

Dear ASO Chorus,

During this May-time preparation of our newly commissioned work by Michael Gandolfi (“Q.E.D.: Engaging Richard Feynman”), and in anticipation and celebration of the 10<sup>th</sup> anniversary of our “Atlanta School of Composers,” I thought I’d depart from the usual technical descriptions that have occupied these “E-pages” and wrestle with the other side of the “creative” coin – the more elusive concept of Inspiration. –Hope you enjoy!

**-Jeffrey Baxter**

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Atlanta Symphony Orchestra  
May 11, 2010

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### Q.E.D.: Engaging Michael Gandolfi Creativity and the Right-Brain

When examining artists and artistic creativity, the discussion of Right- versus Left-Brain always seems to come into play. It is usually rife with generalizations, but often these assumptions about reconciling our dual selves through artistic expression are not without substance, especially as regards artistic creation on the level of a “masterwork” – the kind of works we routinely encounter each Monday night in rehearsal.

What Eastern mystics might term as “enlightenment” – a reconciliation of the world of opposites – in the West has been described as the two halves represented by Apollo/Dionysus, Reason/Emotion, Head/Heart, Inspiration/Perspiration, Whole/Part, Control/Release and many more. Even Sigmund Freud in his own way recognized the two sides, defining Creativity as leaning toward the side of “anal expulsive” (as opposed to “retentive”). Euw.

All famously successful creative types – artists, composers, performers and certainly great athletes – have come to terms with these battling opposites.

As recently as last week (May 7<sup>th</sup>) the *New York Times* took on this subject in an article by Patricia Cohen, “Charting Creativity: Signposts of a Hazy Territory” (<http://www.nytimes.com/2010/05/08/books/08creative.html?scp=1&sq=creativity&st=cse>).

Cohen described recent scientific studies by Dr. Rex Jung [no relation to Karl!] of the University of New Mexico that indicate a linkage of the so called right and left “brains” in creative individuals:

*“Creativity is kind of like pornography — you know it when you see it,” said [Dr.] Jung... his team [is] doing the first systematic research on the neurology of the creative process, including its relationship to personality and intelligence.*

*Although intelligence and skill are generally associated with the fast and efficient firing of neurons [“Perspiration”], subjects who tested high in creativity [“Inspiration”] had thinner white matter and connecting axons that have the effect of slowing nerve traffic in the brain. This slowdown in the left frontal cortex, a region where emotional and cognitive abilities are integrated, Dr. Jung suggested, “might allow for the linkage of more disparate ideas, more novelty and more creativity.”*

Cohen continues:

*Like many researchers over the past 30 years or so, Dr. Jung has relied on a common definition of creativity: the ability to combine novelty and usefulness in a particular social context.*

*As the study of creativity has expanded to include brain neurology, however, some scientists question whether this standard definition and the tests for it still make sense. John Kounios, a psychologist at Drexel University, argues that the standard “has outlived its usefulness.”*

*“Creativity is a complex concept; it's not a single thing,” he said, adding that brain researchers needed to break it down into its component parts. Dr. Kounios, who studies the neural basis of insight, defines creativity as the ability to restructure one’s understanding of a situation in a non-obvious way.*

*Everyone agrees that no single measure for creativity exists. While I.Q. tests, though controversial, are still considered a reliable test of at least a certain kind of intelligence, there is no equivalent when it comes to creativity — no Creativity Quotient, or C.Q.*

*Dr. Jung's lab uses a combination of measures as proxies for creativity. One is ... a test for "divergent thinking." ... Here a person is asked to come up with "new and useful" functions for a familiar object, like a brick, a pencil or a sheet of paper.*

*Dr. Jung's team also presents subjects with weird situations. Imagine people could instantly change their sex, or imagine clouds had strings; what would be the implications?*

*In another assessment, a subject is asked to draw the taste of chocolate or write a caption for a humorous cartoon, as is done in The New Yorker magazine's weekly contest. "Humor is an important part of creativity," Dr. Jung said.*

I am reminded of – and delighted by – the humor in the jazziness of the second movement of our "Q.E.D." piece, which Gandolfi describes as "a real romp."



My first encounter with Michael Gandolfi was a few seasons back when he was here for the ASO performances and recording of his newly expanded version of "The Garden of Cosmic Speculation." Michael met with the Symphony staff and kindly took a few questions. I asked him what he did, as a composer, when the ideas didn't come. I was curious for him to share his creative solutions (and problem-solving) with our staff.

His two-part answer was instructive:

1. Step back. Re-assess. Wait.

And, something he suggests to his composition students,

2. Copy-out other music. Anything. From a Haydn string quartet to a Doors song. For as long as it takes, days even. –The thinking behind this suggestion is that one not be influenced by or imitate another's style, but get one's own creative juices flowing.

While the second part of his answer might seem more unexpected than the first, both parts are in line with two other very successful and well known composers:

1. Stravinsky – who, when asked the same question, said something to the effect of "I wait patiently – still – like an insect... then I STRIKE!"

And

2. J. S. Bach – who (being largely self-taught) according to legend furtively copied-out much music in his youth at night by candlelight. His brother, who housed him, had been a student of Pachelbel's and possessed copies of the master's organ works. It was these works – as well as the works in the even more vast library at Lüneberg – that Bach spent time copying. This practice certainly must have taught him many things (about style, technique, etc), but most importantly it jump-started inspiration in an already highly developed, creative mind. It was a practice he continued (and modified) in adulthood, when he "transcribed" works of fellow composers like Vivaldi or Telemann. Along the way, he would inevitably "improve" upon those compositions – paying back ten-fold what he "borrowed."

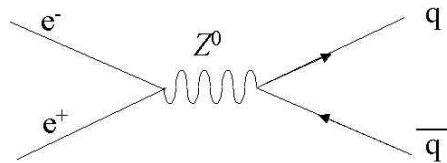
I am intrigued that Michael Gandolfi was inspired in this recent composition by the American physicist, Richard Feynman. As we have seen so far, there is no mention in the work (not yet, anyway) of quarks or gluons or any mention of particle physics. Rather, it was Feynman's unique early education and ability to see beyond the world-as-it-is that intrigued our composer.

Gandolfi describes his work:

*Each movement will be preceded by a one-minute (or so) video, during which Feynman tells a story, illuminating the subject of the ensuing composition. In the first video, Feynman recounts a story in which an artist (painter) friend of his argues that Feynman, because he is a scientist, can't appreciate the beauty in a flower; the implication being that the 'rational' mind does not permit the experience of beauty (suggesting that beauty is the exclusive provenance of the artist or aesthete). Of course, Feynman disagrees and presents his unique and inspired view of the flower and its beauty. The poets Joseph Campbell, Emily Dickinson and Gertrude Stein, 'weigh-in' on the subject in my composition. The overall mood of the piece is somber, pious, and serious.*

*The second movement begins with Feynman telling a sweet story about his childhood and his relationship to his father, specifically as his teacher. It is a brilliant story. The basic theme is knowledge, told through the naming and study of birds. Feynman alludes to the superficiality of naming things, and how recounting names or labels, is often mistaken for knowledge, learning and/or understanding.*

Feynman, like all great creative types, was gifted in seeing the world in a “non-obvious way.” He was able to think “big” in a world of very, VERY small parts. His revolutionary scientific ideas found expression not only in the traditional, complex language of mathematic equations, but also in nifty little diagrams. Here’s one that predicts the creation of matter (a sub-atomic “Z” particle) from the collision of an electron and a positron. The “Z” is significant as it is almost 100 times as massive as a proton — heavier than entire atoms of iron. It was discovered (proven) in 1983 in one of the first particle colliders powerful enough to generate it:



It was one step toward an understanding of Creation itself.

The concept described by another one of Feynman’s little diagrams will hopefully be observed in the latest, largest Hadron Collider of CERN: the idea of the “escape” of certain subatomic particles, the (detection and) scattering of gravitons and, hence, proof of the existence of parallel dimensions. This ability to envision and reconcile such minute Parts and such gigantic Wholes certainly qualifies as “super-massive” creativity!

Feynman (and Gandolfi) are in good company. A few of my favorite examples of unusual creative thinking are:

#### 1. Mozart and “Voi che sapete.”

Much can be, and has been, said and written about Mozart’s genius. His works are the enduring cornerstones of Western civilization. From the trio of the grand Da Ponte operas; the compendium of some 22 perfect piano concertos and the 41-plus symphonies to the tiniest chamber works, Mozart’s artistic thinking and consistency of creation is unassailable. Every measure of every piece is a gem, including this deceptively simple aria.

This little “song” about adolescent love from *Le Nozze di Figaro* is intended in the drama as a piece composed by the character Cherubino. In Act II, Susanna makes him sing it for his crush, the Countess. Mozart looked at Da Ponte’s six-stanza poem and saw through it – he was inspired by its larger dramatic potential. He could have easily made it an effective strophic setting (the same tune for each verse), as he would do in Don Giovanni’s serenade, “Deh vieni alla finestra.” Such a setting certainly would have suited the innocence and simplicity of the character singing it, but Mozart saw much more in it. While keeping the simplicity intact – utilizing a march-like tune sung over a simple, plucking guitar-like accompaniment – he subtly varies the melody as he goes along, matching the syllables to the notes as natural as speech. Pausing and panting, freezing and burning, swooning, fainting – as the text describes – but maintaining the consistent accompaniment underneath. The real glory comes in the harmonic departures from the tonic and the dominant to distant keys and the minor mode that so perfectly paint Cherubino’s love-sick confusion. The overall harmonic structure resembles the organizing principles of Sonata form:

$$I - V - (x) - I$$

Mozart’s ability to reconcile the simple and the complex at this moment is never grossly apparent or self-serving – not showy for himself or the singer – but rather so subtle an expression that it completely bypasses the intellect and

goes straight to the heart. -An amazing creative balancing act that serves the drama and instills wonder upon every hearing.

## 2. Haydn - Sonata-form and the Masses.

Haydn's last six mass settings represent the pinnacle of a balancing act between employer and employee. Written to commemorate the name day of his patron's wife each year, these late works represent some of the most creative solutions and merging of choral and instrumental music ever conceived. Not only could Haydn look at (and past) the traditional, prescribed liturgical text and create a world of sound-organization through a synthesis of both fugue and sonata-form, he took it a step further and tied together whole movements within the mass to effect mini-symphonies. Haydn's longevity and never-ending joy in creativity and problem-solving is one of the greatest testaments to combating "burn-out."

## 3. Dostoyevsky's "novel" novel, *Karamazov*.

*The Brothers Karamazov* stands as a supreme (if not *the* supreme) achievement in the genre of the 19<sup>th</sup> century novel. Like Bach's B-minor Mass, *Karamazov* is Dostoyevsky's *summa opus*. The "plot" is amazingly intricate, yet understandable, surprising and engaging, but is only a means to an expressive end. The book could be whittled down to just the bare bones of a narrative and still be successful (this is precisely what happened with attempts at a screen play, when making a film of the book). -But Dostoyevsky's creative angle with this book is that through the characters and the narrative, he tackles almost every known human condition. His encyclopedic knowledge of human nature is rivaled only by Shakespeare.

One particularly beautiful chapter (occurring at the proportional Golden Mean, incidentally) is the little fantasy called "The Grand Inquisitor" – a parable told by one of the Karamazov brothers about Jesus Christ being imprisoned by the Spanish Inquisition. Not only does the parable function as a reflection on human nature and freedom of choice – benevolence and malevolence – it also furthers the character development at a crucial point in the story.

It is Dostoyevsky's amazing ability to see the whole while crafting intricate, integral parts that make this a "timeless classic" – in every sense of the word.

## 4. Picasso's Cubism.

-So obviously creative that we take him for granted, but Picasso's groundbreaking way of looking at life from simultaneous perspectives grew both out of his ability to "see beyond" the world in front of him and his expertly grounded technical skills. Before he twisted and turned reality in his great cubist works like *Les Femmes d'Alger* and *Los Tres Músicos*, he had mastered the ability to paint with proportional accuracy and expressive beauty the human form. While his cubism still today packs the power to shock, can there be anything more "human" than *Guernica*?



So, in regards to artistic expression, this leads us to three questions:

### Question #1. Why is Creativity not enough?

This is the easiest question to answer, as a lack of craft is easily and quickly identifiable by anyone with a modicum of technical training. -But this doesn't mean that there is not fun to be had (i.e. the quickly consumed and quickly forgotten "fast food" of pop music and culture). Besides, truly great intuition often resides in (or comes through) a mind that possesses great powers of execution, like Mozart and Bach's intuitive sense of proportion. It is only when just this Dionysian half of the coin gets represented – or passed off as Art (or worse yet, "worship") – that the imbalance becomes obvious, insincere and rings untrue. It may really be that only the Truth can set one free.

### Question #2. Why is Craft not enough?

-Because without inspiration, craft quickly becomes little more than a soulless exercise – sometimes in futility, like the music-theory student's exercise in counterpoint, or whole collections of left-brained isorhythmic motets and hockets from the Ars Nova era of late 14<sup>th</sup> century Europe, and - some would argue – many of the works from Arnold Schoenberg's 12-tone method of composing. Knowing when to "let go" is equally important for artists (-and for athletes "in the zone"). -And for composers like Haydn who wisely used his expert contrapuntal skill in small doses within the Sonata-Allegro framework of Classicism – treating a symphonic theme with moments of *fugato*,

rather than belaboring the musical “narrative” with a full-blown fugue. It is when technique *becomes* spirit that the dove descends.

Great Art that stands the test of time is a synthesis of – to paraphrase Voltaire – the best of *both* possible worlds, and to borrow Green-lingo, is “sustainable.” It is something to which we return again and again, to mine new treasures.

It really doesn’t require a great amount of knowledge to realize balance is good and that it takes two to tango. -Or as Emily Dickinson much more eloquently described it: “For each ecstatic instant / we must an anguish pay / in keen and quivering ratio / to the ecstasy.”

-And finally,

Question #3. Why great Art? Does it matter? Does Creativity matter?

Answer: Boy, does it matter!

For me, no one explained it better – or more beautifully – than Robert Shaw:

*I recall the voices of my father and my grandfather announcing from their pulpits on Christmas mornings that "the Word was made Flesh." And the reciprocal truth strikes me that it is possible for matter to become spirit. -That the Arts are the "Flesh become Word." And for me that is no less a miracle, and no less Divine.*

*The truth is that it does not require a graduate degree in Musicology or Art History to (what they call) "appreciate" great Art. What it does require is equal parts of modesty and vulnerability – and a preference for the small truth over the big lie. -The Arts will come all the way to us – if we but give them a chance.*

*And [finally], across boundaries of Time and Space the Arts are an open hand instead of a closed fist. That [prehistoric] painter in his cave at Lascaux had sharpened his arrows and his spears for food – not for piercing the infidel. His eyes smarted from the smoke of his pitch torches, not from the burning of books or heretics. His message is very clear: "The days of the Hunter are numbered, but the years of the Artist stretch on and on – as long as the mysteries of life and death. Good luck!"*



-And aren’t we the lucky ones to be a part of the gestation, birthing pains, delivery, nurturing and infancy of such expressions of Creativity like *Doctor Atomic*, *El Niño*, *Ainadamar*, *blue cathedral*, *The Here and Now of God*, *The Garden of Cosmic Speculation*, and now our current labor of love...

-Or to paraphrase physicist Stephen Hawking:

“Isn’t it a great time to be alive?”

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