INVESTIGATING THE PHILOSOPHY BEHIND *THE ART OF THE FUGUE* AND ITS SUBJECT

A Historically Informed Analysis of J. S. Bach's Music and its Scope

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I, the undersigned, **Balint Nikovitz**, candidate for the MA degree in Philosophy, declare herewith that the present thesis titled *Investigating the Philosophy Behind The Art of the Fugue and its Subject. A Historically Informed Analysis of J. S. Bach's Music and its Scope* is exclusively my own work, based on my research and only such external information as properly credited in notes and bibliography. I declare that no unidentified and illegitimate use was made of the work of others, and no part of the thesis infringes on any person's or institution's copyright.

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Vienna, 01 June 2025

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ABSTRACT

The following is a historically informed analysis of Johann Sebastian Bach's *The Art of the Fugue* (*Die Kunst der Fuge*, BWV 1080) from a philosophical perspective and an attempt to establish direct and indirect philosophical influences as inspiration behind the collection. The thesis is built up of four chapters. In Chapter I, I provide a theoretical analysis based on the treatises on music which were known by J.S. Bach. In Chapter II, I connect these treatises to Lutheran philosophy and what is labelled as "mechanistic philosophy". In Chapter III, I focus on *The Art of the Fugue* and pinpoint the theoretical background (musical as well as philosophical). In Chapter IV, I provide possible counterarguments to my thesis and then conclude the text with a positive answer to the question 'does *The Art of the Fugue* have direct and indirect philosophical influences?'.

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I would like to express my gratitude to my supervisor, Professor Hanoch Ben Yami, for his professional as well as personal guidance.

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Introduction and outline

Over the years there have been many speculations about Johann Sebastian Bach and his music. Some have claimed that his music was composed according to the rules of the Golden Section and the Fibonacci numbers. Other theorists, such as Friedrich Smend, have claimed that his music contains numerological references and was built on certain numbers which are present throughout his pieces.[1] Even one of his contemporary theorist, Lorenz Christoph Mizler, has fallen into such biased analysis by idolizing Bach as a composer and not recognizing the discrepancy between his requirement, that composers should yield to the latest taste, and Bach wholly disregarding this requirement.[2] I find these claims problematic, as the rules according to which they analyse Bach's music are arbitrary in nature. Bach had left no explicit clues regarding whether he was aware of the Fibonacci series of numbers, whether the numbers reappearing in his music are intentional or merely the result of someone with a good sense of proportion but not of deliberation or whether he wanted to convey any philosophical message. It is therefore important for me to approach the analysis of Bach's music with a certain level of scepticism. While it is true that he was a highly skilled composer and performer, had an in-depth understanding of orthodox Lutheran theology and kept a regular contact with theoreticians, such as Johann Gottfried Walther and Johann Heinrich Ernesti, his compositional technique is often raised to the level of a genius who could create works so complex that they basically have infinite layers of meaning. I am a Bach enthusiast: I have listened to and played

[1] Ruth Tatlow, "Bach's numbers" in *Bach's Numbers. Compositional Proportion and Significance*; p. 3.
[2] Laurence Dreyfus, "Bach as a Critic of Enlightenment" in *Bach and the Patterns of Invention*; p. 220.

his music for many years now and therefore a good target of such idolized thinking. I am also a philosophy student. It seems appropriate to connect the two interests and ask: what are the actual layers of meaning in J. S. Bach's music? Was Bach influenced, either directly or indirectly, by philosophical ideas of the Early Modern period? And if so, are these ideas present in his works? In the following I am going to present the theoretical environment (musical and philosophical) around Bach and place him into context. My aim here is to investigate whether Bach's music was influenced by philosophical ideas and if so then whether these are present in one of his collections, *The Art of the Fugue* (BWV 1080).

Johann Sebastian Bach was not a philosopher. He would refer to himself as a trained musician whose primary task is to compose music and also be able to perform it. The term in Bach's time used for a person such as himself was 'musicus',[i] a term that has more meaning than meets the eye. (The definitions given by Walther in his *Musikalische Lexicon* are quoted at the Endnotes section in their original German version, transcribed from fraktur typeface.) A '*musicus'* is a professional, who, through deliberation, is able to apply (or in cases purposefully omit) the rules of music theory in their own compositions, by understanding the principles that govern music. This reinforces the claims that the nature of Bach's compositions, as well as the names he had given to them carry significant messages. Furthermore, his concept of composition had a single goal, to praise God. The fact that he was not a philosopher, however, does not mean that he was unaware of philosophy: his studies involved theology, rhetorics, logic and philosophy.[3] While fulfilling the Capellmeister position in Leipzig (1723 – 1750), his duties included teaching the small catechism of Luther on Sundays at the *Thomasschule*.[4] His close connection with the professors working at the University of Leipzig within the departments of Philosophy, Law and Theology also presents a picture of someone who is surrounded by an intellectually vibrant sphere. As a composer primarily of church music, he was held on the same status as a preacher. He also had to apply rhetorical tools in his music, as it was seen as musical homiletics.[5]

[3] Markus Rathey, "Schools" in *The Routledge Research Companion to Johann Sebastian Bach*; p. 133.
[4] Robin A. Leaver, "Luther's Theology of Music in Later Lutheranism" in *Luther's Liturgical Music*; p. 289.
[5] *Ibid*.; p. 289.

Another thing Bach was not is a theoretician, at least not in the usual sense. Eighteenth century composers who were also music theorists, such as Telemann, Mattheson and Fux published treatises in which they describe and then demonstrate their methodologies. Bach had never published a theoretical treatise. He emphasized the importance of the practical side of musicking: C. P. E. Bach recollects in a letter to Forkel how his father's teaching style always oriented the students towards the practical side of music making. In the same letter he writes that the "departed [namely, J. S. Bach], like myself or any true musician, was no lover of dry, mathematical stuff.'[6] What these hint at is that Bach emphasized practical music making over the "dry, mathematical" theoretical approach both in composing and teaching. This further explains why he did not write treatises – or even articles – dedicated to music theory, or at least not in German. What he did was publish collections of music which served as direct demonstrations of principles governing his compositional technique. These collections serve as the treatises: when Bach was elected to be the member of Mizler's *Correspondierende Societät der musicalischen Wissenschaften* in 1747, his task was to submit a thesis annually which then was published by the Society.[7] Instead of treatises, he submitted musical compositions. Furthermore, Bach seems to have deliberate plans and governing ideas behind his collections. The *Clavier-Übung* series were for "spiritual refreshment"[8] and ultimately the ethical betterment of the student. The *Wohltempiertes Klavier I & II* (BWV 846-869 and BWV 870-893, respectively) demonstrated tonal harmony: the collection explores the genres of preludes and fugues, written in all the 24 different keys, pointing out the qualities of the different tonalities.[9] *Die Kunst der Fuge* or *The Art of the Fugue* (BWV 1080; below I continue to use the English name of the collection. I chose the translation '*The Art of the Fugue*' instead of '*The Art of Fugu*e' for it refers to a specific theme which is then developed throughout the collection)

[6] "*New Bach Reader* (abbreviated as NBR in the following); §395 (p. 400).
[7] Pamela M. Kamatani, "Lorenz Christoph Mizler, the *Musikalische Bibliothek*, and the *Correspondierende Societät der musicalischen Wissenschaften*" in S*cience, Metaphysics and the Late Works of Johann Sebastian Bach*; p. 68.
[8] Ruth Tatlow, "Unity, proportions and universal Harmony" in *Bach's Numbers. Compositional Proportion and Significance*; p. 97.
[9] David Ledbetter, "Fugues" in *Bach's Well-tempered Clavier*; p. 97.

was composed to demonstrate modal harmony: the collection remains within one tonality (D minor) and explores the possibilities through demonstrating the different methods (or modes) of a simple building-block, namely, the recurring subject of the fugues.

In the following I attempt to point out that, despite C. P. E. Bach's testimony regarding his father's approach to music, *The Art of the Fugue* was more than just a collection of fugues, written for purely educational purposes: I start with the hypothesis that there is a philosophical statement behind them and this statement's influence can be traced down by analysing both the collection itself and the environment of Bach. What I am to prove is that Bach's *The Art of the Fugue* has another layer of meaning which is possible to unearth by closely examining works of philosophy and music theory, providing direct connections between Bach and the philosophical ideas of Lutheran circles in the early and middle 18th century. What it also provides is Bach's standpoint, an aversion towards Enlightenment and his subscription to Rationalism. The scope of this thesis is twofold. The narrow scope is to provide clarity of the symbolism when interpreting Bach and the depths of meaning his music could reach. The more ambitious scope is hopefully to contribute to the Bach-scholarship with meaningful data, elaborating further on the cultural relevance and place of his music.

The thesis is built up of four chapters. In Chapter I, I summarize the principles of fugal writing in the late 17th and early 18th centuries and how it was defined by the theoreticians of the era. This includes Johann Jospeh Fux's *Gradus ad Parnassum*, Wilhelm Marpurg's *Abhandlung von der Fuge*, Gioseffo Zarlino's *Le Istitutioni Harmoniche* (Part III), and Part I of Friedrich Niedt's *Musikalische Handleitung* (hereinafter referred to as *Musical Guide*). I chose these texts based on contemporary analysis which showed that they were either taken as fundamental for composing music in the German speaking area of Europe during the centuries mentioned above or were proven to be read by Johann Sebastian Bach. By the end of this part my plan is to identify five essential key features (or keywords) that are specific to fugues: invention, identity, imitation, variation and harmony. These are going to serve as tools while analysing *The Art of the Fugue* in Part III.

In Chapter II, I connect these theoretical works to the leading philosophical ideas of Lutheranism. I begin with Martin Luther and how he approached music. As a skilled and learned musician, he had a firm grasp of music theory which he incorporated into his theology. In his *Table Talk* he stated that "music is next to theology".[10] From Luther I pass on to St. Augustine, as the Lutheran understanding of music was largely based on the Neo-Platonic-Augustinian approach: musical sounds are composed of eternal numerical ratios and the aim of a musician is to create harmony, by utilizing consonances and dissonances.[11] Since these ratios are eternal, their origin must be so as well, which, for Augustine, is God. The purpose of these eternal ratios is, for Luther as well as for Augustine, to praise God by mirroring the divine Harmony, capitalized in order to distinguish from musical harmony, through imitation (*mimesis*). In that part I also present the Lutheran philosophy in the late 17th and early 18th centuries and their relation to music theory. I begin that section of my thesis with a more general overview and then specify the different claims and point them to thinkers who contributed to shaping the environment in Leipzig, where Johann Sebastian Bach lived and worked between 1723 and 1750. These theoreticians are Andreas Werckmeister, Leibniz and Christian Wolff. Bach seemed to have been what Laurence Dreyfus called a "critic of Enlightenment".[12] For this reason I chose Lutheran thinkers who subscribed to Rationalism.

Chapter III is an analysis of *The Art of the Fugue*, with special attention to its main subject. What I aim to do in this chapter is to first describe what is apparent from the scores I used for the analysis. These scores are the holograph manuscript with its supplement (*Mus. ms. Bach P 200* and *200/1*, respectively), the 1751 first publication (*Mus. O. 17364*) and the Urtext edition.[13] The theoretical texts on music include Chapter 51 of Part III in Gioseffo Zarlino's *Le Istitutioni Harmoniche*, Johann Joseph Fux's *Gradus ad Parnassum*, the entry "Fuge oder Fughe" in Johann Gottfried Walther's *Musikalische Lexicon*, and Chapters 20 – 23 in Part III

[10] WA TR 968 in Robin A Leaver, "Luther's Theological Understanding of Music" in *Luther's Liturgical Music. Principles and Implications*; p. 65.
[11] Augustine, *On Music* (*De Musica)*, I.12, §22 (p. 199).
[12] Laurence Dreyfus, "Bach as a Critic of Enlightenment" in *Bach and the Patterns f Invention*; pp. 219 – 244.
[13] *Neue Bach-Ausgabe, Serie VIII, Band 2.1*, pp. 1-198.

of Johann Mattheson's *Der vollkommene Capellmeister*. I opted to include Mattheson's book despite the lack of proof that Bach ever read it. Another possible concern with this source is that it presents an aesthetic model (gallant style) which was in high fashion during the first half of the 18th century, while Bach did not subscribe to such model. What this book is useful for, however, is that it provides a detailed overview of different genres, such as the fugue, and how it was employed throughout the history of Western music. While this source needs to be treated carefully for the aforementioned reasons, I take it to be an excellent source for describing and explaining fugues and fugal compositions. Throughout this chapter I rely on David Ledbetter's analysis of fugues in his book titled *Bach's Well-tempered Clavier*, as well as Felix Salzer's and Carl Schachter's book, *Counterpoint in Composition*. My descriptive analysis consists of looking at the collection's key signature, its meter, the instrumentation (or lack thereof) and the main theme as a constantly recurring element of the collection. After that I am going to analyse the collection according to the previously mentioned key concepts, specific and necessary in fugal writing: invention, identity, imitation, variation, harmony. By the end of Part III, I aim to prove that Bach was directly and indirectly influenced by the philosophical ideas of Rationalism and that these are present in *The Art of the Fugue*.

In Chapter IV, I present two possible counterarguments to my thesis. The first one is based on the quote from Carl Philipp Emanuel Bach mentioned above. I take his claim of his father's dislike towards music as "mathematical stuff" seriously for several reasons. First, he was a prominent member of the Bach family. His musical abilities are beyond question and probably he is the second most famous member of the Bachs, after his father, Johann Sebastian. His insight into musical concepts is therefore valuable. The second is his close connection to his father's work, *The Art of the Fugue*. He oversaw the compositional process, took part in the organization of the collection and then published it in 1751. Someone as closely related to the work I analyse as C. P. E. Bach is an invaluable source to explore the presence or absence of certain concepts in the collection. The second counterargument stems from an ongoing debate about the nature of instrumental music. J. S. Bach's instrumental works are often seen as 'pure

music', works whose concepts do not reach beyond music and do not convey extramusical meaning (I take this term to be synonymous with 'absolute music').[14] In that section I am going to focus on Peter Kivy's claim presented in the chapters "It's Only Music" and "Surface and Depth" in his book called *Music Alone*. I briefly describe his point, namely, that musical understanding does not necessarily require musical knowledge and attempt to provide an argument rejecting his claim and showing that music taken to be representational is not "the airy-fairy land of the Romantic imagination" and certainly does not lead to "madness".[15] Rejecting the claim that *The Art of the Fugue* belongs to the category of 'pure music' would result in the acceptability of claims on what music is 'about', rejecting Kivy's argument that such claims are "unintelligible enough to sound slightly mysterious and slightly "musical"".[16] After defending my thesis from these arguments, I conclude that Bach was indeed affected directly and indirectly by philosophical concepts, and that he expressed them in *The Art of the Fugue*, through musical symbolism.[17]

Throughout the thesis, as advised by Ruth Tatlow,[18] I use three lexicons which form the 'foundation' for understanding certain concepts which had specific meaning in the early 18th century. One of them is Johann Gottfried Walther's *Musicalisches Lexicon oder Musicalische Bibliothec* (1732), a collection of musical concepts as well as names of people. Bach owned a copy of this lexicon and was its sales agent in Leipzig. The other lexicon is Johann Heinrich Zedler's *Grosses Universal-Lexicon* (1731 – 1754); I use this work to approach concepts which are not solely musical, such as Harmony and identity, for these are present in philosophy as well and the book serves as a guide to pinpoint their origin. The third lexicon is the *Teutsch-*

[14] Roger Scruton, "Absolute Music" in *The New Grove Dictionary of Music and Musicians. Second Edition. Volume 1, A to Aristotle*; pp. 36 – 37.
[15] Peter Kivy, "It's Only Music" in *Music Alone*; p. 94.
[16] *Ibid*.; p. 94.
[17] For detailed description of musical symbolism in Bach's music see: Ruth Tatlow, "Bach's numbers" in *Bach's Numbers. Compositional Proportion and Significance*; pp. 7 – 11 and Laurence Dreyfus, "Matters of Kind" in *Bach and the Patterns of Invention*; p, 164.
[18] Tatlow, "Bach's numbers" in *Bach's Numbers; Compositional Proportion and Significance*; p. 15

Englisches Lexicon (1716) written by Thomas Fritsch. I find this work valuable for translating the different keywords from German to English while maintaining the historical accuracy.

Chapter I: On fugues

I.1. The literature on fugues during the late 17th and early 18th centuries

In this section I summarize the principles to fugal writing. I begin by presenting a more general approach in the late 17th and early 18th centuries. I begin with a chronological description, going from Zarlino's *Le Istitutioni Harmoniche* (1558) to Marpurg' *Abhandlung von der Fuge* (1753), and then specify the key concepts which are present in each theory. Because these concepts are present in all the theorists' writings, I treat them as universal constants. While *The Art of the Fugue* is not mentioned here, the principles and rules mentioned here are applied in its composition. The explicit analysis is going to take place in Part III of my thesis (Part III.1. Analysing the musical part of *The Art of the Fugue*). As guides I am going to use Matthew Dirst's book called *Bach's Art of Fugue and Musical Offering*, David Ledbetter's description of fugues in his book, *Bach's Well-tempered Clavier,* and Alfred Mann's *The Study of Fugue*. It is important to note that the following analysis is specific to *The Art of the Fugue*. While it contains material that is useful in a broader sense (such as the definition of fugues, including canons which I take to be strict fugues or *fuga totalis*), the keywords leading this section are case-specific.

The reason for choosing these authors and works is due to their relevance in Bach's life, as well as how they were seen by the musicians of the 18th century around Bach. Zarlino's rules and principles established in *Le Istitutioni Harmoniche* had long been accepted as the basis of contrapuntal writing.[ii] The treatises and textbooks used for teaching (by Bach and his contemporaries) based their description on Zarlino's claims. There is evidence that Bach used Part I (1700/10) of Niedt's *Musical Guide* while teaching in Leipzig and therefore it is useful

when describing principles which guide contrapuntal as well as fugal writing.[19] While there is no evidence that Bach owned or used them, I include sections from Part II (1721) and Part III (1717) as well for they convey the same principle according to which Part I was written. The next work is Johann Joseph Fux's *Gradus ad Parnassum*. It is known that Bach owned its Latin (1725) and German (1742) versions and used the latter to teach from.[20] While Marpurg published his *Abhandlung von der Fuge* in 1753, and therefore Bach could not read it in its entirety, he visited the composer in Leipzig, between 1747 and 1749 in order to discuss fugal composition.[21] For me the importance of the encounter or encounters was due to the fact that both men were occupied with major fugal works: Bach with *The Art of the Fugue* and Marpurg with the *Abhandlung von der Fuge*. Marpurg's visit to Leipzig as well as the topic of discussion suggests that the *Abhandlung von der Fuge* was inspired by the compositional techniques employed by Bach in his fugal writings.

Counterpoint was seen by Zarlino as the fundamental principle according to which music should be composed. In Part III of *Le Istitutioni Harmoniche* Zarlino requires compositions to be built primarily by consonances. Dissonances are used to introduce tension and when resolved, the consonance following them pleases the listener. Both elements were seen as necessary constituents of musical harmony, which resulted from the tension produced by dissonances and the release produced by consonances.[22] In Part III of the treatise Zarlino provides the reader with technical and theoretical advice on how to compose according to the rules of counterpoint. It is Chapter 51, "Fugues or Consequences", where he states the following: "If we follow the rules given up to now […] our harmonies will be good and pleasant. Yet there will be lacking in them a certain beauty, polish and elegance unless they contain a

[19] Pamela L. Poulin and Irmgard C. Taylor, "Introduction to the Translation" in F. E. Niedt's *The Musical Guide*; p. xii.
[20] Robin A. Leaver, "Life and Works" in *The Routledge Research Companion to Johann Sebastian Bach*; p. 506 and p. 532.
[21] Christoph Wolff, "Contemplating Past, Present and Future" in *Johann Sebastian Bach the Learned Musician* (abbreviated as *BLM* in the following); p. 422.
[22] Zarlino, Chapter 27; p. 53.

particular procedure."[23] That musical procedure being the fugue. Harmony is therefore an element of music, at least in Zarlino's reading, that cannot be omitted, regardless whether the piece is charming or not.

Zarlino uses the terms '*fuga'* and '*consequenza'* interchangeably.[24] He begins with a rather broad definition of what fugues are: "a certain repetition of some notes or of an entire melody contained in one part [or voice] by another part, after an interval of time."[25] This repetition can occur in unison with the original melody or in a given interval. Furthermore, the repetition can apply to the entire melody or just a part of it, after which the other voice is "free to proceed independently."[26] The definitive element for Zarlino is found in relation of intervals: if they remain *identical* in the imitating voice, the piece is a fugue. If the intervals differ, showing only similarity in their shape to the original subject presented, then *imitation* occurs.[27]

Niedt discusses fugues in Chapter X of Part I in the *Musical Guide*. Similarly to Zarlino, he is brief and concise, emphasizing the practical elements of how to compose fugues when realizing thoroughbass.[28] He states that fugues consist of a minimum of two voices (and no maximum is given).[29] The only clue he gives to the readers regarding the realization of fugues is a two-part fugue example on pp. 48-49. This aligns with Zarlino's definition: a melody is introduced which is then repeated and also imitated on a different voice. The addition compared to Zarlino's definition in Niedt's example is *variation*: in measure 2 and in measure 17 the alto voice imitates the original subject's rhythm but the melodic line changes. While direct evidence shows only that Bach used Part I of the *Musikalische Handleitung*, it is not unlikely that he was aware of the other two parts. Their importance comes in an implied sense: if Bach used Part I

[23] Zarlino; p. 126.
[24] Gioseffo Zarlino, "Chapter 51, Fugues or Consequences" in *The Art of Counterpoint: Part Three of Le Istitutioni Harmoniche*; p. 126.
[25] *Ibid*.
[26] Zarlino; p. 127.
[27] Zarlino, "Chapter 52, Imitations and What They Are" in *The Art of Counterpoint: Part Three of Le Istitutioni Harmoniche*; p. 135.
[28] "The art of composing, usually extemporaneously, a harmonic progression upon a given bass melody to provide the harmonic organization for a piece [...]." (Joseph P. Swain, "Thoroughbass" *in Historical Dictionary of Baroque Music* (p. 281).)
[29] Niedt, *Musical Guide*, Part I; p. 48.

as material for his students, it is likely that Part II and III were also known by him. Niedt's principles remain the same throughout the parts of the book and therefore their inclusion seems justified. He starts with fundamental principles and guiding through the reader to the more complex, multi-layered contrapuntal writing (and here I find it important to point out that *The Art of the Fugue* follows the same principle), it is likely that Bach would agree with most of Niedt's claims. With that being said, I find it important to remain careful when examining the rest of the parts due to the lack of direct evidence that Bach used them for teaching.

Variation as necessary for good music is introduced in Chapter I of Part II:it is a generally required element of any good piece of music. (Here Niedt goes further and claims that this is a generally required element of life itself.)[30] In the case of free fugal writing variation is given: the first voice introduces a subject which is then imitated by another, showing similarity but starting from another note, variation is achieved. In the case of canons or strict fugues this is trickier to achieve. Niedt discusses canons separately in Part III. Canons were often notated on a single staff line. Their execution (or solution) often relied on the ingenuity of the performer who had to employ traditionally known techniques on how to perform canons. One of the technique is performing the canon's subject in an inverted form (known as *fuga totalis contraria*, not discussed by Niedt) or in reverse (*fuga totalis canrizans* or crab canon)[31] set against the subject in its original form. It results in a total imitation, adhering to the strict rule of canons while introducing variation without altering the melody in a radical manner. While Niedt does not list all the techniques one may employ when solving canons, this knowledge was shared by the skilled dilettantes as well as the learned musicians.[32]

In the literature discussed so far, imitation of a voice is not sufficient for calling the piece a fugue. It is Fux who defined fugues in an elaborate manner in his *Gradus ad Parnassum*: fugues are derived from imitation and arise "when a succession of notes in one part is taken

[30] Niedt, *Musical Guide*, Part II.1; p. 73.
[31] Niedt, *Musical Guide*, Part III.2; p. 255.
[32] Matthew Dirst, "Musical Gaming" in *Bach's Art of Fugue and Musical Offering*; p. 87.

over in another part, with due regard for the mode, and especially for the position of whole- and half-tone steps."[33] The imitation therefore has to happen within the *same* scale compared to the original subject or melody in order to maintain the tonality. The imitation occurring in *The Art of the Fugue* theme (discussed in detail in Part III.2. *III.2. The Art of the Fugue* theme and its variations: *Contrapunctus I* as the provider of topic) aligns with these restrictions: the theme starts with a perfect fifth leap while the second voice, beginning on the fifth degree of the tonality, starts with a perfect fourth leap, keeping the melodic relationship between the two voices within the same octave. It is in Fux's treatise where mathematical relations between notes in fugal writing become explicit. The relation of notes is based on their dissonance and perfect or imperfect consonance. How this materializes in *The Art of the Fugue's* theme and the collection, as a whole, will be discussed in detail in Part III.

Marpurg in the preface to his *Abhandlung von der Fuge* introduces a fourth element fugues strive for: restoring "the honor of *Harmony*" (my italic).[34] Fugues are therefore means to an end, to restate not only musical harmony but Harmony in an absolute sense as well. In Baroque Lutheranism, music was seen as a gift from God, with which God's glory can be praised. For this reason, it had a twofold role: first, it served as an ethical guide. By playing and listening to appropriately written music (meaning that it was composed for the praise of God and according to the rules of how to write such music) the audience will be bettered by contemplating on God. The other role it had was to marvel on the Universal Harmony music is able to *reflect* by adhering to eternal truths, based in mathematical ratios. Since fugues are one of the strictest genres to compose music in, the content is carefully selected and organized (one might even say 'engineered') in such a way that the numerical ratios gain significance. And by doing so, the composer adheres to universal rules set by God when creating the World. While this is not stated explicitly in the texts focusing on music, the driving force behind composing

[33] Johann Joseph Fux, "Fugues in General" in Alfred Mann's *The Study of Fugue*; p. 80.
[34] Alfred Mann, "Marpurg as Interpreter of Bach" in *The Study of Fugue*; p. 140.

the best music possible is the establishment of Harmony in an absolute sense through harmony in a musical sense.

David Ledbetter points out that in Baroque musical thinking the selection of a subject for a fugue was treated as selecting a topic for discussion.[35] He quotes Johann Gottfried Walther's definition in which the same terminology is used as in rhetorics. The reason behind using such terminology was due to the role of music in the Lutheran tradition. Music had to be composed for the praise of God, and as such, the composer was seen as an orator, guiding the audience towards God. This leads to the fifth element, the *inventio*: "[Invention is a] metaphor for the idea behind a piece, a musical subject whose discovery precedes full-scale composition."[36] However, the term expresses more than just a concept in the background of a musical piece. For it to be an invention it has to be realized and developed in the piece (Dreyfus quotes Mattheson, who, in his *Der vollkommene Capellmeister*, calls this "*locus exemplorum*"; a place where a composer's ability to execute the task has to be established, based on the examples set by previous composers).[37] A fugal theme is therefore an invention if it functions as a "mechanism that triggers further elaborative thought from which a whole piece of music is shaped."[38] In other words, fugues are mechanistic devices: the chosen subject entails the compositional possibilities which then produce an interlocking mechanism, similar to a delicate machinery, whose parts are interrelated and their movements trigger the motion of another.

I chose identity as the fifth key element. In all the literature concerning fugues the pieces are defined by the subject introduced at the very beginning. As stated above, it is like choosing or inventing a topic for discussion. It is also a recurring element, either in its original, imitated or varied form, but in all cases, it is a recognizable element, specific to a piece or pieces. In the case of *The Art of the Fugue*, the theme reappears in all the movements as a unifying component, providing the identity of the collection. In chapter four of his book, *Bach's Well-tempered*

[35] David Ledbetter, "Fugues" in *Bach's Well-tempered Clavier*; p. 73.
[36] Laurence Dreyfus, "What is an Invention?" in *Bach' and the Patterns of Invention*: p. 2.
[37] Johann Mattheson, *Der vollkommene Capellmeister*, Part II, Ch.4, § 81 (p. 298) in Laurence Dreyfus, "What is an Invention"; p. 2.
[38] *Ibid*.; p.2

Clavier, Ledbetter points out that the term 'fugue' can refer to the genre, the subject and the counterpoint set against it, the entire piece or only the subject.[39] This provides another perspective to the title of the collection: *The Art of the Fugue* thus refers not only to the genre in which the pieces of the collection are written, but also to the fact that they are indeed devices for the same subject.

I.2. Five necessary and jointly sufficient ingredients of *The Art of the Fugue*

I collected five keywords which characterize fugal writing in a specific case (albeit not necessarily limited to it), namely, invention, identity, imitation, variation, harmony. *Invention* is for marking the topic, *identity* provides a unifying element to which the rest of the keywords align to. *Imitation*, while not specific to fugues but is an essential element, provides the necessary variation required by theorists. *Variation* also overlaps with the variability of a musical piece but in a looser way and allows musical elements to imitate the original theme while introducing variety in the musical piece. I chose *harmony* as my fourth keyword as, according to the Lutheran understanding of music discussed below, music must express the perfect and harmonious way God had created the world and to align to the rules God assigned to Nature while creating the world. *Identity* is provided by the theme, the genre and the contrapuntal logic according to which the collection was composed. I take these five keywords as necessary and jointly sufficient elements when discussing *The Art of the Fugue* as a whole or only its theme. Lacking only one of these key ingredients, the collection would be insufficient for demonstrating the standards set by the theorists. It is important to note that these key components are only jointly sufficient, for they are in support of the other.

[39] Ledbetter, "Fugues"; p. 74.

Chapter II: Philosophical analysis of musical thoughts

II.1. Luther's theology as source

Possibly the best way to understand the philosophical background around Bach and *The Art of the Fugue* is to approach it through Martin Luther: Bach was a devout Lutheran, knew Lutheran theology well,[40] and his thinking was deeply influenced and intertwined with Lutheranism. In the following I am going to describe Luther's views on music, its connection to faith, theology and philosophy, provide an outline of the foundations of Luther's views and how his ideas regarding music were present in the XVIII century. Following the more general overview I am going to specify the different claims and point them to thinkers who contributed to shaping the environment in Leipzig, where Johann Sebastian Bach lived and worked between 1723 and 1750. The main theoreticians I am going to focus on are Andreas Werckmeister and Wilhelm Gottfried Leibniz. It is important to point out that Bach did not have a personal connection with neither of them. The only texts related to philosophy which were known by Bach, and this knowledge is well documented, are the works of Andreas Werckmeister.

The premise I begin with is that music was seen as representational (this premise will be defended in Chapter 4). According to the theory of music in Protestantism, music was seen as a gift from God and therefore every (appropriately) written and played music praised God.[41] This includes secular works as well, since they also belong to the category of music. This premise is further supported by the terminologies used when music was discussed, which were often taken directly from rhetoric. Church musicians were seen as orators whose principal task was to channel the word of God to the congregation. Music was seen therefore as a carrier or

[40] *NBR*; §101 (pp. 105-106).
[41] Matthew Dirst, "Contrapuntal Pursuits" in *Bach's Art of Fugue and Musical Offering*; p. 20.

vessel of significant messages which were available to the listeners, through shared beliefs and knowledge.

These were central tenets of Protestant theology and philosophy, formed by Martin Luther and elaborated in his sermons as well as writings. As a skilled and learned musician, Luther had a firm grasp of music theory which he incorporated into his theology. In his *Table Talk* he stated that "music is next to theology".[42] Luther's theological understanding was based largely on St. Augustine's Neo-Platonic approach: musical sounds are composed of eternal numerical ratios and the aim of a musician is to create harmony, by utilizing consonances and dissonances.[43] Since these ratios are eternal, their origin must be so as well, which, for Augustine, is God. The purpose of these eternal ratios is, for Luther as well as for Augustine, to praise God by mirroring the divine Harmony through imitation (*mimesis*).

As stated, Luther regarded music "next to theology" and a gift of God to humanity. Appropriately composed and played music affects the listener's soul and intellect, resulting in "joyful disposition".[44] In Luther's reading, the primary function of music is to praise God. By doing so the listeners are moved and affected in a manner which was deemed appropriate for Luther. These claims make it clear that Luther regarded music as an ethical tool which is able to better the listeners by affecting their emotions and intellect and orient those towards devotion to God. It is not a surprise to have him claim these: Luther started off as an Augustinian monk and was aware of St. Augustine's claims on music. According to the latter, music is a tool to reach the ultimate truth, namely, God.[45] Like Plato, he also thought of music as an ethical device with the components which make up its 'body' being numerical ratios. The intellect recognizes these ratios by rational thinking and memory working together, as the idea of God and the eternal is already implanted in the mind of the listener. This idea is brought forward by the process of *anamnesis*. Because the numerical ratios which are the building blocks of music are

[42] WA TR 968 in Robin A Leaver, "Luther's Theological Understanding of Music" in *Luther's Liturgical Music. Principles and Implications*; p. 65.
[43] Augustine, *On Music*; VI.5, §9 (p. 335) and VI. 10, §§26 – 27 (pp. 351 – 354).
[44] Leaver, "Luther's Theological Understanding of Music"; p. 65.
[45] The following is a short synopsis of what is claimed by St. Augustine in Book VI of *On Music*.

eternal, the only thing that has access to them is the soul, since it is also eternal. Furthermore, the numerical ratios have a degree of perfection. Well-constructed ratios create harmony and the more harmonious a music is, the more perfect it is, participating in a divine quality. Eternity, perfection and Harmony are the divine attributes. From this it is clear why Plato, Augustine, and following them Luther as well, saw music as directly connected to God.

Luther saw music as gift from God, in which God's perfection can be praised. He also expected students to be taught music in schools, as "it makes fine, skillful [*sic*] people."[46] From this is it is clear that Luther had a primarily Augustinian and therefore Neo-Platonic concept when *approaching* music. His *understanding* of it, however, was quite different. Not only was he skilled in philosophy but he was a musician and composer himself. This allowed him to have a more personal insight than a 'mere' listener. His education and writings also show the influence of music theorists such as Boethius, Johannes de Muris and Johannes Tinctoris, whose treatises were a heavy influence on Renaissance and Baroque contrapuntal music.[47]

II.2. Lutheran philosophy in the 17th and 18th centuries

Luther's theological-musical influence had been carried through from the late-Renaissance to the late-Baroque and found its way in both philosophical as well as musical spheres. One of the most important contributors to the Lutheran philosophy of the musical harmony was Johannes Kepler. Kepler's aim was to present music as a mathematical science, based on geometry: and for numbers and their relations were seen as eternal truths, he considered them to belong to the divine and therefore proving music to have divine origins. He saw Nature as an expression of consonance created by God and music as a tool which is able to mimic such harmonies through expressing the same numerical ratios. While in the circles of philosophy the claims of Kepler were contested and ultimately overruled by Marin Mersenne's theory on harmony due to its

[46] *What Luther Says. An Anthology, Volume II*, compiled by Ewald M. Plass: § 3090 (p. 979).
[47] Leaver, "Luther's Theological Understanding of Music"; p. 66.

"higher potential for explanatory depth",[48] Kepler's mathematical understanding of the world (including music) gained popularity in the schools and universities of the German speaking countries.

Following Kepler's theory, Andreas Werckmeister was another theorist who was both influenced by and influenced the Lutheran understanding of music. Bach knew Werckmeister's works well: organ-reports show that he did his inspections according to the rules set by Werckmeister in his *Orgel-Probe*. He also had easy access to other works of Werckmeister: his cousin, Walther, was an avid collector of Werckmeister's works and provided Bach with access to his personal library.[49] Werckmeister, complying with the Lutheran tradition, approached music and its ingredients through mathematics. He claims that God designed things in an orderly manner and this order is accessible to the intellect.[50] This order is the Natural Order; the way things were intended to be in the creation. Basing his theory on Kepler's geometrical-mathematical approach, he claims that the order of things is quantifiable, manifesting in measurement and number. Musical compositions, which are built quantifiable intervals, should align with such order to demonstrate the Divine Harmony and Perfection to the audience, resulting in the praise of God's perfect creation. Werckmeister justifies his claims based on the Scripture and quoting verses where God speaks directly (*Job*, 38:4-7, *Exodus*, 25:40). [51] What the musical piece should do is to *reflect* and *imitate* these numerical relations present in nature. The imitation presented by Werckmeister is strikingly similar to how Plato describes the structure of Harmony as essentially musical in the *Timaeus*.[52] While the similarity is striking, it is important to note that there is no evidence that Bach ever read the *Timaeus* or that he was even aware of the text, and therefore the discussion further has to be approached carefully.

[48] Domenica Romagni, "Determining the Potential for Explanatory Depth: Kepler and Mersenne's Competing Theories of Musical Consonance" in *The Hard Problem of Consonance and its Influence on 17th Century Philosophy*; p. 88.
[49] Tushaar Power, "Chapter 2: External Evidence" *in J. S. Bach and the Divine Proportion*; p. 24.
[50] Andreas Werckmeister, *Musicae Mathematicae*, 12 – 13 in Tushaar Power, "Chapter 2: External Evidence"; pp. 32 – 33.
[51] *Ibid*.;; p. 36.
[52] Plato, *Timaeus*; 35a – 36c.

Another important connection between philosophy and music theory is Lorenz Christoph Mizler and the *Correspondierende Societät der musicalischen Wissenschaften*, created and led by Mizler. While earlier I pointed out that Mizler was biased towards Bach, he and the society remain an important source for how music was thought of in Bach's close environment. Bach was admitted to the society in 1747.[53] The society's goal was to investigate the connections between music and philosophy, based on the philosophy of Plato, Leibniz and Wolff.[54] So far, in the literature about Bach's life, works, and influences on him, this seems to be the closest he ever got to philosophy and its connection to music theory. In his 1738 publication, Mizler declares that members should show competency in both practical and theoretical skills regarding music (point 3), and that the members are allowed to borrow and use books from the society's library.[55] In his publication from 1746 he requires that "all members should be especially well-versed in philosophy and mathematics".[56] While the society was not maintained regularly, their meetings and publications were sparse and *ad hoc*,[57] the list of members is quite considerable. These included, among others, G. P. Telemann (1739); G. F. Händel (1745); the organist, music theorist and professor at the University of Jena, Christoph Gottlieb Schröter (1739); the cantor and music theorist Heinrich Bokemeyer (1739); and the writer, linguist and rector of "a school in Prenzlau",[58] Georg Venzky (1743).[59] The common element among the members (especially between those I mentioned above) was the conviction that contrapuntal composition is the foundation of music and its understanding as a mathematical science. The fact that Bach was admitted to the society suggests strongly that he

[53] *BLM*; p. 422.
[54] Kamatani, , "Lorenz Christoph Mizler, the *Musikalische Bibliothek*, and the *Correspondierende Societät der musicalischen Wissenschaften*" in S*cience, Metaphysics and the Late Works of Johann Sebastian Bach;* pp. 67-68 and p. 80.
[55] Lorenz Christoph Mizler, *Musikalische Bibliothek 1, no. 4, (April 1738*) pp. 74 – 76 in Kamatani, "Lorenz Christoph Mizler, the *Musikalische Bibliothek*, and the *Correspondierende Societät der musicalischen Wissenschaften*"; p. 67.
[56] *Ibid.;* p. 68.
[57] *Ibid*.; p. 69.
[58] *Ibid*, p. 80.
[59] For the full list of the members see: Kamatani, "Lorenz Christoph Mizler, the *Musikalische Bibliothek*, and the *Correspondierende Societät der musicalischen Wissenschaften*" in S*cience, Metaphysics and the Late Works of Johann Sebastian Bach;* pp. 70 – 85.

was sympathetic to its views, although the only evidence that survives is his admittance as well as his submissions for the members of the society.

The influence of the Leibnizian world view in the society can be found among those who subscribed to the philosophy of Leibniz: Mizler, a follower of Christian Wolff and Leibniz, and Venzky. Leibniz defined Harmony as "*Similarity* in *variety*, that is, *diversity* compensated by *identity*."[60] (My italics.) This reinforces how Harmony was viewed in Bach's time, according to Johann Heinrich Zedeler' *Complete Encyclopedia*: bringing different things together skilfully, resulting in unity.[iii] According to Leibniz,experiencing Harmony is to be delighted. He further stated that God, a perfectly just being, is just because God loves everyone which consists in the delight in the happiness of another.[61] This presents a world view, described as "mechanical philosophy"[62] by Antognazza, in which the attribute of God, namely, God's being perfectly harmonious, have a musical element to it. Leibniz used musical descriptions extensively when writing on the nature and attributes of God. This view was founded in Augustine's and Kepler's theories.[63] These authors wrote extensively on music and its relation to the divine: how music, "the science of mensurating well"[64] as defined by Augustine, can express grades of perfection through harmony and how this harmony can imitate divine perfection by striving to be as perfect as possible. Another striking element in Leibniz's philosophy is how he writes on dissonance and consonance. He claims that dissonance and consonance are like good deeds and vices, both contributing to Harmony:[65] one being musical and the other divine. Therefore, sins and good deeds are necessary elements of Harmony and that the tension (understood as vices and dissonances) must be released, producing consonances (and good deeds). While this work was not known to the public, the *Theodicy* (1710), parts of the *Monadology* (1714), as well as his articles from the journal *Acta Eruditorum,* were. These

[60] Leibniz, *The Confession of a Philosopher*; p. 29.
[61] *Ibid*.
[62] Maria Rosa Antognazza, "Youthful Vocations (1646-1676)" in *Leibniz. An Intellectual Biography*; p.52.
[63] *Ibid*.; p. 52.
[64] Augustine, *On Music;* I.2, §2. (p. 172).
[65] Leibniz, *The Confession of a Philosopher*; p. 65.

publications, especially the *Monadology* and the *Theodicy*, can be seen as the mature versions of the ideas present in Leibniz's early period. As presented above, the Leibnizian "mechanical philosophy", understanding of the World based on numbers and their relation to one another, had a great influence on the intellectual circles in and around Leipzig, where J. S. Bach lived between 1723 and 1750. This is further reinforced by Kamatani's claim, who pointed out that the name of the society, *Correspondierende Societät der musicalischen Wissenschaften,* often marked only as *Societät der musicalischen Wissenschaften,* closely resembles the name *Societät der Wissenschaften* (*Königlich-Preußische Akademie der Wissenschaften* to mark its full name), an academy founded in 1700 by Prince-elector of Frederick III of Brandenburg, following the advice of Leibniz.[66]

The only remaining keyword to cover is invention. Apart from being a key element of rhetoric,[iv] a tool in which one selects the topic at hand, it was seen in more general terms as an imitative, ingenious, artistic approach, one that is purely based on the creator's imagination.[v] The word 'artistic' [*Künstlichen*] had then a different meaning than the one it has today. It was associated with imitation as well as artificialness – in the sense that it was a result of a deliberative process of a person, whose aim was to create order, harmony and structure. Invention is therefore an exploratory as well as an imitative process – imitative in the sense that it bases itself on Natural order or Harmony. Looking at it from a Christian perspective, the creation of humans can also be seen as a divine inventive process, since God not only creates something new, namely, humans, but also "created man in His own image" [*ihm zum Bilde*],[67] making the act both exploratory as well as imitative at the same time. And since it is a conscious process which imitates perfection, divine invention is also an expression of Harmony. The noun '*Bild'* was associated with both the likeness of something, as well as a thing representing

[66] Kamatani points out that the name of the society closely resembles Leibniz's *Societät der Wissenschaften* (Kamatani, "Lorenz Christoph Mizler, the *Musikalische Bibliothek*, and the *Correspondierende Societät der musicalischen Wissenschaften*"*;* pp. 89-90.
[67] *Gn.* 1:27.

another through imitation.[68] Following this approach, invention being inseparably related to rhetorics as well as to creative processes, the phrase "The Word became flesh" [*Und das Wort ward Fleisch*][69] gains another meaning: it conveys the fundamentally creative effect of rhetorical devices, such as invention. For Bach, a devout Lutheran with considerable theological knowledge, the religious function of music (a rhetorical-, ethical-, as well as creative tool) made such connections quite plausible, which were then proved to him by the Scripture. It is fair to conclude that Lutheran church musicians in the early 18th century saw their own inventive process as an imitation of God's inventive process, further emphasizing their main goal: the (re)creation of Harmony and Order.

II.3. Summary: the five keywords and their place in philosophy

Invention, identity, imitation, variation, harmony; these are the five key concepts established above. The first four of these are means to an end, aiming at the closest representation of the Divine Harmony. By grasping the world through mathematical descriptions, the intellect is able to grasp the eternal forms of Nature as well as to express its ratios. And since numerical ratios were taken to be mind-independent eternal types, they must originate from another eternal type, which in this case is God. The Lutheran philosophy subscribed to the description and representation of Nature through mechanical philosophy, which rested on mathematical ratios and relations. In the following, I am to show how these ratios and relations are present in *The Art of the Fugue*, making them available for the target audience of the collection; the musically learned.

[68] Fritsch, *Lexicon*; "*Bild (das)* the figure, image, shape, likeness, effigies, representation. *Gott schuf den menschen ihm zum bilde* [*sic*], God made men after his own image and likeness […]."
[69] *Jn.* 1:14.

Chapter III: *The Art of the Fugue*

III.1. Analysing the musical part of *The Art of the Fugue*[70]

This section, Part III, is an analysis of *The Art of the Fugue*, with a special attention to its main subject, also known as *Dux:* the main theme of fugues, including canons, presented as a first subject in the fugue, which is then followed by another voice imitating the main theme, referred to as *Comes* in technical terms..[vi] While it would be exciting to analyse the entire collection, the scope of this thesis prevents me from doing so. I hope to attempt to tackle this challenge later, during my doctoral studies. For this reason, I concentrate on the main subject and look at the rest of the fugues as a whole, without dissecting one or the other. What I aim to do in this chapter is to first describe what is apparent from the scores I used for the analysis. The three scores I used when analysing the collection were the holograph manuscript and its supplement,[71] the 1751 first edition[72] and the Urtext edition.[73] The reason for using three different scores is to categorize and mark the pieces as accurately as possible (Urtext), to gain insight into decisions Bach made when he composed the pieces (holograph manuscript and its supplement) and to have the possibly most accurate representation of how Bach would have liked the pieces to be organized (first edition). The apparent characteristics consist of the key signature, the meter, the instrumentation (or lack thereof) and the main theme as a constantly recurring element of the collection. After that I am going to analyse the collection according to the five keywords specific and necessary in fugal writing: invention, identity, imitation, variation, harmony. By the end of Part III, I aim to prove that Bach was directly and indirectly influenced by the

[70] I would like to thank Laurence Crane for his brief but positive feedback when reviewing this chapter.
[71] *Mus.ms. Bach P 200* and *Mus.ms. Bach P 200/1*.
[72] *Mus. O. 17364.*
[73] *Neue Bach-Ausgabe, Serie VIII, Band 2.1*, pp. 1-198.

philosophical ideas of the mechanistic philosophy and that these are present in *The Art of the Fugue*.

Except for two pieces, neither the manuscript, nor the first edition, nor the Urtext contain any hints about which instruments the piece was written for. The exceptions are *Fuga a 2 Clav*. (*forma recta*) and its inverse (*forma inversa*), the corresponding instrument being the harpsichord (marked in the Urtext as BWV 1080, 18/2 and BWV 1080, 18/1, respectively). The rest of the pieces are written for undefined instruments on one, two, three, four, or six staves. The fact that Bach diligently marked what instrument or instruments his works were written for and the lack of such marking implies that generally the collection was not primarily for instrumental music and neither for vocal music, as that would require a text to be sung. This suggests that the collection is to be considered as what Walther calls '*musica didactica*' in his *Lexicon*: speculative pieces, investigating quantity, proportion and measurement.[vii]

Another remarkable feature is the names Bach gave to the movements. All of them are in Latin and most of them are named *Contrapunctus*,[viii] and then with a corresponding number. Walther in his Lexicon associates this with church-music,[74] something *The Art of the Fugue* is clearly not. What is 'churchy' about it is its tonality. *The Art of the Fugue* is in the key of D minor.[ix] While there is a key signature marked clearly (flattened B) and is in the D natural minor (Aeolian[x] scale), it is closely related to the Dorian mode. The Dorian mode[xi] is the second mode of the C Ionian (major) scale. In the Medieval Dorian mode the scale usually involves a major sixth (B natural), however at times it can involve B flat, as well as a raised seventh (C sharp as the leading tone).[75] These modifications place the tonality in *cantus mollius*.[76] This mode was associated with rigor and seriousness, as marked by Walther in his *Lexicon*.[77] The piece therefore floats between D natural minor (Aeolian) and D Dorian tonalities.

[74] "[…] *gemeiniglich aus Kirchen Gesängen genommenes Subjectum* […]" (Walther, *Lexicon*; 'Contrapunto' (p. 182).).
[75] Felix Salzer and Carl Schachter, *Counterpoint in Composition*; p. 10., and Walther, *Lexicon*; Modus Musicus, 1. Dorius Modus.
[76] *The New Grove Dictionary of Music, Volume 7*; Dorian (p. 507).
[77] "[…] *bes nach dem rigore Modi* […]"; Walther, *Lexicon*; 'Modus Musicus, I. Dorius Modus'.

The collection is a set of fugues, as well as canons. Fugues[xii] are defined by Walther the following way: an *artificial* piece [*künstlich Stücke*], [78] in which a theme is given by one of the voices, and another voice imitates (or chases [*jaget*]) it.[79] As pointed out above, the word artificial is not in a negative sense, but to be understood as something which is done in a learned and skilful manner. In other words, fugues are skilfully crafted pieces of music, in which a theme is given with variations. The definition above also points at the original title of the collection, *Die Kunst der Fuge*, further reinforcing the claim above that the collection is for didactical purposes. David Ledbetter points out that in the definition of Fugues and their subject, given by Walther, the terminology for choosing the theme or subject of a fugue is the same as choosing a topic for discussion.[80] The following is a brief summary of "Fugues or Consequences" (chapter 51) in Part III of Zarlino's *Le Istitutioni Harmoniche*, the description given by Walther in his *Lexicon* under the entry "Fugha, Fuga" and the corresponding subentries, Chapter 20 – 23 in Part III of Johann Mattheson's *Der vollkommene Capellmeister*, and the description of David Ledbetter in the chapter titled "Fugues" of his book *Bach's Well-tempered Clavier*. Fugues can be divided the following way: if the following voice imitates the first note by note, it is a *fuga totalis*, also known as canon; if it imitates but in a different pitch, it is a *fuga partialis* or free fugue; if the imitation happens in a perfect interval (fifth above (*fuga authentica*), fourth below (*fuga plagalis*), unison or octave) then the piece is a *fuga propria*. If the imitation happens at any other intervals, then it is a *fuga impropria*. Free fugues can be further divided into four categories; 1) when the imitation follows the melodic shape of the theme (*fuga recta*); 2) when it is inverted (*fuga contraria*); 3) when the imitation is reverted (*fuga canrizans*); 4) when multiple subjects are present (*fuga doppia*). In *The Art of the Fugue* fugues all these categories appear, as well as their combinations with one another:

[78] Fritsch, *Lexicon*; "*Künstlich* 1. *Senn*, to be artificial. […] *Etwas künstliches*, an artificial, handsom [*sic*], artfull [*sic*], accurate, curious, fine or elaborate piece of work."
[79] Walther, *Lexicon*; 'Fugha, Fuga'.
[80] David Ledbetter, "Fugues" in *Bach's Well-tempered* Clavier, p. 73.

1. *Contrapunctus I – IV*; simple fugues
2. *Contrapunctus V – VII*; counter fugues, the subject appears in its original form and its inversion
3. *Contrapunctus VIII – XI*; fugues with a main subject and multiple countersubjects
4. *Contrapunctus XII – XIII*; mirror fugues
5. *Contrapunctus a 4*; Fugue with four subjects.
6. Four canons;
    a. *Canon Augmentationem*; The subject is inverted and rhythmically augmented
    b. *Canon alla Octava*; The subject imitated at the octave
    c. *Canon alla Decima*; The subject imitated at the tenth
    d. *Canon alla Duodecima*; The subject imitated on the twelfth
7. *Fuga a 2 Clav*.; Fugue for two harpsichords; first as *fuga recta* then as *fuga contraria*
8. *Fuga a 3 soggetti*; the last and unfinished fugue with 3 main subjects

Ruth Tatlow points out that this amounts to a total of 23 pieces: *Contrapunctus XII*, *XIII* and the fugue for 2 harpsichords are present in their original form as well as their inverse form.[81]

III.2. *The Art of the Fugue* theme and its variations: *Contrapunctus I* as the provider of topic

In the following I am going to focus on *The Art of the Fugue* theme (in the following I use 'theme' and 'subject' interchangeably) as presented in *Contrapunctus I* and the structure it provides throughout the whole collection. David Ledbetter claims that the subject of a fugue "provides a microcosm".[82] What this implies is that it entails the relations presented in the entire piece. Since *The Art of the Fugue* is a collection of fugues (including the canons, since they

[81] Ruth Tatlow, Ruth Tatlow, "Two Large Late Collections" in *Bach's Numbers. Compositional Proportion and Significance;* p. 244.
[82] David Ledbetter, "Fugues"; p. 80.

belong under the *fuga totalis* category), built on a single theme, the subject sets the stage for all the following fugues and the possibilities in terms of combinations, variations, technical principles, etc. The theme is a rhetorical tool: the key tonality is the tone it is presented and the tonal relations within the theme are the inventio, the preparatory element for the whole speech.

The meter of the piece is *alla breve*.[xiii] Since this meter doubles the number of beats per measure ($\frac{2}{4}$ instead of $\frac{4}{4}$), it indicates a clear 2:1 ratio. Striving for such a ratio is something which is typical of Bach's approach to music.[83] Ruth Tatlow in Chapter 1 of her book*, Bach's Numbers*, argues that with some exception it is often not the numbers themselves but the proportion they represent which is important for Bach, aiming at the representation of "unity, symmetry, proportion and Harmony".[84][xiv] Furthermore, she claims that Bach's music contains layers which are built on the 1:1 and 1:2 proportions, creating symmetrical structures.[85] Symmetrical structures are therefore key elements in Bach's music, such as in *The Art of the Fugue*. Harmony[xv] (with a capital H) was often associated with the Holy Trinity, based on the theory of Johannes Lippius, who stated that "the triad is the image of that great mystery, the divine and solely adorable Unitrinity",[86] a claim which was held commonplace among music theorists and composers alike.

The first measure of *Contrapunctus I* begins on the alto voice, with the ascent of perfect fifth and then a descent of major third, outlining the D minor triad in its root position. There are two notable elements already present: first, that the theme begins with a perfect fifth ascent followed by a major third descent. Secondly, that it simultaneously produces a triad in its root position.[87] This adheres to the hierarchy of the notes in contrapuntal writing, namely, the root, followed by the fifth and then the third, and at the same time provides a harmonic triad in its root position, a musical element which was associated with perfection and ultimately God. This

[83] Ruth Tatlow named it "parallel proportion"; Ruth Tatlow, "Bach's Numbers"; p. 13.
[84] *Ibid*.; p. 7.
[85] *Ibid*.; p. 6.
[86] Johannes Lippius, *Synopsis of new music*, p. 41.
[87] Fux refers to a chord in the root position exclusively as *the* harmonic triad, not including the other two inversion in the term. (GaP; p. 71).

is further reinforced by Lippius, who bases his claim that the triad expresses the Holy Trinity in acoustics, something which, based on Bach's thorough knowledge in organ-building, he was familiar with. According to Lippius, the triad consists of three monads, the root or "*prima*", the fifth or "*ultima* which is begotten by the prima" and the third or "media [which] proceeds from them", connecting them together.[88] If the triad is a minor one (consisting of a minor then a major third) then it "consists of an arithmetical proportionality" as opposed to the major triad which has the harmonic proportionality.[89] This might come across as a problematic element since *The Art of the Fugue* theme is set in minor and the claims about perfect harmony made by Lippius refer to major triads, but it is the symbolic relation between the notes which is more important, as seen in the other fugues of the collection. The theme read vertically provides the *trias harmonica* (root – perfect fifth – major third), while read horizontally adheres to the basic harmonic intervals (also known as '*senarius')*, which was another expression of perfection.

Another important element is the descent to C sharp on the first beat of the second measure in the alto voice. It is of particular interest as this strong dissonance (major seventh) occurs on the strongest beat of the measure. Given that the theme is a microcosm in itself, expressing the character of the whole, the C sharp is not just the leading tone of D minor but also provides an outline or reinforcement of the tonality and the potential dissonances in the *Contrapunctus I*. In Walther's Lexicon in the Dorian mode the C sharp is essential for cadences [*hauptsächlich der Cadenz wegen*] and the C sharp implies the presence of the G sharp [*cis und gis vorkommen*], dominating the melodies. In the 17th century the word 'melody' was understood in a broader sense than today, it was used synonymously with harmony or at least was viewed as its essential constituent.[90, xvi] This does appear on the first beat of the fourth measure in the soprano voice, the imitation of the theme (*Comes*). These dissonances compared

[88] Lippius; p. 41.
[89] Lippius; p. 42.
[90] Claude V. Palisca, "Universal Harmony" in *Music and Ideas in the Sixteenth and Seventeenth Centuries*; pp. 14 – 15.

to the key of D minor are key elements in driving the harmonic progression and pre-establishing the dissonances present in the piece and pieces.

III.3. Theoretical analysis

The following is an analysis of *The Art of the Fugue*, based on the criteria established in Part I. In order to approach the collection, I find it important to place it in a historical context and point out the motivating factors behind it. While this remains a controversial move – for sometimes it is claimed that the intention of the composer is secondary to the actual work itself and works have to be understood as standalone objects – I find it important, for the same reason that a manuscript of the composer is ought to accompany the learning process of a given piece, when available. Both historical context and manuscripts provide relevant information. They both show details without which the meaning behind a given piece would become obscure. A manuscript can show the composing process with its corrections, additions or even scribbles on its margin. The historical context creates an environment in which the creation of the given piece becomes a character, contributing to the environment in one way or the other. This also helps identifying and ideally answer the question of what motivated Bach to compose this collection.

III.3.1. Historical outline

Around 1740 Bach starts composing *The Art of the Fugue*.[91] The 1730s for Bach were his 'quieter years': he finished composing the church repertoire by 1729 and in the next decade he is fulfilling his position performing mainly this repertoire. Christoph Wollf calls this period the "journey of reflection".[92] His activities seem to point at contemplation and self-reflection and maintaining a distance from his official work allowed him to prepare for two large-scale composition, the *B-minor Mass* and *The Art of the Fugue*. Both pieces are discussed by Ruth

[91] *BLM*; p. 433.
[92] *BLM*; p. 421.

Tatlow in her book, *Bach's Numbers* and are considered to be pinnacles of what Tatlow labels as "parallel proportionalism". Bach grew up in a tradition which considered music to be part of the *quadrivium*,[93] making it a subject of mathematics. Tatlow's results, namely, that Bach's works were constructed to express 1:1 and 1:2 proportions, strive for symmetry and to have a strictly organized structure, based on numerical proportions, suggest that Bach subscribed to the idea that music is a mathematical discipline. This is further suggested by his in-depth knowledge of Lutheran theology, which also considered music a mathematical discipline and – based largely on Neo-Platonism and Augustinianism – claimed that by observing the eternal in music (namely, the numbers and their ratios) the mind can discover God. It recognizes the mimesis of the musical harmony of the Divine Harmony and the more these align the more the intellect rejoices.[94] Bach's aesthetics also imply that he strived for getting his pieces as close to perfection as possible in order to praise God as the most perfect being.

In 1737 Johann Adolph Scheibe published in the journal *Critische Musikus* an anonymously written letter in which Bach was criticized, without explicitly mentioning his name. The dispute that followed took place between 1737 and 1739. The letter ends with the following sentence, which summarizes well its content: "In both [naturalness and nobility], one admires the difficult work and exceptional effort, which, however, is used in vain because it [Bach's music] conflicts with Nature."[95] The claim is quite strong. If Bach's music conflicts with Nature, then it is unable to express Divine Harmony or the "Natural Order", as Werckmeister called it. And if it cannot express such Harmony, it is inappropriate to praise God. What the writer of the letter, as well as Scheibe, was against is "mathematical music".[96] In the 1720s there was a shift of paradigm of what music should achieve: the new taste required music first and foremost to be entertaining and expressive, and it can only be achieved if music is intelligible, simple, and elegant. This new approach is often labelled as 'stile galante' or gallant

[93] *BLM*: p. 7.
[94] Augustine, *On Music*; Book VI.11, §33 (p. 358).
[95] Beverly Jerold, "The Bach-Shcheibe Controversy: New Documentation" in *Bach, 2011, Vol. 42, No. 1, (2011)*; p. 9.
[96] Jerold, "The Bach-Shcheibe Controversy"; p. 5.

style.[97] Bach's music was seen as obscure due to the rich harmonic progression, resulting in not being natural, for it is in misalignment with the requirements of the new aesthetic ideal.[98] While this criticism does not seem sufficient in itself to trigger Bach to start composing *The Art of the Fugue*, I treat it as a possible contributor to it. Bach's environment was vocal in their disagreement with the criticism and therefore seems to have considerable importance in Bach's life.

The philosophical influence seems to have grown around Bach in the last decade of his life: he formed friendships with his colleagues, who also served as his audience, he became member of Mizler's society, he composed large-scale collections of secular music such as the *Musical Offering* (BWV 1079), *The Well-tempered Clavier II*, the *Clavier-Übung IV* (also known as the *Goldberg Variations*, BWV 988) and *The Art of the Fugue*, which arguably dealt with different concepts concerning music theory.

III.3.2. The five keywords and their function in practice

The main questions behind *The Art of the Fugue* are: how much variability can be created with a simple element? How does this element function as a building block of the collection, acting as its microcosm, containing all the potential qualities the pieces obtain? Bach seems to focus on variability based on a given simple form (or the main subject). While these questions may be asked in relation to other large scale fugue cycles, such as the *Musical Offering* (*Musikalisches Opfer*, BWV 1079), I believe they are more relevant in the case of *The Art of the Fugue*: it is a mono-thematic collection which deals only with fugal composition. Furthermore, as stated above, it presents a collection of fugues organized according to their increasing complexity, suggesting the educational concept behind. While the *Musical Offering* is also a monothematic fugal collection, it was dedicated to Frederick the Great and was written to be performed by the king. The complexity of the *Musical Offering*'s theme (*Thema Regium*) compared to the simplicity of *The Art of the Fugue* theme is also an important contrast,

[97] Joseph P. Swain, "Introduction" in *Historical Dictionary of Baroque Music*; p. 19.
[98] Jerold; p. 10.

suggesting Bach's conscious approach to how a simple element functions as the basic structural element. What *The Art of the Fugue* aims at in my reading is unity and the multiplicity it may entail. The way Bach does it is by inventing a subject, containing all the possible elements or intervals through the different combinations, dissecting the original subject and reorganizing it, creating variety in the collection.

Invention is present in the theme of *The Art of the Fugue*. It sets the tonality (or tone) and implies the possible harmonies within the piece, for invention is a process of discovery.[99] In the collection, invention is the composition itself for Bach, through choosing the theme for the collection, also providing himself with the possibilities of harmonic- and melodic combinations, which are explored in the fugues. This concept is expanded further by introducing more and more complex fugal writing and using the main theme as the foundational building block.

The identity of *The Art of the Fugue* lies first and foremost in its theme: it runs through the collection as a recognizable unit, making invention and identity inseparable from each other. For as long as the subject returns, the fugue expresses the same topic and the requirements to invent are also fulfilled. Secondarily, identity is the genre and tonality of *The Art of the Fuge*. All the pieces belong under the category of fugues and all of them are in the key of D minor. Identity is also present in the unfinished fugue: on the third beat of m. 193 until the first beat of m. 195 Bach introduces his famous B-A-C-H theme. While it is tempting to take it as a personal signature placed in musical text, I take it at least also to be as a "tribute to the composer's origins":[100] it is not only an expression of the personal but of gaining identity by being part of the Bachs, a musically highly skilled family.

Imitation occurs when the subject, or identity, is slightly altered but its essence remains to be recognized (e.g. it is set in a different tonality while maintaining the melodic shape of the original melody), such as in the mirror fugues or the tonal answer to the main subject, also

[99] Laurence Dreyfus. "What Is an Invention?" in *Bach and the Patterns of Invention*; p. 3.
[100] Laurence Dreyfus, "Matters of Kind" in *Bach and the Patterns of Invention*; p. 164.

known as *Comes*, but also when different fugal entries are introduced, both as wholly or partially. Imitation is also present when the collection is taken in its entirety. It is a higher-level imitation for it takes its model to be the Divine Harmony and aligns to it in the closest way possible.

Invention, identity and its imitations provide variety while maintaining the similarity and homogeneity of the pieces, satisfying the requirements of fugal writing according to the leading theories of the era. To quote Fux: "Pleasure is awakened by variety of sounds. This variety is the result of progression from one interval to another, and progression, finally, is achieved by motion."[101] And, as Augustine defined, in music, the "science of mensurating well",[102] well-done mensuration is done by "moving well",[103] from one interval to another according to the mathematically definable forms in Nature.

Harmony, as end, is therefore achieved by the combination of these four ingredients, as means. By being harmonious, music fulfils its function and aligns itself with Nature, and ultimately with the Divine Harmony.

[101] Johann Joseph Fux, *Gradus ad Parnassum*; p. 21.
[102] Augustine, *On Music*; I.2, §2 (p. 172).
[103] Augustine, *On Music*; I.2, §3 (p. 175).

Chapter IV: Counterarguments and conclusion

IV.1. Presenting two counterarguments

The first counterargument I take into consideration comes from none other than C. P. E. Bach. The fifth child of Johann Sebastian Bach contributed greatly to the image we have of his father through his correspondence with Johann Nikolaus Forkel, who then published the first biography of Johann Sebastian Bach in 1802.[104] C. P. E. Bach is an important source for the reason that he was taught by Johann Sebastian himself from an early age, both at home and at the *Thomasschule* in Leipzig. Looking at him from a musical perspective he is one of if not the best successor of his father in terms of legacy: the extent of his compositions as well as being held as an established keyboard virtuoso and pedagogue show a character who fits well in the Bach legacy. Any claim of his regarding J. S. Bach is therefore to be taken seriously. In a "Letter answering questions about [J. S.] Bach"[105] he writes unfavourably about Mizler and his society and how he (C. P. E. Bach) and Johann Friedrich Agricola, a student of J. S. Bach, put together the biographical text on his "late father", which was then published by Mizler. It is here that C. P. E. Bach adds that no true musician likes the "dry, mathematical stuff."[106] Whether he refers to his father or Agricola as "the departed" (Agricola died in 1774 and the letter dates from 1775) does not concern me, for I am sure C. P. E. Bach would consider both composers "true musicians" and therefore the claim is equally applicable to both of them. What he meant exactly by this phrase is somewhat unclear and can be interpreted in many ways. I understand it as music being composed according to theories which base themselves on mathematics as the

[104] *NBR*; pp. 417-418.
[105] *Ibid.*; §395 (p. 398).
[106] *Ibid*.

fundamental property of musical harmony such as the Platonic, Augustinian and Keplerian theories, and the emphasis on the theoretical instead of the practical approach in music.

While C. P. E. Bach was personally close to his father, this is not so true of his musical 'aesthetics': he belongs to the generation of composers who subscribed to the aesthetical requirements of the Enlightenment, the 'gallant style' or '*Empfindsamkeit*" in German. This ideal emphasized charm, intelligibility, and flow and took music's primary goal to be the expression of affections. J. S. Bach's music not aligning to such ideals was the ground of Scheibe's criticism as well, resulting in his claim that Bach's music is unnatural, "bombastic" [*schwülstig*],[107] and jumbled [*verworren*],[108] claims with clearly negative connotations. [109] J. S. Bach, however, never aimed to fulfill the aesthetic requirements of the latest taste. The closest he came to such model is his *Italian Concerto* (BWV 971, in *Clavier-Übung II*).[110]

The question arises 'why would C. P. E. Bach claim that his father disliked "mathematical stuff", despite the clues and signs pointing at the contrary?' I think the answer lies in C. P. E. Bach's role after his father's death. He wanted to maintain the legacy of the Bachs and at the same time fulfill the requirements of the aesthetics of Enlightenment. Afterall, he was serving in the court of Frederick the Great in the royal orchestra (1738 – 1768) and then became the director of music in Hamburg, at the court of Princess Anna Amalia of Prussia (1768 – 1788). These roles, serving in the courts of the high aristocracy, required his music to be fashionable by representing the latest taste and style of the 18th century. And at the same time, he recognized the importance and legacy of his father's music, otherwise he would not have published *The Art of the Fugue* and would not have helped Forkel to write J. S. Bach's

[107] Fritsch, *Lexicon*; *Schwülstig senn […] Eine schwülstige rede oder schreib-art*, a high-strain; a bombast; a tumid, high, high-flown, high-strained, bombastic, swelling, swoln [*sic*] or swollen speech or style.
[108] Fritsch, *Lexicon*; *Verwirren (etwas)* to intangle [*sic*], confound, pester, or imbroil [*sic*] something; to jumble, shuffle, blend, mix hurry or juggle things together.
[109] Jerold; p. 14.
[110] Laurence Dreyfus, "Bach as a Critic of Enlightenment" in *Bach and the Patterns of Invention*; p. 223.

biography. This leads me to conclude that his claim is a sort of clash between wanting to represent the gallant style and at the same time recognize the heritage of his father.

The other counterargument comes from Peter Kivy. Throughout his book, *Music Alone: Philosophical Reflections on the Purely Musical Experienc*e he claims that music is non-representational. In the following I am going to focus on his points in the chapters "It's Only Music: So What's to Understand?"[111] and "Surface and Depth",[112] as these are the ones most relevant to my thesis. Kivy starts with the question "Do you understand music?",[113] something which requires a vastly different answer (if even answerable) compared to questions such as 'do you understand clocks?' or 'do you understand the German language?'. The latter ones refer to the inner function of a mechanism or the grammatical structure of a language, whereas in the case of music, in Kivy's view, one needs not have any insight in order to understand it. For him enjoyment of a given musical piece is enough. His reasoning can be summarized the following way:[114] he starts with the premise that describing something need not be related to being an expert. A lay person can describe music without technical terms, such as the case with annotators, popularizers or even critics. Description is therefore not reserved for the experts. Furthermore, description, in any sense, emphasizes the person's musical understanding as well as perception. And the more one perceives and understands, the more they appreciate and therefore enjoy. He concludes his claims with "if I deny the ordinary listener the ability to describe these syntactical properties, I deny at the same time the enjoyment of them, since, on my view, perception, understanding, describing, and enjoying are all wrapped up in one package."[115] It follows that understanding, be it of a professional's or not, is given by the listener's ability to describe the "sonic event"[116]. For this reason, attempting to ascribe any extramusical meaning to music is not only irrelevant but harmful according to Kivy.

[111] Peter Kivy, *Music Alone: Philosophical Reflections on the Purely Musical Experience*; pp. 93 – 123.
[112] Peter Kivy, *Music Alone: Philosophical Reflections on the Purely Musical Experience*; pp. 124 – 145.
[113] Kivy, "It's Only Music so What's to Understand?"; p. 93.
[114] *Ibid*.; pp. 96 – 100.
[115] *Ibid*.; p. 109.
[116] *Ibid*.; p. 100.

Kivy's other chapter, "Surface and Depth", deals with the attempt to define certain elements in music, such as monothematicity. The main question Kivy raises is what makes a piece of music allegedly monothematic, such as Beethoven's Ninth, even if there are no audible clues for the listener? For him, finding such non-audible clues will result in "astrology" instead of "science":[117] what isn't meant to be heard and is only available through analysis which focuses on something unintended by the composer will not yield any useful results. Instead, it produces theories that hang on nothing but a forced theory which distorts the facts, so they fit the hypothesis. Kivy's conclusions are that "if something cannot be heard then it is not meant to be heard,"[118] and, more importantly, that understanding music need not be available only to experts. Therefore, extramusical meaning, such as pointing at properties that cannot be heard, cannot be part of any musical piece.

Kivy has a point here. Identifying meaning beyond the composer's intentions in pieces which were *meant* to be heard, such as trying to find the monothemiaticity in Beethoven's Ninth in Rudolph Reti's analysis, is a dubious effort. These pieces are meant to be heard and anything that is trying to point beyond audible clues left by the composer is merely an "interpretation"[119] therefore claiming it to be theory is arbitrary and unconvincing. For Kivy, music first and foremost has to be heard to be understood. Anything that can't (or was not meant to) be heard is not part of this understanding. For Kivy the laity's understanding is just as valid as the professionals and he writes about musical understanding in a given culture (in this case Europe) as temporally universal, for the universal purpose of European music, in Kivy's reading, is to be enjoyed.[120]

My issue with Kivy's claim is that he separates music from its historical context. He analyses and claims according to how people think, act and react in the late 20th century,

[117] Kivy, "Surface and Depth".; p. 136.
[118] *Ibid*.; p. 144.
[119] *Ibid*.; p. 138.
[120] Kivy, "It's Only Music"; p. 98.

regardless whether musically trained or not. Furthermore, when he claims that if anyone tried to interpret "music as the revelation of [...] universal harmony" it will lead to "madness,"[121] Kivy disregards underlying concepts that drove composers when creating a new work. When Bach published his *Clavier-Übung* series he did it for the ethical betterment of the person studying his collection: the word '*Übungen'* had a deeper and richer connotation, something that was available for the consumers of his music. For them, this word would be associated with religious virtue.[122] My claim is that when Bach chose the title *Die Kunst der Fuge,* he did it because '*Kunst'* had an association with imitation, invention and Harmony itself. Separating this collection from its historical context would therefore be detrimental when analyzing the pieces. Furthermore, the underlying associations with certain words, such as '*Übungen'* and '*Kunst'* were available for the musically trained, the target audience of *The Art of the Fugue*. I claim the target audience to be the musically trained for these pieces pose challenge, both theoretically and practically, for fugues were taken to be as one of the strictest and most demanding genre.

IV.2. Conclusion

Before I conclude my thesis, there is something I would like to point out: the attentive reader will have noticed that I did not use notated music while describing *The Art of the Fugue*. While I marked three scores as sources, they were kept in the background and were not used for demonstrating the analysis of the musical passages I provided above. For some, it might seem like a flaw or even an error on my part. However, this was done deliberately. What I aimed to demonstrate is that music can be expressed only verbally and without the aid of musical notation. What I aimed to achieve with this is to challenge myself by analysing *The Art of the Fugue* with the least amount of 'tools' at hand and rely only on literary devices. This admittedly

[121] Kivy, "It's Only Music so What's to Understand"; p. 94.
[122] Tatlow, „Unity, proportions and universal harmony"; p. 97.

risky step can and should be criticized, if need be. For those who attempt this criticism, I would like to point out that the solely verbal analysis without any musical notation as cues for the analysed passages was sufficient for the musically trained and therefore, I judged that my thesis did not require music notation to be used.

As a conclusion, it is safe to claim that *The Art of the Fugue* does contain philosophical influences. Most of it is indirect, as they seem to be exerted through environmental factors, such as the group of colleagues Bach had in Leipzig, Luther's theology about music and how numbers as eternals and their relations represent Divine Harmony. Some of these, however, are direct influences. One is Andres Werckmeister's books. In the preface of the Orgel-probe he writes: "They [Plato, Pythagoras, Macrobius] agree that man – being Microcosm, i.e. the small world – would be enchanted and delighted by the proportions, if they could be made audible to him by reduction to pure sound; that he would perceive, as in a mirror, his own image, God's order and the creatures of heaven and earth, even God's own image in the sense of the saying, *Omne simile suo simili oblectatur* [every likeness enjoys its own similarity]."[123] While not a purely philosophical work, its influence seems to be present in *The Art of the Fugue*, for it expresses the worldview according to the "mechanistic philosophy". Based on these, I am convinced that Bach had both direct and indirect philosophical influences while composing *The Art of the Fugue*. There is much left to be done in terms of analysis, such as the five keywords appearing in the individual movements, which I hope to tackle during my future research and studies.

[123] Andreas Werckmeister, *Orgel-probe*; pp. xviii – xix.

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Endnotes

[i] Walther, *Lexicon*; Musico (*ital*.) Musicien (*gall*.) Musicus (*lat*.) bedeutet so wol einen Componisten als executorem: doch leget et der Usus mehr dem *Executori*, als den Componisten ben. s. Brossard, Diction. P. 77. Die heutigen Italianer verstehen durch einen Musicum sonst nichts, als einen bloffen Saenger. F. Matthesonii Crit. Mus. P. s. p. 91.

[ii] Walther, *Lexicon*; Zarlino (Giosepoe) ein sehr berühmter und gelehrter Capellmeister yu Venedig, von Chioggia gebürtig (Clodiensis,) begab sich an 1541 nach Venedig, succedirte daselbst dem aus der Republic Diensten gegangenen Cipriano Rore; schrieb *Istitutiono Harmoniche*; *Demonstartioni Harmoniche*; *Sopplementi musicali*; *della Patienza; del vero anno & giorno della morte di Christo*, und *della origine dei R. F. Cappucini*. Alle diese Wercke sind nachgehends zusammen in 4 omis daselbst in folio gedruckt worden. Die Institutiones hat er dem Patriarchen zu Venedig, Vincenzo Diedo; die *Demonstrationes* dem Venetianischen Herzoge Aluigi Mocenigo; die *Supplementa* dem Pabst, Sixto V. und die übrigen dren Tractäte (welche Volumen 4tum & Ultimum ausmachen) der Leonora da Este, zugeschrieben. Er hat auch einen Tractat unter dem Titul: Melopeo ò Musico Perfetto; ingleichen 25 Bücher *de Re Musica* in latinischer Sprache, verfertiget. s.das Ende der Supplementorum, und Giacomo Alberici Catalogo breve de gl´illustri & famosi Scrittori Venetiani, p.41 all wo stehet: de utraque Musica, libri venetienque latini. (1559)Er ist an 1559 den 14ten Febr. ohngefehe im 59 Jahr seines Alters gestorben, und in die S. Laurentii-Kirche begraben worden.

[iii] Zedler, Lexicon; Harmonia, bedeutet aptam commisuram, coagmentationem, compagem, ein geschicktes zusammenlassen, zusammenfügen; welches entstehet, wenn etliche oder viele ungleiche Klänge dergestalt miteinander vereiniget, und zugleich gehörter werden, das auch die daben befindlichen, aber recht angebrachten Dissonanzen dem Gehör nicht allein keines Weges verdrießlich fallen, sondern auch die darauf folgenden Consonanzen desto schöner und lieblicher machen.

[iv] Zedler, *Lexicon*; Rhetorica Inventio ist, welche weiset, wie man die Realien zu einer Rede nach der Rhetoric erfinden soll.

[v] Zedler, *Lexicon*; Inuention, ist dasjenige im einem Gemählde, welches pur von dem Verstande des Mahlers ist, als da sind die Ordonnance, die Eintheilung des Stücks, wenn es neu ist. Sonsten wird auch Inuention vor eine jede neue Erfindung genommen welche mehrmals den Künstlichen so sinnreich ist, das sie nicht leichtlich, es fen denn, das sie Handgriffe darzu gezeigt werden, nachmachen stehet. Ben einer jeden Inuention, steht zu bedenken, ob solche so wohl ins graffe als kleine angehe, wie hoch die Unkosten sich darauf belauffen möchten, aus was für Principiis sie berühre, ob sie kostbar auszuführen, leicht ins Werck zu stellen, hin und wieder nicht zu verbessern, und leichtlich nachzusammen sen, woraus sie den Effekt besser, wohlfeiler, leichter und geschwinder thue, als man etwann den der vorigen alten Manier mit schweren Kosten, vieler Müh und Zeit-Verlust, hat erreichen müssen. So werden auch in der Chirurgie, Medicin und Chemie öffters viel neue Inuentiones ans Acht/ist gebracht.

[vi] Walther, *Lexicon*; Dux [*lat*.] ist in den Fugen und *Canonibus* die zuerst anfahrende Stimme, und also der andern Folge-Stimme ihr führer. Conf Mathesonii Orchestre I. p. 143. §.6.

Walther, Lexicon; *Comes* (lat.) also wird die zweite Stimme, so das *thema* oder den *Ducem* einer Fuge imitiret, genennet: weil sie dessen Gefehrde ist.

[vii] Walther, *Lexicon*; *Musica Didactica* [lat.] ist eine Satzung der Speculativischen Music, welche nur die Quantität, Proportiones, und verschiedene Qualitäten der Klänge zu untersuchen such bemühet.

[viii] Walther, *Lexicon*; *Contrapunto* [*ital*.] *Contrepoint* [*gall*.] *Contrapunctus*, und *Contrapunctum* [*lat*.] aus Teutsch: ein Gegen-Punkt; deswegen also genannt, weil ursprünglich die Noten oder Zeichen der Klänge Punkte waren, so man gegen oder über einander sagte. Überhaupt nun ist jede harmonische Zusammensetzung ein contrapunct; insonderheit aber fand es ein, 2 und mehrfache Melodien über ein gemeiniglich aus Kirchen Gesängen genommenes *Subjectum*, auf Italiänisch Soggetto genannt. Man

fegt bisweilen das *Subjectum* in Tenor, oder in einer andern Ober-Stimme, welches sodann *Soggetto Sopra heisset*, und der Bass, oder die andern Partien, so man drunter machet, heissen*: Contrapunto infra*, oder sotto il Soggetto. Ordentlich ist das *Subjectum* im Basse, kan aus ganzen oder halben Tacten bestehen, und die Partien über dergleichen Bass heissen: *Contrapunto sopra Soggetto.*

[ix] Walther, *Lexicon*; Modus minor [*lat*.] Mode mineur [*gall*.] Modo minore [*ital*.] bedeutet (1. einen solchen Modum musicum, dessen Grund-Note eine weiche oder Kleine *Terz* hat. (2. ben den Alten hieß Modus minor so viel: als debita Brevium in Longis mensura, d.i. wie viel Breves oder 2schlägige Noten auf eine *Longam* oder vierschlägige gehen solten; welches abermacht durch gewisse Zeichen zu erkennen gegeben wurde: ftunde neinlich (nemlich) nach dein Clave signata ein ganzer mit der Zähl 2 versehener Circkel, auch wohl vorher noch, eine dren spatia einnehmende und vier linien im *Systemate* berührende Over-Linie oder Strich, so giengen dren Breves auf eine Longam, und der Modus hieß *Minor Perfectus*; ftunde aber nach dem *Clave signata* ein halber mit der Zahl 2 verseheiner Circkel, ingleichen nurbeschriebener Strich, so Pausa modalis hieß, oder dren geschwänzte *Longae*, so giengen nur zwo Breves auf eine Longam, und der *Modus* selbst wurde *Minor Imperfectus* genennet. s. Tab. XVIII. Fig. 5. Die Franzosen nennen die erste Gattung: Mode mineur parfait, und die zweite: Mode mineur imparfait, oder insgemein: *Moeuf mineur parfait*, und *Moeuf mineur imparfait*.

[x] Walther, *Lexicon;* Modus Musicus, IX. *Aeolius Modus* [*lat*.] Mode *Aeolien* [*gall*.] *Modo Eolio* [*ital*.] die Aeolische Sing-Art (deren sich insonderheit die Aeoles, eine Griechische Nation, bedienet) heisset: wenn eine Melodie zwischen den *Clavibus* a und $\bar{a}$, oder $\bar{a}$ und $\bar{\bar{a}}$ enthalten ist, in solchen das final machet, und im *ambitu* die Tab. XVI. Fig. 3. bemerkte Claves berühret. Weil nun in dieser Disposition das *Semitonium* im 2ten und 5ten grad zu stehen kommt; so sehen die sämmtliche Transpositiones dieses Modi, dergestalt aus, wie solche Tab. XVII. F2. vorgezeichnet zu finden. [....].

[xi] Walther, *Lexicon*; Modus Musicus, I. *Dorius Modus* [*lat*.] *Mode Dorien* [*gall*.] *Modo Dorio* [*ital*.]oder die Dorische Sing-Art (deren sich die Dores, eine Griechische Nation soff bedient haben) heisset: wenn nemlich eine Melodie zwischen den *Clavibus d* und $\bar{d}$ (nach der Tenor-Stimme zu rechnen) der zwischen dem $\bar{d}$ d und $\bar{\bar{d}}$ (nach der Discant-Stimme enthalten ist, in diesem *ambitu* die Tab XIII. F.5 angemerkte Claves berühret und im D die ordinaire Bass.Cadenz machet. Weil nun in dieser Specie Octavae das *Semitonium* im 2ten und 6ten grad zu stehen kommt, so sehen die sämtliche transpositions dieses Modi, der Vorzeichnung nach, aus wie Tab. III. Fig. 6. zu finden. […] Od nun gleich in dem ambitu einiger legt angeführten Lieder manchmal ein Claivs mehr oder weniger ist, i.a. so gar der ambitus des Liedes: Vater unser im Himmelreich, ist. eine kleine terz über die Octav hinausgehet (welches wegen der im ersten Vers befindlichen Worte: ruffen an, ad experimendum animi ardorem geschehen senn soll;) anben auch in der leisten Clausul an statt des h, das b berühret; ferner, in etlichen an statt des nach dem rigore Modi erforderlichen c und g, cis und gis vorkommen; so heisset es auch hierinn: à potiori fit denominatio, weil doch jene Claves in den mehresten Melodien vor diesen dominiren (wie die hierüber anzustellende Probe zeigen wird,) und ist zu vermuthen, das insonderheit das cis, ad imitationem des Modi Jonici, hauptsächlich der Cadenz wegen, in den Dorium gebracht werden; dieses ist auch von dem folgenden Modo zu verstehen, welcher
II. *Hypodorius* (…).

[xii] Walther, *Lexicon; Fugha, Fuga* (*ital*.) *Fugue* (*gall*.) *Fuga* (*lat*.) *Φυγὴ* (*gr*.) eine Fuge, ist ein künstlich Stücke, da eine Stimme der andern, gleichsam fliehend, mit einerlen themate, in verschiedenem Tone nacheilet. f. Nidtens Musicael. Handleitung zur Variation des G. B. p. II. oder, nach Matthesonii Beschreibung Crit. Mus. T.I.p.265. in der Anmerkung: eine Haupt-Figur, bestehend in einer gewissen Wiederholung und künstlichen Vertheilung einer einzigen fest: fürgesezten Clausul (auch wohl mehrer, wenn sie doppelt ist) welche man in verschiedenen Theilen, des Gesanges, er sen mit 2,3,4 oder mehr Stimmen, wechsels weise zu hören bekommt. Hat den Nahmen à fugando, weil eine Stimme die andere gleichsam jaget. Daß einige Italiäner dieses Wort auch im Singulari mit dem h zu schreiben pflegen, geschiehet ohne Zweiffel darum: den Pluralem, (welcher *Fughe* heisset) desto besser zu formiren, und zu verhindern, daß er nicht unrecht möge ausgesprochen werden. In Pexenfelders Apparatu euriditionis stehet das Wort Fuga, auch an statt *Fufa* gebraucht, und bedeutet eine Achtel-Note.

[xiii] Walther, *Lexicon*; *Allabreve*, oder *a la Breve* [*ital*.] machen den alten Italianern diejenige Tact-Art, in welcehr eine Brevis oder 2schlaegige Note |0| halb im Niederschlagen, und halb im Aufheben

absolvirer, oder an ihre Stelle zwo *Semibreves* oder vier Minimae (nemlich intactu aequali) gebrauchet wurden. Die Endigung dieses Tacts geschahe allezeit cum Tempore, d. i. mit einer Brevi, oder noch langern Note, welche beym Niederschlagen der Hand sich ansieng, und beym Aufheben derselben sich endigte, und nicht in Tempore. Ein durchschnittener halber Circul zeigte diesen Tact, welcher sehr geschwinde tractire wurde, an und hatte nur den Motetten statt. f.Praetor. Syntag. Mus. T. III. P. 50. z.E.V. No. 5. Die aus diesen Tact gesezte Compositiones waren voller Syncopationen, Ligaturen, an einander hangenden Fugen, und hatten keine kleinere Noten, als Viertel, und zwar sehr sparsam.

[xiv] Johannes Lippius, *Synopsis musicae novae*, "De Triade Musica, F4 – F5; "Trias harmonica Simplex & Recta Radix vera est Unitrisona omnis Harmonia perfectissima plenissimaq, que dari in Mundo potest, Sonorum etiam mille & millies mille qui omnis referri posse debent ad partes eius in Unisono Simplici & Composito, magnistius Mysterii Divinae solum adorande Unitrinitatis Imago & Umbra(an ulla luculentior esse possit, nescio).

[xv] Walther, *Lexicon*; Trias harmonica oder musica [*lat*.] Triade harmonique [*gall*.] ist eine Zusammensetzung dreyer verschiedenen Klänge die rein zusammen klingen. z. E. c e g. oder c es g; d fis a, oder d f a. Wenn unter jetzbesagten dren Klängen, der mittlere gegen den untern eine tertiam majorem, und gegen den obern, eine tertiam minorem constituiret, so heisset ein solcher Saß insonderheit: *Trias harmonica major*, *naturalis* und *perfecta*; machet er aber gegen den untern eine teriam minorem, und gegen den obern eine teriam majorem, so heisset er alsdenn: *Trias harmonica minor*, *mollis* und *imperfecta*.

Walther, *Lexicon*; Trias harmonica aucta (*lat*.) die vermehrte *Trias harmonica*, ist: wenn einer von nurbesagten Klängen in einem Saße oder Griffe duplirt wird; es können aber auch alle dren Klänge wiederholt werden.

[xvi] Walther, *Lexicon*; Melodia [*lat*. *ital*.] Melodie [*gall*.] *μελωδία* [*gr*.] von *μέλος* und *ωδή*: eine Sang-Weise; *continuata sonorum connexio*.