

The *Goldberg Variations* (BWV988): An Analysis of Musical Styles and Structural Coherence

Juliana Yap¹

Abstract

The "Goldberg" Variations is regarded as one of the most important set of variations in the keyboard repertoires. An intelligent structure of this piece, its popularity, as well as its musical and technical challenges that requires virtuoso techniques from a performer; have drawn a great interest of musicians to learn this master work. Being the largest works of keyboard music in the Baroque era, its gigantic scope shows Bach's outstanding knowledge of diverse styles in music of the day. He constructed the whole variations by incorporating Italian Aria and French Overture, regardless his personal musical style. This article will focus on the musical form, styles, and the interesting elements of each variation and compositional technique; that Bach had used to unify the work as a whole. The outcome will be a very helpful manual for those who started to gain interest in playing or knowing more about the *Goldberg Variations*.

Keywords: Goldberg variations, Musical styles, J. S. Bach

¹ Adjunct professor of music at Washington & Jefferson College, United States

Introduction

Johann Sebastian Bach's *Goldberg Variations* (BWV 988) stands as one of the crowning achievements of Western classical art music. It not only set an almost impossibly high standard for future composers who wish to create their own sets of keyboard variations, but also raises the bar for keyboardists (both harpsichord and piano) in terms of endurance, technical facility, and, later in history, memorization. Only rarely does one get an opportunity to witness a live performance of the *Goldberg Variations* in its entirety from memory, with the use of repeats as indicated in the score. A performance of this type can easily last eighty minutes or more, and be just as much of a strain on uninitiated audiences as performers.

This article will focus primarily on an analysis of various compositional aspects in the *Goldberg Variations*, with particular attention on stylistic and structural differences between variations. After looking at all variations as compositional entities in and of themselves, we will search for the cohesive elements. They are those elements that bring all variations together to unify a composition of such significance that it has endured the test of time for over two hundred and fifty years.

The title page of Bach's *Klavierübung IV* [Keyboard Book IV] reads *Aria mit Verschiedenen Veränderungen* [Aria with Diverse Variations]. In consideration of the unusually large number of variations (thirty), it is appropriate to begin with a chart that outlines some of the basic differences between them. The following table has been created with the aid of two very important sources by eminent scholars on Bach's keyboard works; one being by Peter Williams in *Bach: The Goldberg Variations*,² and the other being by Ralph Kirkpatrick as reprinted in *The Goldberg Variations Reader: A Performers' Guide and Anthology of Appreciation*.³ Each variation will be listed along with its title as indicated by Bach, time signature, number of manuals required for performance (one or two), number of voices, and one or two short, characteristic observations:

Title	Time Signature	No. of Manuals	Voices	Basic Characteristics
'Aria'	3/4	1	3	melodic, like a sarabande
Var. 1 <i>a 1 Clav.</i>	3/4	1	2	hand-crossing (a polonaise?)
Var. 2 <i>a 2 Clav.</i>	2/4	1	3	imitative, as a trio-sonata
Var. 3 <i>Canone All' Unisono, a 1 Clav.</i>	12/8	1	3	canon at the unison

² Peter Williams, *Bach: The Goldberg Variations* (Cambridge University Press, 2001), 40-41.

³ Laurette Goldberg with Jonathan Rhodes Lee Ed. *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation* (Music Sources Center for Historically Informed Performances, Inc., Berkeley, California. 2002), 17.

Title	Time Signature	No. of Manuals	Voices	Basic Characteristics
Var. 4	3/8	1	4	imitative, as a passepied
Var. 5	3/4	1 or 2	2	hand-crossing, duet
Var. 6	3/8	1	3	canon at the second
Var. 7	6/8	1 or 2	2	dotted gigue
Var. 8	3/4	2	2	hand-crossing, duet
Var. 9	4/4	1	3	canon at the third
Var. 10	2/2	1	4	'fughetta'
Var. 11	12/16	2	2	hand-crossing, duet
Var. 12	3/4	1	3	inverted canon at the fourth
Var. 13	3/4	2	3	melodic, like a sarabande
Var. 14	3/4	2	2	hand-crossing, duet
Var. 15	2/4	1	3	inverted canon at the fifth, minor
Var. 16 <i>Ouverture, a 1 Clav.</i>	2/2 3/8	1 1	2-4 2-3	'ouverture', followed by stretto fugue
Var. 17	3/4	2	2	hand-crossing, duet
Var. 18	2/2	1	3	canon at the sixth, as a trio Sonata
Var. 19	3/8	1	3	minuet?
Var. 20	3/4	2	2	hand-crossing, duet
Var. 21	4/4	1	3	canon at the seventh, minor
Var. 22	2/2	1	4	'allabreve', as a gavotte?
Var. 23	3/4	2	2-4	hand-crossing duet
Var. 24	9/8	1	3	canon at the octave
Var. 25	3/4	2	3	'adagio' arioso, minor
Var. 26	18/16	2	3	hand-crossing, sarabande
Var. 27	6/8	2	2	canon at the ninth, a round
Var. 28	3/4	2	2-4	hand-crossing, trills
Var. 29	3/4	1 or 2	2-3	hand-alternating, as a batterie
Var. 30	4/4	1	4	'quodlibet'
'Aria' da capo				

Ironically, the 'Aria' of the *Goldberg Variations* is not the theme but a variation in and of itself, for it serves to accompany a steadily descending bass line that forms the actual basis for the variations. The slow harmonic rhythm and pulse, singing melody, and lack of an upbeat lead one to categorize the 'Aria' as a sarabande.⁴

The Structure and musical style

The *Goldberg Variations* is grouped into ten sets of three variations, with the third variation of each set being a canon. While number symbolism goes beyond the scope of this project, it is important to know that the number three, and, to a lesser extent, the number two, play integral structural roles throughout the composition. In fact, entire dissertations, journal articles, and book chapters have been devoted to numeral symbolism in the *Goldberg Variations*.⁵ The formal structure of Variation one is rather difficult to ascertain: the steady triple meter, dactyls, and downbeat anapests in the first bar of each half point to a polonaise structure, but a look at the polonaises in the Anna Magdalena Notebook reveals little in common with this first variation.⁶ The genre ultimately remains elusive and becomes more or less a duet between the left and right hands. Perhaps the most important and obvious characteristic of this first variation is that it immediately makes a significant departure from the 'Aria' in both mood and texture, thus establishing a precedent for the following variations.

As the above chart demonstrates, every third variation is in the form of a canon, and it would appear as though Bach is using the technically brilliant and arabesque-like second variation as a practice run for the first of these canons in Variation three. In fact, the imitative qualities of the second variation are so compelling that the famous music scholar, Sir Donald Francis Tovey (1875-1940) went so far as to suggest that it is the first canon in the *Goldberg Variations*, with Variation three being the second.⁷

Variation three is not only the first genuine canon of the set, but also one of the most difficult to play. Due to the fact that it is a canon at the unison, closely crossing voice parts are created in the two right-hand voices. The bass line, upon which the entire set of variations is built, is contracted and repeated, creating a more rapid harmonic bass motion. One of the more intriguing aspects of this variation is that the two upper voices appear to function independently of the bass line and could convincingly work as an independent composition by themselves.⁸

⁴ Williams, Bach: *The Goldberg Variation*, 55-56.

⁵ Ibid., 39-53.

⁶ Ibid., 56-57.

⁷ Goldberg with Lee Ed. *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 25.

⁸ Williams, Bach: *The Goldberg Variations*, 58.

The fourth variation begins the second group of three variations and is similar to the Baroque *passapied* in that it shifts to 3/8 meter and conveys a more rapid sense of harmonic motion. It basically presents a four-part polyphonic treatment of a single figure, a characteristic we have yet to see in the *Goldberg Variations* so far. The opening figure is treated both directly and in inversion, with the inverted presentations becoming more prevalent as the variation progresses.⁹

A return to the style of the first variation is made in Variation 5: It is a brilliant duet between the left and right hands, makes use of only one theme (which is developed during the course of the variation), and presents very clear harmonies along with the bass theme.¹⁰ This variation makes the case for performing the *Goldberg Variations* on a twomanual harpsichord almost irrefutable. The difficulty of the hand crossing is such that rendering it on one manual is virtually impossible both from a musical and technical standpoint. Pianists, who have no choice but to play this variation on one keyboard, must resort to highly sensitive phrasing and articulation to create a convincing performance. We return to canonic form once again in Variation six, but this time we have canon at the second as opposed to canon at the unison. Bach uses this variation to exploit the harmonic tensions created by this type of canon, much in the same way Giovanni Pergolesi (1710-1736) did in his *Stabat Mater*, written not long before the *Goldberg Variations*, and Wolfgang Amadeus Mozart did in his *Requiem* only a few decades later.¹¹

Variations seven and eight are both duets, with seven being of a type that does not occur elsewhere in the work. It is a graceful *gigue* in 6/8 meter and contains two pairs of themes along with a simple presentation of the bass theme and harmonies. The eighth variation is more brilliant in nature and hearkens back to the style of the first but with more complex compositional development of the motives presented at its beginning. The initial pair of motives alternates with its inversion and with a combination of a new figure that appears later in the variation.¹²

The canonic form returns once again in Variation 9 with a canon at the third. The slower pulse of this variation makes for a marked contrast to Variation 8, and the harmonic treatment is naturally much less dissonant than the previous canon (Variation 6) which took place at the second. Part-crossing is still inevitable in a canon at the third, but Bach takes longer to arrive at crossings in this variation, and harmonic dissonance gradually increases from

⁹ Goldberg with Lee Ed. *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 26.

¹⁰ *Ibid.*, 26.

¹¹ *Ibid.*, 27.

¹² Williams, Bach: *The Goldberg Variations*, 62-63.

about the middle of the piece onwards.¹³

Variation ten makes a return to the style last seen in Variation 4; full four-part polyphonic treatment of a subject. This time, however, we have a level of imitative treatment that creates a complete, little fughetta, as indicated in Bach's title. A four measure subject commences at the beginning of this variation, and the Goldberg bass line is represented more by the implications of its harmonic presence than by stepwise, sequential treatment, as it has received in many of the previous variations.¹⁴

The form of a technically brilliant duet between the two hands (and probably intended for two different keyboard manuals) returns once again in Variation eleven. The material does develop as the variation progresses, but one should take note of the fact that Bach often follows his more learned and contrapuntal variations, such as Variation 10, with duets of lesser compositional depth but greater technical display.¹⁵

A canonic variation must now return for number twelve, but this time at the fourth, an interval that creates its own unique set of problems heretofore unseen in the *Goldberg Variations*. Any canonic response that is presented at the interval of a fourth or fifth will present very few differences from the subject in terms of the arrangement of tones and semitones, and, therefore, fewer opportunities for dissonances that need to be resolved. Bach deals with this dilemma in the same way that he does in the Musical Offering (BWV 1079.3c.) a few years later; he presents the answer in inversion. The inverted subject answer, in combination with the fact that none of the canonic phrases begin on a main beat, allows Bach to provide a contrapuntal treatment for the Goldberg bass theme with greater facility.¹⁶

Variation thirteen is a trio for three voices, but unlike the second variation and canons, it is the two lower voices that are kept together while the upper voice stands alone. This variation is also one of the most graceful and melodic in the entire set, complete with dotted rhythms in the bass that remind one of a sarabande.¹⁷

Once again, a brilliant duet is inserted for contrast between the sheer, lyrical beauty of Variation 13 and the next canonic variation at No. 15. The fourteenth variation presents the keyboardist with greater opportunity for technical display than in any variation thus far in the set. Four brief, motivic figures are presented in the first half of the variation, while the second half sees the same figures used again but almost exclusively in inversion.¹⁸ The drama and

¹³ Goldberg with Lee Ed., *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 28.

¹⁴ Ibid., 28.

¹⁵ Ibid., 28-29.

¹⁶ Williams, Bach: *The Goldberg Variations*, 67.

¹⁷ Goldberg with Lee Ed., *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 29-30.

¹⁸ Ibid., 30.

rapid development of Variation fourteen, sets the stage for the mid-point of the set.

Variation fifteen represents the first truly radical departure from all that has gone before. It is the first variation to be presented in the minor mode, which necessitates a considerable shift in harmonic scheme and creates a level of melancholy previously unheard in the set.¹⁹ As mentioned above, the fifteenth variation states its subject answer in inversion also avoids beginning canonic phrases on a main beat. Additionally, the bass-line of the *Goldberg Variations* is now so well integrated into the canon that it imitates the canonic lines and seems largely derived from the canon's motives.²⁰ One might view the fifteenth variation as a representation of the highest level of thematic integration in this composition before it embarks on the second half of its journey.

The sixteenth variation is in the form of a classical "French Overture"; the only one of its kind found in the *Goldberg Variations*, and a genre that Bach rarely used in any of his compositions. With its return to the major mode, rapidly ascending scale passages, and dotted rhythms, this variation bursts forth in marked contrast to the minor mode variation that precedes it. The stately and majestic quality of the first half of the variation is followed by fugal treatment of material in the second, as is common to most French Overtures of the day.²¹

Again, Variation seventeen is a highly virtuosic arabesque for two voices inserted before the next canon. Only two themes are presented this time for compositional treatment, and, as in the previous duet, inversion plays a significant role in the process. The primary difference that may be detected between this duet and the others is that it takes advantage of the possibilities of writing for a two-manual instrument more than ever before.²²

Next, we have two variations of a highly succinct nature that share the quality of having relatively short bars; one is in 2/2 meter and the other in 3/8. This is the only instance in the *Goldberg Variations* where two "short-bar" variations are placed side by side. A canon at the sixth follows Variation seventeen, and it differs considerably from its canonic predecessor (No. 15). The return to the major mode along with a faster tempo creates a more concise and driven movement.²³ The problems with constant voice crossings in the earlier canons are no longer an issue. Bach is free from relying on inverted subject statements to create the potential for further development. The nineteenth variation creates its own "succinctness" through the employment of only one bass note per bar but eludes easy formal categorization. Whether it is a minuet (a kind of three-voice version of the minuet-type found in the Partita in B flat)

¹⁹ Ibid., 31.

²⁰ Williams, Bach: *The Goldberg Variations*, 69.

²¹ Goldberg with Lee Ed., *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 31.

²² Ibid., 32.

²³ Williams, Bach: *The Goldberg Variations*, 74.

or something much more light-hearted is a matter for interpretation and debate.²⁴

The sheer virtuosity of the crossed-hands variations in the Goldberg set becomes even more unleashed in Variation 20, and one is reminded of the keyboard sonatas of Domenico Scarlatti (1685-1757) or George Frederick Handel's free preludes from early in his career. Structurally, two particular points concern the symmetry and the bass theme. First, the similarity between the two halves of the variation is marked at both the beginning and end of each. This gives balance and unity even though the second half has new virtuoso material and alters some of that from the first half. Secondly, the theme is still noticeable in the first notes of each bar, and thus preserves some sense of the paraphrase technique common to compositions of Bach's day.²⁵

Vaguely reminiscent of chorale-settings is the next movement, the canon at the seventh, for the prevailing eighth-note patterns in canonic lines, and their habit of passing into the bass to create a unified sound. Variation 21 may present a welcome calm to the virtuosity of its predecessor but contains considerable musical depth. It is the second of only three variations in the entire Goldberg set to be written in the minor mode. One can easily respond to the beauty of this variation and barely notice that in fact the bass theme is not only there in every half bar but somehow still manages to be largely in the major mode.²⁶

Variation twenty-two is a gavotte that bears similarities to Variation 4 in that it is four voiced and densely imitative; parts of its subject are heard in one or another voice in every bar. As such, it is in principle not far from the motet conception of several of the chorale settings in Bach's *Clavierübung III*, where a *cantus firmus* is part of the texture.²⁷

The twenty-third variation contains the greatest similarity to Ludwig van Beethoven's *Diabelli Variations* (Op. 120), one of the few sets of keyboard variations written after the Baroque Era that comes close to rivaling the Goldberg set. Here we have extraordinary effects being created with music's basic elements, particularly simple scales - lines tumbling over each other, answering or running against each other. While the four bar phrase pattern remains intact, the rest is held together by being derived almost entirely from major scales.²⁸

In variation twenty-four we finally reach the canon at the octave: first, a canonic line is answered at the octave below, and then a second canonic line is answered at the octave above. Naturally, as one might expect, this order is reversed in the second half. The 9/8 meter, vaguely pastoral in quality, produces a long line for a canon, but in some ways makes the

²⁴ Ibid., 75.

²⁵ Ibid., 76.

²⁶ Ibid., 77-78.

²⁷ Anna Harwell Celenza, *Bach's Goldberg Variations* (Watertown, MA: Charlesbridge, 2005), 20-21.

²⁸ Goldberg with Lee Ed. *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 35.

composition more manageable. The canon is also more immediately audible than in some of the other canonic variations.²⁹

Next, we have what many consider to be the slowest and most intense movement in the *Goldberg Variations*, as well as the third and final variation in the minor mode. The Goldberg bass is now more chromatic in nature but still within the 'rule' of one chord or note per bar. Bach's unusual (for the time) cadences and key changes (coupled with the presentation of two opening themes and a conclusion that returns to the first theme) leave us with a movement approaching classical Sonata form. More than any other Goldberg variation, number twenty-five raises the question of whether music expresses and arouses emotion or is really doing something else.³⁰

The exuberance of Variation twenty-six cannot be missed, nor can the simple left-hand chords, either at the beginning or when they move to the right hand. For hidden in this music is a sarabande, with indeed a simpler exposition of the harmonies of the Goldberg bass-theme than the Aria itself, and not very different from some of Handel's sarabandes. However, Bach added grace-notes and appoggiaturas to some of the chords in his manuscript copy, confirming the notion that what we have here is an elegant French sarabande.³¹

In Variation twenty-seven, the canon at the ninth uses two manuals in order to distinguish the two canonic lines, for the hands do not cross. There are some one-bar phrases, but they always pass to a longer one, as if making a structural crescendo. The subjects are mostly smooth and conjunct, their countersubjects detached and leaping, and therefore somewhat resemble those of the first two canons. The second half of Variation twenty-seven freely inverts some of the material from the first.³²

Difficult hand-crossing appears once again in Variation twenty-eight, and the use of two manuals is advisable for harpsichordists. This variation takes on the quality of a two-part toccata but could also easily serve as an etude for trills. Needless to say, technical facility is required in abundance, but despite the technical demands, there is a very calculating use of three distinct ideas in this variation: the trill, the left-hand eighth-notes, and the invertible sixteenth-notes. The motive in sixteenth-notes is heard in recurrent passages around the middle and ends of each half and could easily have appeared in any of the two-manual variations. They also follow the bass theme fairly literally.³³

Uniquely for the *Goldberg Variations*, Variation twenty-nine is in much the same tempo

²⁹ Ibid., 36.

³⁰ Williams, Bach: *The Goldberg Variations*, 76.

³¹ Goldberg with Lee Ed. *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 37.

³² Celenza, Bach's *Goldberg Variations*, 25.

³³ Williams, Bach: *The Goldberg Variations*, 76-77.

and character as its predecessor. Up to this point, Bach has preferred to give us a rather noticeable shift in overall character between variations. Clearly, he has placed two highly climactic variations together so as to prepare the listener for the finale. Slow multiple trills along with alternating triplets and chords serve to lead us into the final variation.³⁴

In performance, the festive character of the last variation is obvious. Even the little upbeat announces that something different is happening here, but the attentive listener will also find the Goldberg bass at its usual place in each bar. Nevertheless, Variation 30 is highly unpredictable in that it uses other melodies - for example, in measure fourteen an unusual moment arises because the alto line is quoting a popular song of the day. This is because number thirty is not a canon, as we would expect, but a medley or 'Quodlibet' ('what you please') and as such alludes to a tradition of making music by singing either successively or simultaneously various popular tunes, often with racy texts. Due to the fact that Bach was using mere incipits of songs that took different forms, the tunes employed in the Quodlibet have not all been conclusively identified by current research into German popular song. It should also be noted that in the creation of Variation 30, Bach drew on compositional precedents established by the famous Italian virtuoso organist, Girolamo Frescobaldi (1583-1643) in his *Fiori Musicali* (1635).³⁵

The repeat of the 'Aria' is not written out, and instead, the performer is simply given the direction, *aria da capo*. Several numerological reasons have been suggested to explain why Bach would not write out the 'Aria' once again after having gone through so many variations, but, as mentioned above, those theories are beyond the range of this study.

Conclusion

As we have learned from the chart presented above and a brief survey of each movement, the variations, when viewed as separate compositions, are markedly different from one another and, perhaps with the exception of the last five, not as continuous or inevitable as one might like to think. The overall plan, which can be more complex than perhaps the composer intended, leaves room for speculation as to what levels of pattern Bach wittingly and/or unwittingly created. Thus, one can speak of two primary ways of looking at the *Goldberg Variations*, a perceptual and a conceptual.³⁶

Perceptually, the movements proceed by way of significant contrast and change, reach several semi-climactic moments on the way (particularly in the "French Overture" variation,

³⁴ Ibid., 77.

³⁵ Ibid., 77.

³⁶ Celenza, Bach's *Goldberg Variations*, 29.

number sixteen), sink into the sadness of the long G minor variation (number twenty-five), build to a crescendo of excitement towards the end, achieve a festive character in variation twenty-nine and a chorus of songs in variation 30, and then fade away as the aria returns and eventually closes the work. In other words, a clear sense of impetus and tension is achieved through the music's passage in time, followed by a natural conclusion and return to the beginning.³⁷

Conceptually, however, there is a more static pattern that is not easily perceptible, since it is always there on the paper to be grasped. The thirty variations are made up of ten groups of three, in which a dance or clear genre-piece (such as a fughetta) is followed by an arabesque-like movement (technically brilliant, usually requiring crossed hands on two manuals) followed by a canon (created at successively rising intervals). The thirty variations are built up from a series of these threes which do not, by themselves, either create or relieve tension but only work as a cohesive unit when placed beside each other. Additionally, an overall shape of Aria (variations one to fifteen) - Overture (variation sixteen) - Aria (variations seventeen to thirty) has also been suggested, which approaches something of an arch-form with the 'biggest' movement in the middle. A view such as this, however, involves a reworking of the concept that there should be a musical crescendo to the finale.³⁸

In the *Goldberg Variations* Bach used many of the keyboard forms and genres of his predecessors and brought them to their highest level of compositional realization and contrapuntal development within the framework of a large-scale set of variations. He took these wonderfully crafted, yet concisely stated works and arranged them in a manner that provides a certain degree of flexibility but never deviates from a set and established pattern. All the while, an essential harmonic structure and fundamental bass line miraculously maintains its presence in virtually every bar of every movement. After all of the analysis is over, however, it is perhaps the persistent yet never intrusive sense of line flawlessly spinning its way throughout the *Goldberg Variations* that holds the attention of performers and audiences long after the composer and the patrons for whom it was intended have passed from this world.

³⁷ Ibid., 29-30.

³⁸ Goldberg with Lee Ed. *The Goldberg Variations Reader: A Performers' Guide and Anthology of Critical Appreciation*, 44.

Bibliography

Boyd, Malcolm. *Bach*. New York: Vintage Books, 1983.

Celenza, Anna Harwell. *Bach's Goldberg Variations*. Watertown, MA: Charlesbridge, 2005.

Goldberg, Laurette with Jonathan Rhodes Lee Ed. *The Goldberg Variations Reader: A Performers ' Guide and Anthology of Critical Appreciation*. Berkeley, California: Music Sources, Center for Historically Informed Performances, Inc., 2002.

Schweitzer, Albert. Trans. Ernest Newman. *JS. Bach*. New York: Dover Publications, Inc., 1966.

Wolff, Christoph. *Johann Sebastian Bach: The Learned Musician*. New York: W.W. Norton & Company, 2000.

Williams, Peter. *Bach: The Goldberg Variations*. Cambridge University Press, 2001.