holds a great variety of expression, and the techniques of composition vary greatly. We all have our own opinions of who our favourite 'genius' composers are, many will feel that Hindemith's impressive memory makes him a genius and some will not. What makes a child naturally musically gifted is an accumulation of many factors; the inheritance of musical genes from a parent is just as likely to create genius as the upbringing of a child is. The placement of a particular composer or piece in its history also shows the importance of culture in the measure of genius. Faith as a suggestion, whilst being more difficult to comprehend for many people must also be treated with respect. The fact is that no one can reach a definite answer, because there isn't one. The very nature of musical genius, much like the nature of faith and the nature of beauty, is something that cannot be described through human reason. Human intelligence will have to cope with an understanding

of the origins of genius musical creativity, but its essence will have to remain a mystery.

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