

Fugue No. 23

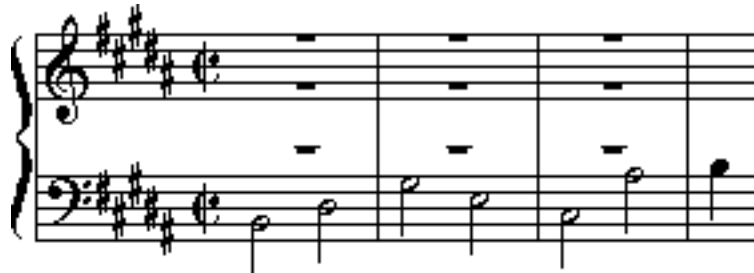
B Major

Well-Tempered Clavier Book II

Johann Sebastian Bach

© 2006 Timothy A. Smith (the author)¹

To read this essay in its hypermedia format, go to the Shockwave movie at <http://www2.nau.edu/tas3/wtc/ii23.html>.



Subject: Fugue No. 23, *Well-Tempered Clavier*, Book II

- form follows function
- Bach is Bach because...
- and not because...
- triads and tonality
- the power of other things
- eternal harmony?

Form Follows Function

Do you find it coincidental that swimming beasts--reptile, mammal, and fish alike--have flippers and fins? Or have you wondered why the flower's seed is a sphere, with its stems and leaves being tubes and planes? Here's why. Fish and ferns are the way they are because other things are the way *they* are. Biology is the way it is because geometry (and chemistry and physics) are the way *they* are. We express this principle as *form follows function*.²

¹You may print, copy, link to, or cite this document, for non-profit educational purposes, so long as credit is given to the author as per fair use. You may not reproduce this document electronically, enfold it into a web site, or incorporate it into a saleable product without written permission from the author.

²Flippers and fins (forms) provide the most efficient means of seaborne locomotion (function). The seed is spherical to encapsulate, with the greatest degree of protection, the highest density of genetic information and essential nutrients within the smallest volume of space. Where the function is to generate solar energy, the optimal form will trade security for surface--a plane. Between extremes, the fern's need to extend its

The principle of form following function is just as true of music as it is of fish and ferns. I owe this thought to Michael Marissen's recent explanation why fugue, the most highly favored form of the 18th century, was supplanted by sonata-allegro, the darling of the 19th.³ It had to do with the perceived function of music.

Dr. Marissen observes that if music's purpose is to represent the reasonableness of reason (the pet idea of the Enlightenment), then one needs a form that proffers argument, followed by a countervailing argument, culminating in rapprochement--amicable coexistence of the two. Inimical ideas become thus able to part company, each having heard the other's reasons, respectfully, to the end. This function is idealized, musically, in *sonata-allegro*, a form that Marissen likens to dialogue.

Bach's music is not like that. His approach, notes Marissen, is more like a preacher's and his music the sermon. Of all musical forms the fugue, being most sermonesque, is Bach's favorite. It begins by identifying the essential argument, the main point, to which the sermon will return, never challenging its underlying truth, but validating the argument by persistent restatement, with varied inflections, profound introspection and scrutiny from every possible angle. Being a good sermon, the fugue entails application: demonstration of how the truth retains its truth in every conceivable setting.

Bach is Bach because...

As we proceed to examine this fugue in more detail, I hope that you will remember this:

Bach's music is the way it is
because other things are the way they are.

The validity of this argument can be demonstrated in this fugue. But first it will be helpful to note that there is nothing controversial in what I have just proposed. All scholarship is built on it. In affirming this truth we simply acknowledge that things are the way they are for a *reason*. Getting at those reasons is what scholarship is all about. At the same time, in getting-at-those-reasons, we stroke the pet idea of the Enlightenment--that truth is found in reason(s).

Here's the problem. Once we've identified the reason, we usually stop; the mere fact that something *has* a reason is seen as validation enough for both the function and its form. Modern scholarship gives little thought to whether it is a *good* function or whether the form is properly suited to it (we got over that phase with the Greeks). Today, any form is fine so long

fronds toward the sun requires a balance of strength and conductivity through which food may pass--a tube.

³Michael Marissen, "The Spiritual Power and Integrity of Bach's Music," Hinkle Distinguished Lecture Series, Oregon Bach Festival, July 5, 2006. This essay is inspired by Marissen's topic, and with great appreciation for his work.

as it fulfills its function. Once we've pinned down the reason, we consider it impolite (or unscholarly) to comment on whether it was good, bad, beautiful, ugly, or somewhere in between.

The reason we're hesitant to go all the way is because qualitative conclusions are thought to be unreasonable. Values are viewed as dismissive of the notion that truth is synthesized in reason, the ultimate value. For every one who pronounces a masterpiece, another must argue that it is hideous, or that the canon is hateful, and the cycle begins anew.⁴ Not to begin anew would be to let slip a claim to truth--in modern scholarship, an unpardonable sin.⁵

But evaluation is necessary, and, I would argue, unavoidable. In even the most "objective" scholarship, underlying values are often thinly disguised. The question is, do we do it well? Or is our vision so clouded by contemporary thoughts that we dismiss, out of hand, what is older than us? To what extent, and by what standard, can we assess worth? Is the scholar's role to assign value: is Moses greater than Manson, Bach than the Beatles? Is it helpful, our tendency to dissociate Bach's form from the pre-Enlightenment functions that produced it?⁶ Can Bach's music be great if its religious sentiment is so much rubbish?

This fugue presents the perfect opportunity to grapple with that difficult

⁴In a recent online discussion moderated by the Society for Music Theory, an Ivy League graduate student maintained (with some agitation) that professors should never "profess" any work of art to be a masterpiece. The role of the educator (she implied) is to describe, not evaluate. Students should be encouraged to form their own opinions in accord with their own values. To do otherwise is to impose the teacher's values upon the student. Ironically, persons who advocate that teachers should not advocate are, by their own advocacy, advocating advocacy. But the mantle of objectivity, so dutifully worn by modern scholars, is based upon a myth: that knowledge and values cannot mix. In truth they cannot help but mix. Most of the great advances in science, the great discoveries, the great works of art (but there I go again, using the word "great"), have been made by passionate people, strongly committed to the truth or rightness of ideas long before they came to the common practice.

⁵Ironically the mindset that moral truth claims are dangerous, today employed to insulate secular statism from religious influence, has its roots in the Protestant reformation. Huston Smith proposes (*The Soul of Christianity*, HarperCollins 2005) that the "Protestant principle" established, for the first time in western thought, the primacy of the individual, not society, government, church hierarchy, creeds, or tradition, in determining the correct interpretation of Scripture. This produced a culture of perpetual wariness. To avoid being misled by others, individuals were taught to search the Scripture for themselves, a habit to which we owe the invention of the printing press and all forms of mass media thereafter. That culture, in full flower during Bach's lifetime, accounts for the preponderance of the theological works in his library. Most of the marginalia in Bach's Bible is typographical correction or clarification of Luther's commentary. In this attitude we discover the ideological underpinnings of modern skepticism toward received canons, forms, and functions.

⁶In his biography of J. S. Bach, Albert Schweitzer wrote of the *Well-Tempered Clavier*: "What so fascinates us in the work is not the form or the build of the piece, but the worldview that is mirrored in it." Schweitzer's reference to the Christian worldview--that time and creation have a purpose, and that goodness comes from God and is a reflection of the created order--expresses, in other words, the principle of form following function.

question, for it expresses Bach's belief that the tertian structure of tonal music reflects the trinity of God--a quaint connection if ever there was one. But I hope here to make that connection not only interesting, but supremely relevant to how we hear Bach. Indeed, what we know as "Bach" could not have existed without it. Some readers may even agree that the thought is timeless.

To that end I propose a second idea, one that I think flows naturally from the first, but may be seen as challenging the most cherished assumption of modern scholarship. The idea is this: not only is Bach's music the way it is because other things are the way they are, but:

Bach's music is powerful in proportion
to the power of those "other things."

This argument is (I know) hopelessly Aristotelian. No, "hopeless" is the wrong word--*hopefully* Aristotelian is better. For the argument asserts that integrity is not found in being "true" to a lie. A powerful syllogism is not made in the elegant wording of flawed premises. Timeless forms do not arise from ambiguous, misleading, or malicious functions. If these are not ideals worth hoping for, than no ideal is.

Now, if you have a problem with this, your beef is not with me, but Bach. In a moment we'll examine the historical evidence. For now, consider the possibility that praising Bach's music, while at the same time satirizing his beliefs, is to imply one of two things: either he knew that he was giving elegant expression to silly ideas, or he did not. If the former, then he was a liar; if the latter, deluded.

How much better it would be to assume that Bach knew that he was giving timeless form to what he believed to be, *and actually turn out to be*, timeless functions! That is my premise. To establish it, we'll need to evaluate those functions (fair warning, they're religious), as well as Bach's manner of musical expression.

And Not Because...

But first it shall be necessary to refute some common errors. In saying that elegant forms are powerful in proportion to their functions, I do *not* mean to imply that Bach's music is powerful simply because it fulfills its function (usually liturgical). Although his fugues are indeed true to the beliefs that made them, and it is likewise true that such integrity is properly considered in this debate, I am going much farther than that. I am quite certain that, if the function itself is flawed, the form is commensurately flawed. While it may be possible to make silk purses out of sow's ears, it is less likely, and much more difficult, than had we Chinese silk from the start. So let's deal with these ideas in order.

It is tolerable, in some circles, to intimate that Bach's music is spiritually powerful because it is true to the beliefs that produced it, those beliefs being (in modern thought) stodgy, a tad silly, and, at opportune moments,

laughable. But the instant we indulge that sentiment, logic evaporates. The argument loses its own power because it says that ideas have integrity by virtue of their being sincere. At such a juncture it is only appropriate to recall that more damage has been inflicted by sincere fools than insincere wise men. Sincerity does not make a stupid idea powerful.

So I propose the opposite: power and integrity come not of sincerity, but of the intrinsic worth of the underlying belief. In this conjecture, Bach's music derives its spiritual power from the beliefs that produced it. If that *belief* were trite, then the *music* too would have been trite. It is rare, and not the rule, for excellent forms to emanate from flawed functions.

Before proceeding with the argument, we must debunk two more misconceptions: (1) that laudatory functions invariably produce elegant forms on the one hand, or (2) that excellent forms validate flawed functions on the other. Both of these ideas, too, are untenable. Not every aesthetic emanation of Christendom (or the theological for that matter) has been beautiful, nor are its countless beautiful forms valedictory of that belief. The excellence of Bach's music does not "prove" his faith.

I've observed, rather, that careful thinkers give thoughtful care to what is lovely, noble, redemptive, and timeless about functions that rather consistently flower in beautiful forms. They never begrudge those beliefs, mock them, or allow others to do so, simply because the crowd regards them as peculiar, or because extremists have rarely, and with great regret, yielded execrable forms like the anti-Judaism that Bach is sometimes accused of promulgating in his passion music. If it is true that beautiful forms emanate from beautiful beliefs, then it necessarily follows that, to understand the form, one should inquire of the belief.

But now we have a bigger problem. You see, the "faith-based" culture that produced Bach's music is, by modern values, unreasonable. It is unreasonable because it makes certain truth claims that are not open to discussion. They are non-negotiable. They are not true by plebiscite, popular agreement, reason, or dialog. Christianity of any stripe is unequivocal in certain matters. It does not accept, for example, that "the Truth" is synthetic--made up, invented. Accordingly it devalues the role of reason in synthesizing truth. While true things can be propositionalized (reasoned), ultimate truth is either inborn, as in the conscience or instinct, or revealed, as in nature, tradition, and Holy Scripture.⁷

While the Lutherans of Bach's day considered propositional reasoning to be valuable, reason did not make things true. A belief that *can't* be rationalized is not *ipso facto* untrue; nor is it true that everything that *can* be rationalized is automatically true.⁸ The Stoic philosophers were fond of

⁷The kind of truth that we are discussing here is so far removed from scientific "fact" as to be incomparable. Scientific theories and facts cannot approach metaphysical truths. Public discourse (like ours), that promotes scientific and technological "truth" to the exclusion of metaphysical, is in deep trouble. Read the next footnote.

⁸Huston Smith (fn. 5 supra) argues that modernity is in crisis because it has conflated absence of evidence with evidence of absence. Theologically (the context of his book), it does not follow that, because one can't prove the existence of God, God doesn't exist. In

pointing out that all people, saints and tyrants alike, have adopted what they thought to be rational behavior. In Lutheranism, reason was therefore thought to be like a tool that could erect any kind of building, stable or unstable alike. It was the wind that could fill your sails to anywhere--but you had better steer the boat or end up somewhere else (to paraphrase the famous Yogi Berra). Reason without revelation was a snare. With equal effectiveness it could point to the Truth, or away from it.

Now that we have laid the foundation for discussion of this fugue, remember: (1) Bach's music is the way it is because other things are the way they are, and (2) Bach's music is powerful in proportion to the power of those other things.

Triads and Tonality

Now I would like us to think about the many thirds of this fugue. Yes, it is divided into three sections, but I am thinking about 3rds at a more rhetorical level. Three skips betray the subject's thought: a rising 3rd followed by a falling 3rd then a rising 6th (the inversion of a falling 3rd). Its form follows the tendency of intervallic thirds: in tonal music that tendency is to be stacked (tertianism) to create chords (triads), or to make circular melodies of strung 3rds in sequence. The subject of this fugue grows from the latter idea (Fig. 1).⁹

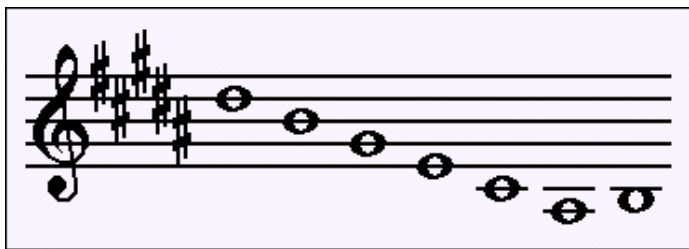


Figure 1: Sequence of Falling Thirds

the broader cultural context, the scientific method is impotent when it comes to establishing humane truth: love, beauty, altruism, perfection, ethics, etc. These are transmitted in narrative and tradition, usually by dramatic or aesthetic means: music, art, literature, poetry, stage and cinema, short story, fairy tale, fable, myth, novel and the like.

⁹This sequence has six pitches terminating in A#. Curiously, Bach did not continue through a 7th pitch, F#. Had he done so, the sequence would have included all diatonic pitches in the B major collection. With F# being a 3rd below A# and a 3rd above D#, it would also have closed the loop. The sequence might have wrapped around itself *ad infinitum*. Why six pitches in the sequence, not seven? The purpose of six pitches is to draw attention to the mathematical, musical, and theological significance of the number six. Mathematically, 6 is the first "perfect" number (sum of its proper divisors 1, 2, & 3). Musically, every diatonic pitch and consonant interval can be produced by the division of a vibrating string into six equal parts. Theologically, God created the world in six days, and on the 7th He rested. Perhaps Bach is saying something here about creation, regeneration, and perfection.

A sequence is a pattern that sounds like it could continue forever. Because its function is to build energy, at some point it needs to let off steam. Bach has brought this sequence to a close by resolution of its leading tone to tonic, the only stepwise motion in the subject.

But there remains a problem of contour (in this case, lack thereof). The descending thirds of the incipient theme lack proper shape. Bach has solved this problem by transposing the first two pitches down an octave, and the last two up. I'll call these boundary pitches the *framing pairs* (Fig. 2).

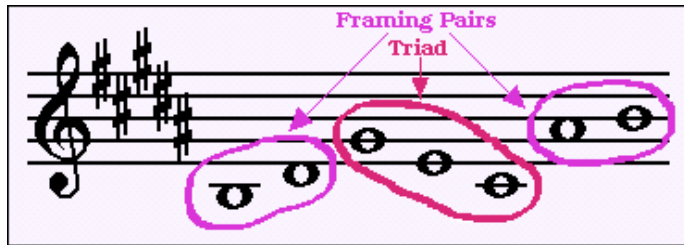


Figure 2: Transposition of the Framing Pairs

The frame draws our attention to a descending triad that falls between.¹⁰ Whereas the framing pairs go up, the triad goes down. It is marked for consciousness not just as sound, but symbol. It is the very symbol that Bach would later use to represent the incarnation of God in the person of Jesus Christ. At the appropriate moment we'll consider the Trinitarian connotations of this idea more fully.

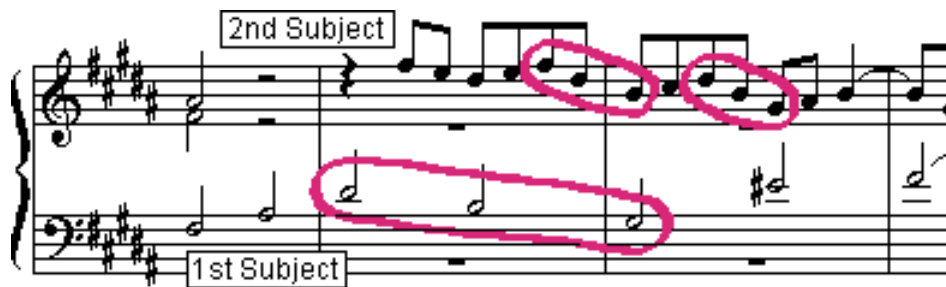


Figure 3: Descending Triads

But first, whatever the connotation may be, it is reinforced by a second subject that incorporates the *same contour* in miniature. This happens not once, but twice! In total, the complex presents the descending triad three times (Fig. 3), first in the long notes of its 1st subject, then in the

¹⁰This framing technique, a rhetorical flourish known as *Chiasmus*, always has Christological significance for Bach. Chiasmus comes from the Greek χ (*Chi*), the first letter in $\chi\rho\iota\sigma\tau\omicron\varsigma$ (*Christos*). It does not require a huge leap of the imagination to hear the subject of this fugue, with its boundary pitches ascending, and its framed triad descending, as chiasmic.

diminutions of the 2nd subject. Notice, too, how the second subject is an elaboration of thirds in parallel with the first subject. Half of the entries are at the 3rd above and half at the 3rd below (Fig. 4).¹¹

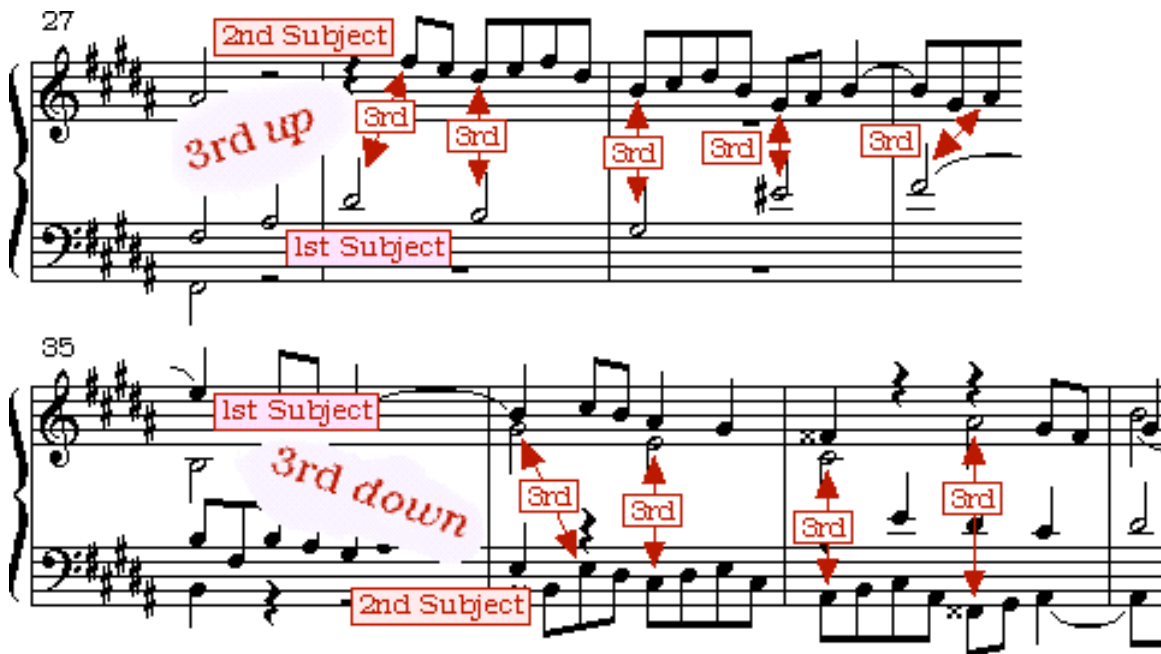


Figure 4: Double Counterpoint at the 12th, mm. 27 ff. & 35 ff.

In view of our thesis, the 2nd subject is the way it is because the 1st subject is the way *it* is. Both are the way they are because the tertian system and tonality are the way *they* are. At last we find ourselves in the proper frame of mind to ask: Why is tonality the way it is? Answering this question will reveal how the spiritual power of Bach's music is commensurate with the power of "other things."

Before proceeding with this line of thought I must be plain: I am *not* about to suggest that tonality is the emanation of a triune God. My thesis is the reverse. Historical Christianity has found in the tertian system a fitting friend and metaphor of Trinitarian dogma, and has never hesitated to visit that friend whenever it needed company (as Bach has done in this fugue).

But more than that, western composers have, in accord with what they believed to be cosmic verities, written in such a manner as to yield a type of music that pertains distinctly to the culture and ethos of the Christian era. The belief then is powerful--not merely insofar as it has exerted a formal influence, but because it has universal mythic, and aesthetic,

¹¹The subjects are in *double counterpoint at the 12th*. Parallel 3rds at the 3rd above the main subject (same as 6th below) are found in the entries of mm. 27, 48, 60, and 85. Parallel 3rds at the 3rd below (same as 6th above) are found in the entries of mm. 35, 42, 53, and 93.

relevance.¹² To appreciate that relevance we'll need to understand what Christians mean by *the Godhead*.

The Power of Other Things

In Christian belief there is one Divine Being who is comprised of three persons: Father, Son, and Holy Spirit. While the persons of the Godhead are distinct in relation to each other, their work in creation, and to the Church, they are believed to be in *homooúsios* (that's Greek for *of the same substance*). The Divine Being is not *three* gods, but *one* God in three persons.¹³

The doctrine of *homooúsios* has had many ramifications for western thought, and music. If the Creator has distinct persons that are of the same substance, and if (as Christians believe) we are created in God's image, then we, too, have distinct parts--body, soul, and spirit--that constitute the substance of one person. Everything in creation, while distinct, is made of one created substance. This belief provided the philosophical underpinnings for countless neo-Platonist theories of music in Bach's lifetime, and persists in the reductionist tendencies of modern analysis.

A second implication of Trinitarian dogma has to do with the idea of *otherness, relationship, and love*. Augustine argued that love couldn't exist without one person being in relationship with another (self-love being narcissistic, the opposite of love). In the Greek ideal of love--*agapao*--the lover rejects self-interest in order to act in the highest interest of the beloved. Accordingly, Augustine reasoned that, before creation, love could not have existed apart from a triune God: each person of the Godhead in *relationship* with the *other*. The logic goes like this: if God is love, then God must be triune (we'll not touch Augustine's argument for three rather than two).

¹²I write this in the spirit of Joseph Campbell's seminal work on myth. Campbell observes that the oldest and most enduring trait of societal humans is that we are makers of myths. Human life is uniquely predisposed in this regard, which implies that myth making distinguishes us from animals. This "form-defining" trait acquires more significance with the knowledge that, at all times and in all places, myths have addressed two concerns: self-awareness of mortality coupled with realization that the tribe, which lived before the self, will continue after. Insofar as Christianity addresses (as all religions address) both concerns, it is mythic. This application implies verity, whereas "myth" usually suggests fiction that has augured purchase in the popular mind (e.g. the "urban myth"). To serious scholars, religious or not, the mythic implications of Bach's Christianity is relevant to the analysis of his music. Whereas truth in advertising requires that I identify my own position with that of C. S. Lewis, Christianity as the "true myth" (I am a Trinitarian Christian), the reader must weigh this against Bach's own, not unbiased, predisposition.

¹³Christianity maintains the doctrine of the Holy Trinity as an article of faith. Attempts to rationalize it, like Augustine's ontological argument for the trinity of God, are of moderate help. Christians believe it first, then try to conceptualize it metaphorically. One of the better metaphors comes from C. S. Lewis who likened the Trinity to line, plane, and sphere, in three dimensions. In Bach's generation, the triadic structure of chords provided grist for countless Trinitarian analogies and proofs.

The final Trinitarian connotation has to do with the beauty of begottenness. The Nicene Creed teaches that the second person of the Trinity, Jesus Christ, was *begotten* of the Father and not created. This begottenness has special significance for Christians because it involved the incarnation of the second person of the Trinity, God the Son, as Jesus of Nazareth who was crucified in the 1st century under the Roman Procurator, Pontius Pilate. In like manner the Holy Spirit *proceeds* from the Father and the Son.¹⁴ Each person of the Godhead is eternal and not created by the others.

What I have just described is the system of belief that characterized western thought for nearly two thousand years. The function of much of the art during this period was to formalize that belief. Bach's use of descending triads to represent the incarnation of the second person of the Holy Trinity represents a case in point. The foregoing symbol is heard in the *Et Incarnatus* of his B-Minor Mass and again in the subject of this very fugue.¹⁵

If you were Bach, and you felt that music could give form to *homooúsios* (distinct entities that are yet one), what kind of music would you write? If you wished to formalize your belief in *otherness, relationship, and love*, what musical shape might that be? If you thought that music could *beget* new ideas from old, how might that take form?

If you answered *canon or fugue*, then you understand how the power of Bach's music is proportional to the power of other things. In the many voices of his polyphony we hear *otherness, relationship, and oneness* in tones. In the self-generating powers of canon, and the exquisitely motivic and developmental strategies of fugue, Bach has given musical form to the *begetting* of new ideas from old--ideas that are distinguishable, yet of one harmonious *substance*.

But all of this theology, while an interesting jig in the puzzle, is but a game if we cannot place Bach in the picture. Did Trinitarian belief really express itself in his music? If so, how? Does it even matter, is it relevant? Will knowing this help us to hear his music more wholly? Does the underlying belief lend the fugue spiritual power, or detract?

Recently my wife and I rejoiced in the birth of our first granddaughter, Margaret Grace. "Gracie" (as I think I shall call her because I hear that she's calm) weighed in at six pounds and 12 ounces. She was 19.5 inches long, exactly the same as her mother when she was born. We are

¹⁴In Roman Catholicism and Protestantism, the Holy Spirit is confessed to proceed from the Father *and the Son*. In the Eastern rites the Spirit proceeds from the Father.

¹⁵ The author has observed that, in Bach, motivic statements of the descending triad, particularly the minor, are often associated with words pertaining to the incarnation of God in the person of Jesus Christ. This association, obvious in the *Et Incarnatus* of the B-Minor Mass, lends deeper meaning to the three fugues of the 48 that begin with descending minor triads. I have identified two of these, the bm of Book I and the f#m of Book II, as "passion fugues." The third, the bm of Book II, concludes the *Well-Tempered Clavier* with alliteration of the other two.

told that she looks, from her nose up, like her two and one-half year old brother. Below the nose, we've heard, she's like her father, with red hair to boot.¹⁶ But the bone structure of her hands and fingers is that of her mother, our daughter.

Now, in case you're wondering, the foregoing paragraph is about the beauty of begottenness. In tracing Margaret's *homology*, her structural similarities to that of her family, we are discovering how she is unique from her mother, her father, and her brother, but also the same. We are saying something very important about where she came from. But most of all we are discovering how much Margaret is loved, and how completely she belongs.

This fugue also has its homology. And that homology associates Bach unequivocally with Trinitarian Christianity. Its second subject is distinct from the first, but of the same substance. Both are elaborations of falling 3rds, in parallel at the 3rd above and 3rd below. These forms emanate from doctrinal functions as much as any of which I am aware. But there's more.

Had you noticed that the fugue begins with three motives, two of which we haven't yet discussed. Listen to the bass voice in mm. 1-13. Can you hear how the subject is followed by the 1st and 2nd countersubjects? Can you appreciate how this series regenerates itself in the tenor of m. 5 followed by the alto of m. 10? In the fugue's exposition we hear these three ideas three times as melodies. But we also hear them three times in counterpoint with each other.

So the fugue's exposition expresses the product of 3x3. Although it is not a canon, it comes close. In the parlance of the 18th century, a canon in three voices was called *three in one and one in three*, a phrase most often used in reference to the Holy Trinity.

All of these subjects belong with each other because they are generated of each other in harmonious relationship. They are heard as distinct and separate, but also, in counterpoint, as being of the same substance. While there are those in the 18th century who argued that this substance emanated from the Holy Trinity itself, we at least can agree that they are metaphorically expressive of that triunity. The western fixation on artistic unity in variety is a product of Trinitarian belief.

Eternal Harmony?

Bach's generation was divided on the nature and meaning of music. The conservative group, we'll call them the *Cantors*, believed that music is the way it is because God is the way God is. With its neo-Platonist roots, the cantoral tradition traced its lineage to the Greek mathematician, Pythagoras, for whom the universe was essentially mystical.

The other group, we'll call them *Progressives*, believed that God had

¹⁶ Writing three years later, "Gracie" has not stuck. Our first granddaughter has turned out to be "Margaret" with hints of "Maggie." Things being the way they are for a reason, her red hair should have been the cue.

nothing to do with it. While the Progressives were willing to concede some connection between music and mathematics, they were averse to theological formulae, allegories, and metaphors. The cantoral ideal was intolerably mythical and unscientific for the Progressives, who trended toward the modern belief that the universe is impersonal and mechanistic; music is the way it is because people made it that way.

As in all disputes, language was very important. The Cantors designated pitches by their Guidonian solmization syllables: *ut re mi fa sol la*. This connected them with the medieval system of hexachords, abstruse theories of contrapuntal composition, and the Catholics to the south. The Progressives identified pitches by letter names: A B C, like we do today.

Protagonists in this fight included Johann Mattheson (a Progressive) and Johann Heinrich Buttstett (a Cantor). Our Bach, also a cantor by trade, knew of Mattheson for sure, and was probably acquainted with Buttstett, a distant relative from nearby Erfurt and teacher of Bach's cousin, J. G. Walther.

In 1716 Buttstett replied to Mattheson's book, of three years prior, that had satirized obscure tendencies of the cantoral tradition. Buttstett sought to right the scales. The six-pointed star to the right is from the title page of Buttstett's reply: *UT, MI, SOL, RE, FA, LA, tota Musica et Harmonia Aeterna*. The syllables proclaim Buttstett's position.



The star is comprised of superimposed triangles representing musical triads, with the upward being major, and the downward minor. The triangles mirror each other just as the major and minor triads are mirrors.¹⁷ The six points of the star are the pitches of the hexachord. Below the star Buttstett grouped these pitches as *Ut, Mi, Sol* (a major triad), and *Re, Fa, La* (minor triad). Beneath that Buttstett wrote *tota Musica et Harmonia Aeterna*, meaning "all of music and eternal harmony" [are represented in this symbol].

Buttstett is saying here that music is the way it is because the "eternal harmony" of math, planetary motion, and the harmonic series is the way it is. He implies that their power is proportional to the power of their Creator, the Holy Trinity. We know this because of the three tongues of flame at the center of the interlocking triangles. To help us get a sense of the mystical way that the Cantors perceived music, I have animated Buttstett's triangles. When a subject sounds its major or minor triad, the upper or

¹⁷Buttstett's triangles represent the interval of a major 3rd (M3) as a horizontal line. The major triangle (triad) has its M3 at the bottom; the minor triangle has it at the top. Bach's use of archaic language (title page WTC Book I) to describe major keys as *tertium majorum oder Ut Re Mi* (major third or *ut re mi*), and minor keys as *tertium minorem oder Re Mi Fa* (minor third or *re mi fa*) acquiesces to the cantoral tradition, probably in defense of Buttstett. See fn. 19.

lower triangle (respectively) moves to the foreground.¹⁸

Buttstett should have known better than to butt heads with Mattheson, infamous for his wit and suave invective. Not a year had elapsed but Mattheson had skewered Buttstett. In *Das Beschützte Orchestre* Mattheson also slandered Bach's father-in-law, giving rise to a theory that the *Well-Tempered Clavier* was Bach's rejoinder in the debate.¹⁹ You see, on the title page, Bach has identified tones by their Guidonian syllables, *Ut Re Mi*, thus identifying his own view as sympathetic to the cantoral tradition.

But the Cantor's fight was not precisely Bach's. While the confrontational episodes in his life are legendary, none of them had anything to do with musical style or composition. When Bach quibbled, it was over duties, titles, and authority. He never used music as a weapon.

Bach's approach to musical conflict was, rather, to demonstrate how competing trends, styles, and theories could coexist, often *in the same composition*. His peaceable attitude toward music had something to do with his high regard for its spiritual power and purpose. If music reflects the reality that God is love, three persons in one harmonious substance, and in relationship with creation, then it should not divide people, but bring them together.

We can hear Bach's syncretistic approach in this very fugue. Its white-note subject and *alla breve* time signature suggest something very old, as does its bottom-up exposition and Trinitarian structure. But the subject's outline of a ⁰7 chord was contemporary, as was its overtly tonal structure. The fugue's most progressive trait is heard in the daring leaps and pungent half-note dissonances of its 1st countersubject (heard here in the low voice).

In closing, I hope to be permitted a most personal reflection. As we affirm the power of Bach's music, today, do we not also confirm our wish for the power of other things? If so, what things? Permit me to suggest the power of hope. We have learned so much hopefulness from Bach. His music is hopeful because it says that the present is the beneficiary of every beauty, and lesson, of the past. Its warning, and loveliness, is this:

¹⁸Diminished triads are represented in the animation by the downward triangle.

¹⁹This theory, first offered in an unpublished dissertation (1942) by Walter Blankenburg, is retold by Ledbetter (2002, pp. 5-6, 120-125). Mattheson's first book, *Das neu-eröffnete Orchestre*, and follow-up *Das beschützte Orchestre*, employ the code word *Orchestre* to extol music of the French style. The prior publication (1713) criticizes, in words that Ledbetter calls "gratuitous and obscene," the music of Bach's father-in-law, Johann Michael Bach. Then Mattheson audaciously calls on Johann Sebastian to contribute his biography for a planned *Ehrenpforte* (triumphal arch) of German composers. In 1719 Mattheson published a series of figured-bass exercises in all keys, a collection that J. S. Bach may have seen on his visit to Hamburg in the following year. Ledbetter concludes (p. 6): "There could be no finer irony than that Bach, the firm supporter of tradition, should have written the first collection of fully composed pieces to use every key as tonic, amply demonstrating an advanced connoisseurship of the latest French styles and how they might be given depth by traditional technique."

in a world of so much hatred and violence, it must be possible to believe that the many persons of humankind, with all our entities of otherness, can coexist as one family. We are, after all, of one mortal substance--most alike in our hopes, fears, dreams, need for relationship and security, love, and sense of begottenness and belonging to each other.

Like the Progressives of Bach's day, we can think that we are the way we are because we've made ourselves that way. What we have broken we can fix. Or, like the Cantors, we can believe that our being is because of something deeply spiritual within us, a glowing ember that longs for restoration to the flame of relationship and oneness with each other and (if so inclined) to God. We can believe that our society is in trouble because we've lost that flame. Reigniting it will not happen with impersonal and mechanistic facts and technologies, but in remembering the spiritual values of our forbearers.

We are the way we are because of other things; our power is proportional to the power of those other things. True power is not the ability to impose one's will upon another, or upon nature, but in knowing who we are, where we came from, and where we are going. It is time, when we feel powerless and inept, when we sense the world moving toward an abyss of perpetual war and environmental destruction, to look at the power (or powerlessness) of what we hold most dear.

Is our confidence in cleverness, the wizardry of our science, force of arms, and technology, or is it found in our longing for restored relationships, love, and oneness? Is our confidence in what we construct, or the object of our belief? Does our unquenchable desire for meaning and purpose prove that purpose and meaning are real? The hopefulness of Bach's music is that it *has* purpose, and it *has* meaning, not of Bach's own invention (he would say) but eternal, wholly *other*, reaching toward us, so pristine and obvious that we're prone to miss it altogether.