

# Fugue No. 12

F minor

*Well-Tempered Clavier Book I I*

Johann Sebastian Bach

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To read this essay in its hypermedia format, go to the Shockwave movie at <http://www2.nau.edu/tas3/wtc/ii12.html>.



**Subject:** Fugue No. 12, *Well-Tempered Clavier*, Book II

The following commentary is divided into three sections: fictionalized remarks by J. S. Bach upon seeing a forensic reconstruction of his face, the composer's (again fictional) thoughts on analysis vs. composition, and the author's ruminations on scientific vs. artistic ways of understanding what is "real."

- Hello, I'm Bach
- No fan of his music
- There he is, the father of fugue
- Tortured imagings of our vexed decades

## Hello, I'm Bach

That's supposed to be my skull, there to the right! Recently a forensic anthropologist in Scotland unveiled what the Guardian heralded as "the first modern scientific reconstruction" of me.<sup>2</sup> The Guardian proclaimed that scientists had used "medical files, a death mask and the latest technology," to create the "true face" of yours truly.

Prior to her creation of "the most definitive image" of me yet, Prof. Caroline Wilkinson had resurrected my predecessors, Ramses II and jolly old St. Nick. She affirms that her work represents, "the most complete likeness of Bach we can achieve from the information we have."

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<sup>2</sup> The Guardian headlined Wilkinson's creation with the teaser, "Hello, I'm Bach."

My reconstruction began with my skull--a bronze cast of dubious origin. This was bulked up in clay renovations of my facial muscles. From the news reports, the scientists relied heavily upon the portrait that Herr Hausmann painted four years before I died.

Even though the team apparently believed the rumor that I'm overweight--Ach!--I am impressed with their thoroughness and professionalism.<sup>3</sup> They've obviously done their homework. I do indeed have swollen eyelids, but categorically deny that this has anything to do with my fondness for beer and Schnapps. I was relieved to read Prof. Wilkinson's confession to having embroidered me a bit in the addition of, "a light tan, stubble, nasal hair and a set of eyelashes." Although my "creator" maintains that I am "around 70% accurate," she insists that my friends would have recognized me.

### **No Fan of His Music**

Upon reading the Guardian, I was distressed to learn that Prof. Wilkinson doesn't care much for my music. "Too frilly," she says. Being herself in the business of frilling up dead men's bones, I would have thought that she'd recognize me as a kindred "spirit." What I do, and what forensic anthropologists do, are quite similar. We're both about moving from the known to the unknown. We're both about growing sketchy ideas into their fully formed substance. We're both about frilling out forms.

To show you how, I'm going to subject this fugue (no pun intended) to a forensic examination. Rather than growing it from simple to the complex, I'll step you through the process in the opposite direction. We'll begin by shaving my subject of its eyelashes and nasal hair, stubble, light tan and facial muscles to reveal the bronze cast beneath. Dissection...now *there's* a "subject" that forensic anthropologists have no trouble developing!

First I'll X-ray my subject to reveal the bones beneath. Give those bones a good rhythm, beef them up with a few muscles and some fat, and *Wahrlich, und siehe*, it's my subject! The order of events that I've presented in this paragraph mirrors the process of fugal composition. It begins with the elaboration of a simple idea in order to make it full-bodied and complex.

Most call it "composition," but I like to call it "invention,"--the art of making wonderful motives that grab and keep your attention. Well-invented motives also have the potential to reinvent themselves in various permutations and developments.

How, then, is analysis different from composition? I'm tempted to say that it's a process of "decomposition," but fear that, in the context we now find ourselves, this might be misunderstood. So let's just say that analysis moves through the same steps, but in the opposite direction. It begins by identifying surface features, then stripping them away until one has arrived at the underlying idea that gives them meaning. The analyst recognizes these surface events because they don't make musical sense when dissociated from the structure that gave them birth.

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<sup>3</sup> This project was completed at the Centre for Forensic and Medical Art in Dundee, Scotland. Other members of the team, who included Caroline Needham, Dr Chris Rynn and Janice Aitken, are identified in the University's press release of February 29, 2008.

Without structure, surface features have no musical meaning. A good analogy would be that my tan would not exist without my face, which would not exist without its muscles, which would not exist without my skull. "The frills," as Dr. Wilkinson has called them, derive their function and meaning only in context, and in relationship with that which brought them into being.

Analyzing music is a process of continually asking two questions. First, does this event derive its meaning from something else? If the answer is "yes," then the event in question is subsidiary to that other thing. The second question is, what musical traits are indicative of structural importance in that other thing?

There are many ways that music attaches weight and significance to its structural underpinnings. These significances and weights are different for each composition and style period, and they manifest themselves in countless combinations. Possible indicators include pitches that are high or low in contrast to others, loud or soft, accented or not, on the beat or off, dissonant or consonant, of shorter or longer duration, static or dynamic, surrounded by rests, repeated, or chromatic.

Listen again to my subject, this time with an ear for what I've done to draw attention to its structural pitches (its "bones"). Do we not agree that my primary technique involves repetition? Coincidentally, the first time each group is heard, it falls on a downbeat. Notice, too, that David Korevaar has called special attention to the repeated notes by shortening them. So the technical palette for marking structural tones involves, in this instance, repetition, stress, and articulation.

Once we've determined what the "frills" are, we can give them a name. In this subject, they are comprised entirely of consonant skips and passing notes. If you'd like to explore how these structural levels interact with each other, click the Subject button in the timeline. A well-constructed subject has the potential for clever development, as you can see by clicking the Sequence button.

### **There He Is, the Father of Fugue**

Of the many "definitive" and "true" facts that science has revealed about me, the most thrilling is to learn that my skull is a full 58 centimeters in diameter! This tidbit, which had eluded me heretofore, dunced me down like the unfortunate Sissy Jupe, in Dickens's *Hard Times*, who couldn't describe a horse. "Girl number twenty," barked Mr. Gradgrind, "possessed of no facts in reference to one of the commonest of animals." My menders seem of the mind to agree with Gradgrind's model student, Bitzer: "Horse: Quadruped. Gramnivorous. Forty teeth, namely twenty-four grinders, four eyeteeth, and twelve incisive."

"Now girl number twenty," said Mr. Gradgrind, "You know what a horse is."

Gradgrind, I'm sure, would have welcomed my skull to his writing desk.<sup>4</sup> "Nice paperweight," he might have quipped, "or inkwell...Glad they dug him up." This

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<sup>4</sup> Dickens describes Gradgrind in Chapter II of *Hard Times* as: "A man of realities. A man of facts and calculations. A man who proceeds upon the principle that two and two are four, and nothing over, and who is not to be talked into allowing for anything over. Thomas Gradgrind, sir-peremptorily Thomas-Thomas Gradgrind. With a rule and a pair of scales, and the multiplication table always in his pocket, sir, ready to weigh and measure any parcel of human nature, and tell you exactly what it comes to. It is a mere question of figures, a case of simple arithmetic."

disturbing event transpired 150 years after they laid me "to rest" about six paces (tradition says) from the south door of St. John's Church, Leipzig.

And what a glorious century it has been! Prof. Darwin has revealed the mechanism of man's descent (read "big skull") from lower primates (read "puny skull"), which prompted his cousin to conclude that talent and genius (big brain) are inherited, inspiring him in the year before my exhumation to coin the word "eugenics." Although I'm just beginning to wrap my big brain around all of this, I feel truly blessed to have escaped the era of scientific racism.

Assuming, of course, that I *did* escape. For reasons that remain a mystery to me, I was dredged up from my 154-year repose during the week before Halloween of 1894. I'm not entirely happy with those medical experts from Halle and Leipzig who promptly declared my remains to be authentic and free of abnormalities. Considering the phrenological nonsense floating around at the time, I fear what they might have said about my atavistic cousins.

As to the captain of these curious physicians, the distinguished Leipzig anatomist Wilhelm His (pronounced "Hiss"), I have mixed feelings. While 'tis true that he presided over the interruption of my rest, and commissioned a local artist to use my skull as a model for the sculpting of the New Bach Monument, I've forgiven the good doctor for one reason--his scorn for the Lamarckian, Ernst Haeckel.<sup>5</sup>

Haeckel is to be remembered (or better, forgotten) for his theory that racial characteristics are acquired by interactions with one's environment. You see my tan there? Well, Haeckel's implication is that I spent lots of time in the sun, passed the tan to my son, who spent more time in the sun, passing a deeper tan to his son, and so on, until one of us became J. S. Barack. So I forgive Dr. His for dredging me from my grave if only because he skewered Haeckel's recapitulation theory, as well as the veracity of his embryo drawings (which, as late as 2004, still populated American textbooks).

OK, I'll admit, I love a good ghost story as much as anybody. The problem is that I had no death mask, at least that I can remember (I fear that *the Grauniad* has muddled me up with Ludwig). And besides, I don't recognize that skull as mine at all. But wait! I think I know to whom it *does* belong. Something about the nose, and the bent neck--but the hair's all wrong. By Jove, it's my best bud, Johann Gottfried Brauer, also buried some six paces from St. John's--he to the east and me to the west--details that tradition seems to have lost. Yes, it's him! Well, at least the resemblance is "around 70% accurate."

## **Tortured Imagings of our Vexed Decades**

Lay my head on the surgeon's table  
Take my fingerprints if you are able  
Pick my brains pick my pockets  
Steal my eyeballs and come back for the sockets

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<sup>5</sup> The Jan. 6, 2010 issue of Time Magazine offers a fascinating reconsideration of Lamarck in the emerging field of epigenetics. Jean-Baptiste Lamarck proposed a theory of evolution through environmentally acquired traits some 80 years before Darwin's theory of natural selection.

Run every kind of test from A to Z  
And you'll still know nothing 'bout me.

--Sting

If I may change the voice now (this is the author, not a fictional Bach), Sting's "Nothing 'Bout Me" reacts to what Richard Weaver identified as "the tortured imagings of our vexed decades."<sup>6</sup> In Weaver's conception, these images are in consequence of the stranglehold that materialistic scientism has maintained upon our conception of what is real.<sup>7</sup> Weaver would have agreed with Sting's final couplet: "Set up your microscope and tell me what you see; You'll still know nothing 'bout me."

In his response to modernity's dehumanization of the human person, Weaver envisioned the renewal of "some splendid image of man in a morally designed world, ennobled by a conception of the transcendent." But do we see any evidence of such a renewal?

Some have identified the next phase of our common experience, half-jokingly, as "Popomo," for post-postmodern. Glimmers though they be, there are signs that today's "common man" (Weaver's words) "will discard his bastard notions of science and materialism, intellectual hobbies of a hundred years ago." As I look about me, I'm inclined to be hopeful, at least, that Weaver is correct. My students seem homesick for what he calls "the non-materialist views of the world [that] have flourished for most of our history, [and] have inspired our best art and held together our healthiest communities." If that is Popomo, then bring it on.

If modernism lamented the fragmentation and meaninglessness of a world that had lost God--think Nietzsche's *Parable of the Madman* or Sartre's *Existentialism as Humanism*-- postmoderns chose to "get over it." Unlike modernists, who employed the arts to exude the angst of an unanchored and chaotic universe, the postmodernist maintains that art is, in Stravinsky's words, "powerless to express anything."<sup>8</sup> The postmodernist agrees that the cosmos is incoherent and

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<sup>6</sup> Richard Weaver's doctoral dissertation was published posthumously as *The Southern Tradition at Bay* (1968). As Weaver wrote this work, he would have been reading newspaper headlines about the Soviet defense of Salingrad and the surrender of Axis forces in North Africa, Italy, and the Pacific. The quotations are from p. 376.

<sup>7</sup> Huston Smith distinguishes between science and scientism. The former is founded on the presupposition that every theory is open to falsifiability. But *scientism* maintains that the underlying premise of science itself is not similarly open. Because it assumes the immutability of its own premise, scientism is, according to Smith, the world's littlest religion. Observing that "science is our sacral mode of knowing," Smith concludes that it is a little religion because:

- The crux of science is the controlled experiment
- We can control only what is inferior to us.
- Conclusion: Science discloses only our inferiors, from which God is excluded by definition.

<sup>8</sup> Postmodernism, which began to receive academic recognition only in the 1980's, was presaged by Stravinsky's statement that music is, "powerless to express anything at all: a feeling, an attitude, a psychological state, a natural phenomenon" (quoted by François Escal, *Contrepoints, Musique et littérature* (1990). *The Rite of Spring*, so often cited as high modernism, actually

meaningless, but says "So what!" Let's celebrate it anyway. Mary Klages synthesizes postmodernism in the arts as, "Let's just play with nonsense."

So, what is Popomo? Although we are too close in time to be objective, post-postmodernism can be assumed (if it exists at all) in response to postmodernism, which responded in turn to modernism. Popomo seems to begin with the technological means whereby a mass audience finds itself able to shape art and culture toward whatever it aspires. Popomo steals the locus of reality from the historical gatekeepers of academe, the news media, and the intellectuals, bestowing it instead upon the bloggers, pop artists, virtual reality, Second Life, satellite TV, Facebook friends, and the satirists of political correctness.<sup>9</sup> Needless to say, Popomo could not exist without the Internet.

One of Popomo's interesting spin-offs is the alarm of entrenched "truth brokers" at the incursions of others into their territory. Witness, for example, the reaction of traditional broadcast media to a recent presidential debate that was hosted by an evangelical minister. Too, there is the incredulous response of the National Science Foundation to surveys showing that most Americans don't believe in evolution. Although the traditionalists like to blame this on "fundamentalists," something larger is at work.

The scientific metanarrative that has explained the human person for so long as the product of an accidental, purposeless, and therefore meaningless process, is being shrugged off by all sorts of people who have concluded, simply, "I don't believe that about myself." Because we human beings have perceived ourselves, throughout most of our existence, as spiritual beings, not lacking in purpose, Weaver declares the latter to be the "natural" view, and the former indicative of "spiritual decadence."

Now, you may ask what does all of this have to do with forensic anthropology, music analysis, and evolution? What tightens the historical drawstring is Bach, with the forensic reconstruction of his likeness from a cast of his skull that was preserved more than a century ago by an anti-Lamarckian Darwinist. That is the historical thread.

Conceptually, the connection is that each discipline--forensics, music theoretical analysis, and Darwinian evolution--proceeds from the same assumption, though not always with the same results. The assumption is that, by looking at the current state of a thing, one can determine its past and, to some extent, future. It is this assumption, among many, that is being challenged by post-postmodernist thought, which seems to want to reassert the reality of free will, purpose and meaning, and their attendant potentialities of received wisdom, tradition, and the valuation of the human experience as distinct from that of animals and machines.

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"foretold or absorbed virtually all the dialects of modernism and postmodernism" (from Ira Braus's review of *The Stravinsky Legacy*, by Jonathan Cross (1998))

<sup>9</sup> None of these would have impressed Weaver, who believed that renewal of a non-materialist worldview would come from the remembrance of agrarian values. He would have argued for more chivalry rather than virtual reality, and he undoubtedly would not have conceded to post-postmodernism any possibility of redressing the damages of modernism. On the other hand, Weaver would probably have been delighted by technologies that permit his ideas to bypass the gate-keeping function of the modern metanarrative.

Methodologically, the common threat is the lurking danger that our precious tools become the thing measured. If science is that which modernity considers to be real, then a scientifically-rendered image is the most authoritative (never mind that the scientists leaned heavily on a portrait of 260 years prior). Musically, if polyphony were presumed to characterize the music of societies on the top rung of the evolutionary ladder, then fugal analysis, which might ignore the rhythmic and cyclical developments of Indonesian gamelan, the oldest orchestral tradition in the world, would be ineffectual.<sup>10</sup> If, in the womb, the human person begins as a fish, then a salamander, then a frog, and monkey--well, imagine how Haeckel's tool might imperil one's health.

In questioning the reigning metanarrative, and searching for a better model, it can be helpful to revisit the beliefs that enabled our ancestors to understand themselves and place in the world. For Weaver, that metanarrative was "The Southern Tradition." For Bach it began in belief that one's essence is not contained in countenance or physiognomy, but in that which transpired between the temples of what we now hold as an empty skull.

I mean, of course, that the truly authoritative image of Bach can't be seen at all. It can only be heard, understood, and debated. I write here of the universe of thought, meaning, logic, telos, purpose, belief, idea (and music!)--realities that science presumes to capture with the élan of a fly defeating its swatter.

In contrast to our own, the metanarrative of Bach's day would have taught him that the real Bach is the soul that does not die. Bach is not, as the forensic scientist would say, "the cadaver," or "the deceased," but as the Lutheran pastor would say, "the departed." The real Bach lives, and has as little to do with that skull as the shorn toenail to the composer who stubbed his toe while trudging to choir practice one Thursday evening 300 years ago. The real Bach is the music you hear now.

Weaver is correct in his intuition that the task of developing a better metanarrative will fall primarily to the poets and artists--those who understand that every made thing has come into being on purpose, for a purpose, and is therefore possessed of meaning. While science may explain the brain, it takes a human to know a human.<sup>11</sup>

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<sup>10</sup> The entire field of comparative musicology disintegrated when it was realized that the tools of the western classical tradition were inadequate to the task of analyzing other musical traditions.

<sup>11</sup> Shortly after writing these words a friend directed me to Alexander Solzhenitsyn's objection to the word "humanist." Solzhenitsyn writes: "That which is called humanism, but which would be more correctly called irreligious anthropocentrism, cannot yield answers to the most essential questions of our life."