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A Study of Performance Practices in Recordings of Bach's Violin Sonata BWV 1003 from 1930-2000

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Adrian Yeo

Western Australian Academy of the Performing Arts

Edith Cowan University

This dissertation is submitted for the degree of Bachelor of Music Honours

2010

DECLARATION

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Above all, I wish to thank my parents in particular - Johnny Yeo and Siok Li Lee – for all their time, money, patience and support spent with my studies from the beginning. It is their care and their love that have encouraged me and allowed me to achieve my goals.

ABSTRACT

Throughout the 20th century, the performance practice of baroque music has undergone many stylistic changes. Moreover, the rich resources of primary source material available to us in musical recordings of the period have only recently been realised. Bruce Haynes, in his book *The End of Early Music*, suggests that the twentieth century saw three principal schools of performance: romantic, modernist, and historically-informed. This study investigates Haynes' hypothesis through a comparison of fourteen recordings of Bach's Solo Violin Sonata in A minor BWV 1003, ranging from 1933 to 1999. Focus is made on eight pre-determined observation criteria: tempo, tempo fluctuation, rhythmic alteration, accentuation, articulation, portamento, vibrato, and ornamentation. Each criterion is discussed with reference to the secondary literature and observations of each recording are compiled in a systematic fashion. Each of the three schools (romantic, modernist, and historically-informed) is profiled, and an attempt is made to compare and categorise each recording, where possible. The results are used to test the validity of Haynes tripartite model and also to shed further light on the ways that performance practices have changed across the century.

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1 Introduction

This past century has seen a change in performers' understanding of the Baroque style. Bruce Haynes' most recent book *The End of Early Music*[1] and a recent study by Sam Nester titled *Modern Performance Trends in Bach's Sacred Music*[2] claim that it is possible to categorize the 20th century understanding of baroque performance practice into three main categories: the romantic, the modern, and the historically-informed. This dissertation aims to investigate this hypothesis by analysing sound recordings of Bach's *Solo Violin Sonata in A minor* BWV1003 across the twentieth century.

Chapter two begins with a discussion of methodology, and the limitations of completing a primarily aural analysis on early recordings. Justification and discussion is made of the observation criteria through which the recordings are to be analysed (tempo, tempo fluctuation, rhythmic alteration, accentuation, articulation, portamento, vibrato, and ornamentation). Subsequently, a discussion and overview is made of each of the three schools of performance practice (romantic, modernist, and historically-informed; as posited by Haynes) with reference to primary and secondary literature.

Chapter three takes each observation criterion in turn. Within the context of each criterion, a literature review and critical discussion of changing practices is accomplished. This is immediately followed by documentation of the observations made of each recording (for that criterion). Where possible, results are systematically organised in tables and

[1] Bruce Haynes, *The End of Early Music: A Period Performer's History of Music* New York (Oxford University Press, 2007),

[2] Sam Nester, *Modern Performance Trends in Bach's Sacred Music: Changing Tastes in the Performance of Bach's* Weihnachtsoratorium*: An Exploration of the Rhetorical Style* (Bachelor of Music Honours diss., Edith Cowan University, 2009), 1

graphs. Preliminary discussion of these results is also made, highlighting the similarities and differences between each recording.

In the concluding chapter (chapter 4) the profile of each of the three schools (romantic, modernist, and historically-informed) is also presented in a summary tabular format. An attempt is then made to categorise each recording, where possible, by comparison to the expected profiles of each school (as summarised). Discussion is made of the limits of Haynes's triparted conceptual model, highlighting cases where a recording cannot be neatly categorised, and pointing out the observable trends of change over time, whether gradual or abrupt. An evaluation is made as to whether these observations confirm or repudiate Haynes claims, and potential avenues of future research are underscored.

2 Scope and Methodology of the Study

2.1 The Selected Recordings

The recordings selected as the basis for this study are summarised below in **Figure 1**. Bach's Solo Violin Sonata in A minor, BWV 1003, was chosen as the focal point for this longitudinal study because the number of recordings available was not overly large. An attempt was also made to obtain a manageable selection of recordings that were more or less evenly spread across the twentieth century. However, all of the recordings chosen are subsequent to the advent of electrical recording (ca. 1925), and thereby none of them are overly compromised in terms of sound quality.[3] There was also the limitation imposed by the practical necessity of accessing and obtaining recordings. Those chosen were accessed via the State Library of Western Australia (Alexander Library Building), the Edith Cowan University Library (Mount Lawley campus), the Wigmore Music Library at the University of Western Australia, and also from the personal collection of Dorottya Fabian.

[3] Before 1925, acoustic recording was used. This involved a horn (constructed of either stiff fabric or wood) that concentrated the vibrations of the sound down to the point of a needle, and the transfer of these vibrations onto a wax etching. Because of the limit in the frequency range, the sound was stripped of harmonics and overtones, resulting in a "dull" timbre. The earliest 'electric' recordings (with the introduction of the microphone), were also somewhat comprised, with early microphones procuring a thin, somewhat metallic timbre. See Gordon Mumma, et al, "Recording," *The New Grove Dictionary of Jazz*, 2nd ed., ed. Barry Kernfeld (Oxford Music Online, http://0-www.oxfordmusiconline.com.library.ecu.edu.au/subscriber/article/grove/music/J371600) (accessed October 28, 2010).

Figure 1. The selected recordings of Bach's Solo Violin Sonata in A minor, BWV 1003 [3]

Violinist	*Recording Label and Catalogue No.*	*Date*
Joseph Szigeti	Biddulph: LAB 153	1933
Yehudi Menuhin	EMI Reference (mono): CHS 763035 2	1934-36
George Enescu	Instituto Discografico Italiano: IDIS 328/29	1940
Joseph Szigeti	Music and Arts: CD4774	1949
Yascha Heifetz	BMG Classics (RCA) 09026 61748-2	1952
Nathan Milstein	EMI ZDMB: 6479323	1955
Joseph Szigeti	Vanguard Classics: ATM-CD-1246 Artemis Classics	1955
Henryk Szeryng	SONY (AAD mono): 01-046721-10	1965
Joseph Suk	EMI Classics Double fforte: 5 73644 2	1971
Dmitry Sitkovetsky	C130852H Orfeo	1985
Itzhak Perlman	EMI Classics 7 49483 2	1986
Christiane Edinger	Naxos: 8.55057	1991
Lucy Van Dael	Naxos: 8.554423	1996
Rachel Podger	Channel Classics CCS 12198	1999

2.2 Scope and Methodology: The Observation Criteria

By comparing the sound recordings of Bach's *Solo Violin Sonata in A minor*, I intend to identify which recordings contain the influences of the romantic, the modernist, and the historically-informed. While 'post-modernist' recordings also certainly do exist (such as those that display an obvious influence of pop culture or technology), it was decided that inclusion of these recordings would overly complicate this particular study. This study will provide a further body of evidence in support of the claim that performers' understanding of the Baroque style has changed over the course of the twentieth century.

As a starting point for comparison, it was thought expedient to focus the observations around a select list of criteria. These criteria, summarised below in **Figure 2**, outline the parameters within which observation can take place. They were chosen because

of their frequent mention in both primary and secondary sources[4] and also because it was felt that these criteria are those most likely to reveal the most significance stylistic differences. This process is by its very nature, a subjective one: other writers might have chosen different criteria and achieved different results. But some narrowing of scope was necessary in order to allow the aural analysis to proceed in a more systematic and rigorous fashion.

The processes of observation employed here were, admittedly, also often subjective and sometimes ad hoc. This being said, every attempt was made to employ the most logical, practical, and useful methods of observation possible. Different approaches to observation were therefore made with each criterion.

[4] Examples of such sources include but not limited to: Leopold Auer, *Violin Playing as I Teach It* (Great Britain: Butler & Tanner, 1921).; John Butt, *Bach Interpretation : Articulation Marks in Primary Sources of J.S. Bach*, Cambridge Musical Texts and Monographs. (Cambridge [England] ; New York: Cambridge University Press, 1990). ; Dorottya Fabian, *Bach Performance Practice, 1945-1975: A Comprehensive Review of Sound Recordings and Literature* (England: Ashgate Publishing Limited, 2003).; Eitan Ornoy, "Recording of J.S. Bach's G Minor Adagio for Solo Violin: A Case Study " (2008).; Robert Philip, *Early Recordings and Musical Style* (Cambridge: Cambridge University Press, 1992).

Figure 2. The observation criteria

1. **Tempo**
    a. What is the metronome mark by movement?

2. **Tempo flexibility**
    a. What kinds of tempo fluctuations are used?
    b. How often do they occur?

3. **Rhythmic alterations**
    a. What sorts of rhythmic alterations occur, if any?

4. **Accentuation**
    a. To what degree does the performance emphasise the metrical hierarchy (accented strong beats)?
    b. What part of the chord does the performance emphasise and whereabouts on the beat? (i.e. is it always the top note and is it always played on the beat?)
    c. How do the performers play the chords? (i.e. rolled or as double-stops)

5. **Articulation**
    a. Does the performance articulate small motives or longer phrases?
    b. Is the performance varied or uniform (e.g. all legato) in its approach to articulation?
    c. What sorts of articulations are used?

6. **Use of portamento**
    a. To what degree is portamento used?
    b. How and when is portamento used?

7. **Vibrato**
    a. What sort of vibrato is used? (in terms of width and speed)
    b. How frequently is vibrato used?

8. **Ornamentation**
    a. Is additional ornamentation employed?
    b. What sort of ornamentation is used?
    c. Does the performance reflect an understanding of the improvisational nature of the much notated music?

2.3 The Three Schools of Performing Practice: An Introduction

A brief introduction to each of the three schools of performing practice follows here. A more detailed profile of each of the three schools is given in chapter four and **Figure 29** (page59).

2.3.1 The Romantic School

It is quite likely that performance practices from the early twentieth century largely continue nineteenth-century practices. This position is stated by Robert Philip's thus:

> ...the recordings of the early twentieth century have a more general relevance to nineteenth-century practice. Stated at its simplest, it is that none of the aspects of early twentieth-century style described in this book can have risen overnight.[5]

This would be expected, if one considers that the majority of musicians active in this period were educated in the nineteenth century, the period identified (in terms of musical history) with Romanticism.

The romantic style (applied to baroque performance practice) is marked by fluctuating tempos, the use of portamento, and a strong concern for expression. Moreover, according to Haynes, the romantics were obsessed with melody, giving it prime importance over and above the bass line (in distinction to historically-informed approaches). Haynes gives the example of Stokowski's performance of Bach's "Air on a G string," drawing attention to the way that this performance uses an imaginative and intuitive approach to dynamic nuance in shaping the phrase, rather than responding to the bass line or harmonies.[6]

[5] Philip, *Early Recordings and Musical Style*, 49.

[6] Bruce Haynes, *The End of Early Music: A Period Performer's History of Music* (New York: Oxford University Press, 2007), 35-36.

2.3.2 The Modernist School

The modernist influence became the norm in the 1930s and was, in large part, a reaction against the romantic style. As such, the defining characteristics are essentially restrictive ones, a rebellion against the perceived excesses of the preceding generation. Haynes describes the modernist style as defined by:

> ...unyielding tempo, literal reading of dotting and other rhythmic details, and dissonances left unstressed. Modern style is prudish, the musical equivalent of "political correctness" [...] correct, deliberate, consistent, metronomic, and regular.[7]

Modernist performances could sometimes be described as mechanical, characterised by great precision. In *The End of Early* Music, Haynes describes Salonen's performance of Bach's *Toccata and Fugue, BWV 565,* where he keeps a steady, controlled tempo, changing only slightly between sections, but never within a section.

In describing performances conducted by Menuhin, Goberman, and Fuller of the Adagio in Bach's *Brandenburg Concerto No. 1,* this is further confirmed by Dorottya Fabian as she states that:

> [Performances] from the 1960s and 1970s seem similarly to strive for a sustained line with hardly any caesuras, breathing, or lifting of the bow. Intense tone production, dynamically shaped long phrases, strict metre and rhythm, lack of pulse, playing all notes with equal importance and slurring them all together in a continuous legato characterize most of the versions.[8]

---

[7] Ibid., 49.

[8] Fabian, *Bach Performance Practice, 1945-1975: A Comprehensive Review of Sound Recordings and Literature*, 165.

2.3.3 The Historically-Informed School

The historically-informed school (sometimes now called HIP, historically-informed performance) is a recent movement, occurring primarily in the last fifty years, that is concerned with notions of authenticity in the performance of early music. Pivotal to this quest for authenticity is the use of period instruments (whether extant examples or reproductions), the use of autograph or Urtext editions (free of editorial additions), and the revival of practices of embellishment, articulation, and other stylistic concerns deduced from extent primary sources of the period in question. Historically-informed performance has also become a popular and successful movement, associated with a surge in classical CD sales, and a burgeoning early music industry. The actual authenticity of some practices aligned with this phenomenon, however, has been questioned. Certainly, questions of authenticity in performance practice continue to be the subject of lively scholarly debate.[9]

[9] See, for instance, Richard Taruskin, *Text and Act: Essays on Music and Performance* (New York: Oxford University Press, 1995); Nicholas Kenyon, *Authenticity and Early Music* (New York: Oxford University Press, 1988); Bernard D Sherman, *Inside Early Music* (New York: Oxford University Press, 2003); John Butt, *Playing with History: The Historical Approach to Musical Performance* (Cambridge: Cambridge University Press, 2002).

3 Exegesis, Observations, and Discussion: By Criterion

In this chapter, each of the observation criterion—tempo, tempo fluctuation, rhythmic alteration, accentuation, articulation, portamento, vibrato, and ornamentation—is dealt with in turn. A brief exegesis of each criterion is made, with reference to the primary and secondary literature. This is followed by the tabulation of observations (for the criterion in question) and a preliminary discussion analysing and commenting on these results.

3.1 Tempo

Tempo is one of the most fundamental aspects of performance whose understanding has been re-evaluated in the light of historical evidence. Before the invention of the metronome in 1815 by Maelzel, there had been no reliable form of measuring tempo accurately. Because of this, the practice of using Italian and French words to describe the tempo and character of the piece often led to ambiguity. Lawson, Stowell[10], and Donington[11] agree that in early seventeenth-century music the commonly used descriptive terms were normally confined to tempo, and less indicative of mood, but that converse became true in the later baroque. Donington therefore suggests that:

> [...] the tempo of a piece, which is usually indicated by a variety of familiar Italian terms, is derived from its general mood together with the fastest notes and passages which it includes. Proper attention to these considerations will prevent an allegro from being hurried and an adagio from being dragged[12]

---

[10] Handel's first movement of his Organ Concerto Op. 4 No.6 contains the contradictory time-word 'Andante allegro', which could mean a fast-moving Andante, a slow-moving Allegro, or more probably a lively, cheerful Andante.
Colin Lawson and Robin Stowell, *The Historical Performance of Music: An Introduction* (Cambridge: Cambridge University Press, 1999), 59.

[11] Robert Donington, *The Interpretation of Early Music* (Longon: Faber and Faber, 1977), 388.

[12] Ibid., 387.

In the classical and romantic eras, composers used a variety of Italian terms to indicate tempo but also had treatises that provided clear descriptions of each term's musical characteristics. The invention of the metronome in 1815 eased many problems of determining tempo but also raised other issues as it cannot be used in all conditions (such as when much rubato is being used).

There have been many attempts in understanding and addressing the tempo of Bach's works, given that there is often no tempo marking. The subject of tempo is therefore a complex and subjective matter, differing between performers. Authors such as Lester[13], Fabian[14], Haynes[15] and Schröder[16] have commented on the various traditions of baroque performance practice with regards to tempo and suggest that there is a widespread range of metronomic markings. According to Haynes, the romantics' interpretation of a baroque tempo is usually slower than modernist or historically-informed interpretations.[17]

3.1.1 Results and Discussion

Tempo analysis was measured using a stopwatch in a similar approach to that used by Eitan Ornoy[18]. The tempo at the beginning of the movement (comprising two bars) is calibrated three times to the hundredth-of-a-second, to derive a mean estimate of the tempo. I used a KORG KDM-2 Digital metronome that allows me to "tap in" a beat, and which provides a

---

[13] Joel Lester, *Bach's Works for Solo Violin: Style, Structure, Performance* (New York: Oxford University Press, 1999), 137.

[14] Fabian, *Bach Performance Practice, 1945-1975: A Comprehensive Review of Sound Recordings and Literature*, 97.

[15] Haynes, *The End of Early Music: A Period Performer's History of Music* 54.

[16] Grave - ♪ = 58; Fugue - ♩= 74; Andante - ♪ = 66; Allegro - ♩= 84;

Jaap Schröder, *Bach's Solo Violin Works: A Performer's Guide* (Great Britain: St Edmundsbury Press Ltd, 2007), 98-113.

[17] Haynes, *The End of Early Music: A Period Performer's History of Music* 54.

[18] Ornoy, "Recording of J.S. Bach's G Minor Adagio for Solo Violin: A Case Study ", 10.

visual readout of the metronome marking in real time. The tables below provide the results for individual time trials within each recording.[19] The quaver beat was then recorded as a line graph format in order to make a convenient visual comparison of the tempi used across the fourteen recordings.

Through the various line graphs, it is easy to point out that although there are discrepancies; the Grave (**Figure 3)** and Fugue (**Figure 4**) follow a similar shape while the Andante (**Figure 5**) and Allegro (**Figure 6**) are also similar in tempi across the twentieth century. This result is not surprising, however, as the first and second movements are usually played segue, similar to the third and fourth movements.

Figure 7 merges all four graphs into one, for easy comparison of the tempo of all fourteen recordings for all four movements. Curiously, Edinger's recording appears to be somewhat of an outlier, being the slowest in every movement. It is therefore possible to judge the degree of consistency of each recording, in its approach to tempo.

While there is a wide range of tempi exhibited, it is difficult to ascertain any clear chronological pattern. Donington, whose views might be seen to represent a historically-informed approach, suggests that most baroque slow movements need to be played faster, and that most fast baroque movements need to be played slower than first thoughts might suggest.[20] However, no such clear trend emerges hear.

[19] The tempo of the crotchet beat was then calculated by dividing the number of beats in the timed segment by the average time of the played fragments, and from the crotchet beat, the quaver beat was then calculated.

[20] Donington, *The Interpretation of Early Music*, 387.

Figure 3. Tempi (Grave)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Time Trial 1 (s)	24.9	21.9	20.91	24.19	19.4	22.31	27.64	21.86	24.93	22	24.76	28.87	21.2	21.76
Time Trial 2 (s)	24.77	21.89	20.77	23.97	19.38	22.27	27.63	21.81	24.95	21.92	24.84	28.92	21.2	21.7
Time Trial 3 (s)	24.75	21.82	20.87	24.05	19.27	22.32	27.7	21.84	24.9	21.95	24.8	28.91	21.2	21.79
Crotchet Beat	19.37	21.95	23.04	19.84	24.81	21.52	17.35	21.98	19.26	21.86	19.35	16.61	22.64	22.07
Quaver Beat	38.74	43.89	46.09	39.69	49.61	43.05	34.71	43.96	38.51	43.72	38.7	33.22	45.28	44.14

b)

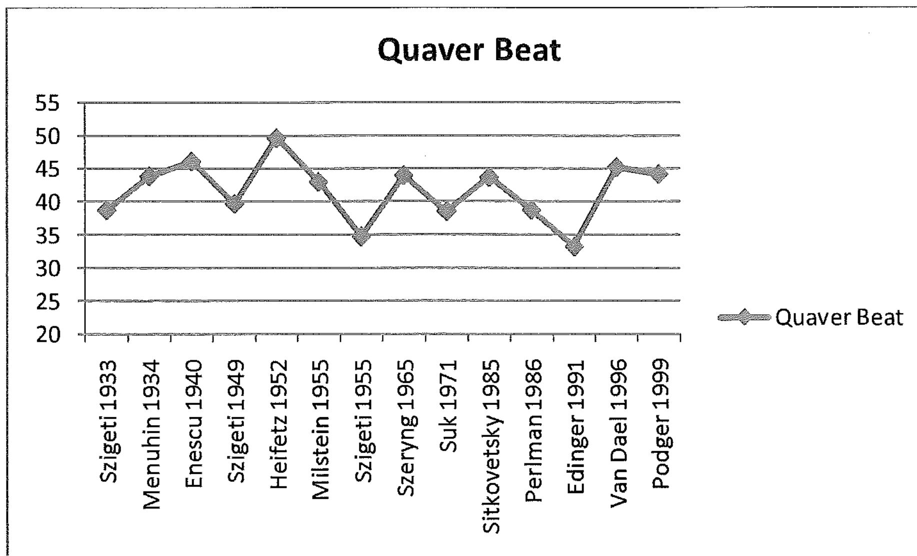


Figure 4. Tempi (Fuga)

a)

	Szigeti 1933	**Menuhin 1934**	**Enescu 1940**	**Szigeti 1949**	**Heifetz 1952**	**Milstein 1955**	**Szigeti 1955**	**Szeryng 1965**	**Suk 1971**	**Sitkovetsky 1985**	**Perlman 1986**	**Edinger 1991**	**Van Dael 1996**	**Podger 1999**
Time Trial 1 (s)	2.99	2.78	2.96	3.07	2.59	2.7	3.13	3.52	3.34	3.31	3.34	4.17	3.15	2.83
Time Trial 2 (s)	3	2.84	2.97	3.06	2.53	2.7	3.11	3.47	3.27	3.27	3.32	4.19	3.08	2.79
Time Trial 3 (s)	2.98	2.78	2.97	3.06	2.57	2.7	3.13	3.47	3.26	3.26	3.31	4.32	3.09	2.86
Crotchet Beat	80.27	85.71	80.9	78.35	93.63	88.89	76.84	68.83	72.95	73.17	72.22	56.78	77.25	84.91

b)

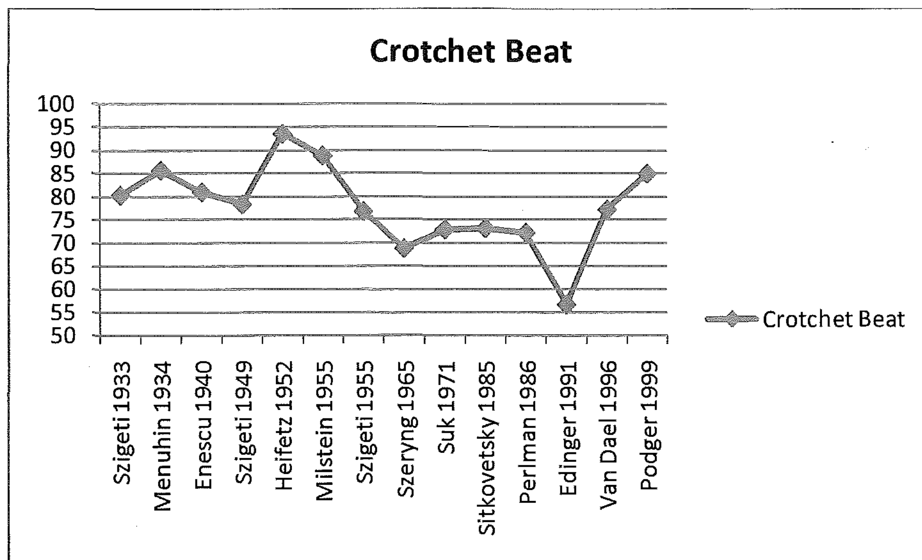


Figure 5. Tempi (Andante)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Time Trial 1 (s)	11.11	12.47	11.05	10.4	12.47	11.65	11.6	11.36	11.48	12.72	12.02	13.85	10.98	9.76
Time Trial 2 (s)	11.16	12.56	11.28	10.36	12.49	11.68	11.45	11.31	11.38	12.65	12.05	13.96	10.93	9.74
Time Trial 3 (s)	11.2	12.55	11.26	10.36	12.46	11.65	11.47	11.34	11.42	12.5	12.13	13.91	11	9.71
Crotchet Beat	32.27	28.74	32.15	34.7	28.86	30.87	31.29	31.76	31.51	28.52	29.83	25.89	32.82	36.97
Quaver Beat	64.54	57.48	64.3	69.41	57.72	61.75	62.57	63.51	63.01	57.03	59.67	51.77	65.63	73.95

b)

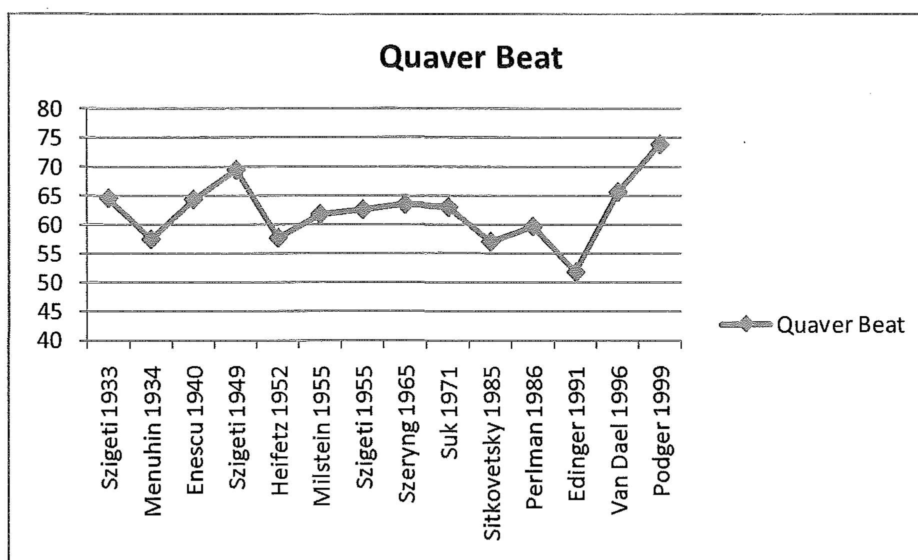


Figure 6. Tempi (Allegro)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Time Trial 1 (s)	4.73	5.99	5.16	4.72	5.49	5.37	5.5	6.67	5.9	6.09	5.36	6.99	5.13	5.59
Time Trial 2 (s)	4.73	6.01	5.16	4.77	5.38	5.38	5.52	6.66	5.89	6.22	5.36	7.05	5.16	5.78
Time Trial 3 (s)	4.74	5.99	5.17	4.77	5.45	5.48	5.41	6.7	5.94	6.2	5.35	6.99	5.25	5.63
Crotchet Beat	101.4	80.04	92.96	100.98	88.24	88.72	87.64	102.86	81.22	77.88	89.61	68.47	92.66	84.71

b)

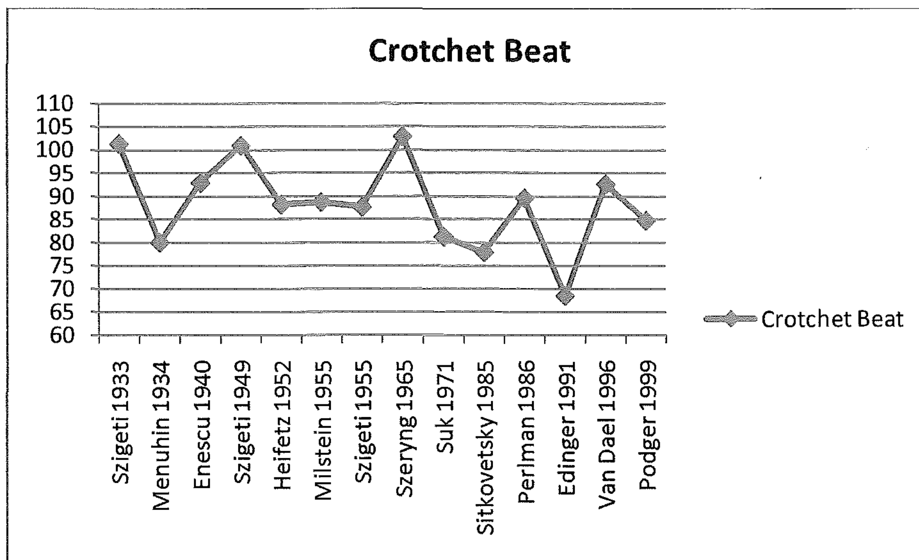
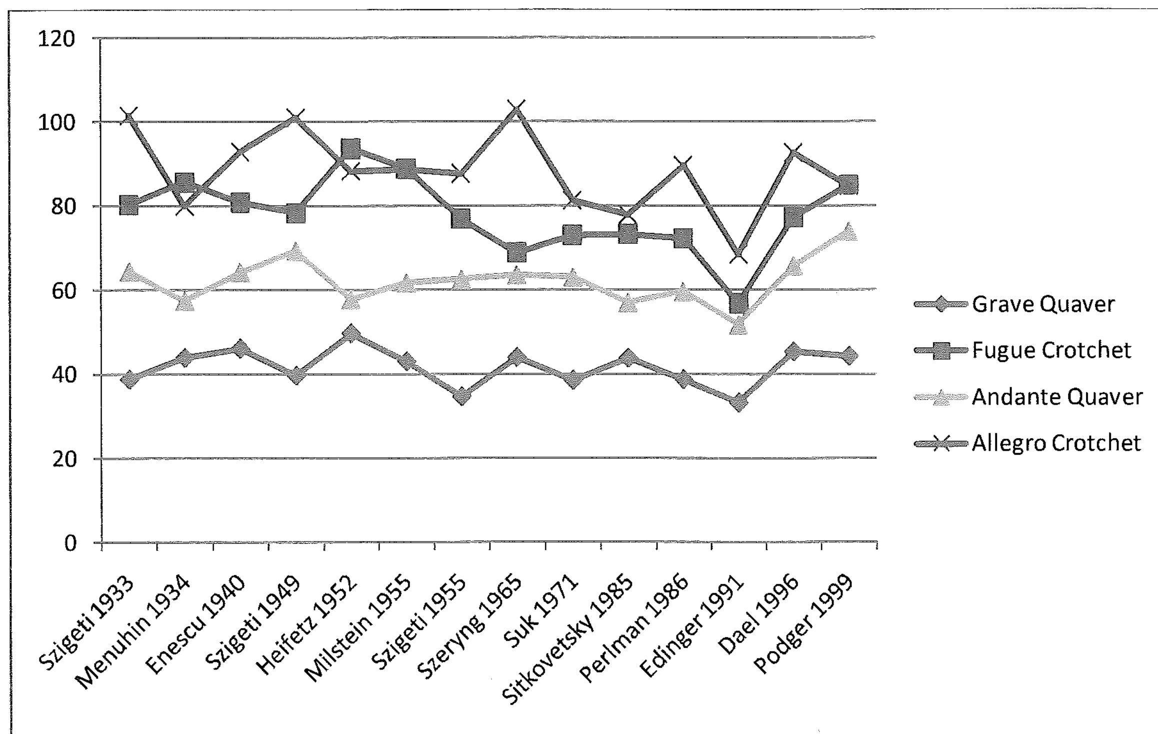


Figure 7. Tempi in all four movements



3.2 Tempo flexibility

Flexibility in tempo was considered a vital element in baroque performance practice. For example, recitative at the turn of the seventeenth century implied considerable rhythmic freedom. It could also be logical to think that tempo flexibility would have been natural and common before the advent of the metronome. While rubato (literally 'stolen time') is normally associated with the romantic style, tempo flexibility does have considerable relevance to baroque music. This is underscored by Lawson and Stowell, who argue that for music of the seventeenth and early eighteenth century, "the chief means of achieving freedom for expressive melodic effect (as opposed to overall tempo) was tempo rubato."[21] Eitan Ornoy[22] elaborates further, arguing that the use of rhythmic flexibility or 'rubato' can either be presented as 'expressive' or 'structural' and are restricted by multiple levels of boundary: by a specific section, phrase, or bar. Changes of tempo between sections may be marked by a change of time signature, or by a specific time-word but it is more often left to the responsibility of the performer.

Similarly, Donington advocates considerable freedom in the performance of early music.[23] However, he distinguishes between "borrowed time" and "stolen time," the latter being permissible but less pervasive in baroque music. In the case of "borrowed time," specific notes are accelerated to make up the time that has been lost, leaving the listener to accept that the underlying tempo has been undisturbed. In "stolen time" the underlying tempo is resumed after stretching the tempo, but restitution is not made for the time taken in doing so. The term *tempo rubato* has been used to describe both cases but its literal meaning applies to the latter. An important case of stolen time in baroque music is the use

[21] Lawson and Stowell, *The Historical Performance of Music: An Introduction*, 62.

[22] Ornoy, "Recording of J.S. Bach's G Minor Adagio for Solo Violin: A Case Study ", 18.

[23] Donington, *The Interpretation of Early Music*, 429-32.

of rallentando at a cadence. Clearly, the performer has to differentiate between a cadence that immediately moves on to the next subject, and from one that brings a section of the music to a close. But with regards to an overly modernist approach, Donington states that:

> One of our most harmful reactions against over-romanticising early music has been the sewing-machine rhythm. No music, not even music based mainly on sequences, will stand a completely rigid tempo [...] A baroque movement taken with no internal rallentandos, and then jerked to an abrupt halt by putting on all the brakes within a bar or two of the finish sounds ruthlessly insensitive and rigid: like the sewing-machine rhythm referred [...] above.[24]

Tempo rubato is also intricately linked with accentuation, but can also be affected by ornamentation and improvisation to incorporate more notes than notated.[25] Flexibility in tempo can also, however, be affected by arbitrary, unwritten accelerandos and ritardandos primarily to do with the performer's choice of expression and musical phrasing. Research by Dr. Eitan Ornoy[26]and Dolmetsch[27] confirm this idea as well as suggest that physical challenges set technical limitations, such as executing chords and position changes, may have an effect on the timing of the beat.

In the early eighteenth century, Hudson[28] describes rubato in baroque music as the melody anticipating or retarding for the sake of expression but returning to the exact tempo, as determined by the bass. This differs from the romantic approach, where rubato is applied more liberally, and where there is more obvious change of tempo at the level of the phrase. On the other hand, the modernist approach favors precision, and where variations in tempo exist they are less pronounced.

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[24] Ibid., 429, 33.

[25] Lawson and Stowell, *The Historical Performance of Music: An Introduction*, 62.

[26] Ornoy, "Recording of J.S. Bach's G Minor Adagio for Solo Violin: A Case Study ", 15.

[27] Arnold Dolmetsch, *The Interpretation of the Music of the Xvii & Xviii Centuries* (London: Novello & Company Limited, 1946), 284.

[28] Richard Hudson, "Rubato," In *Grove music online the world's premier authority on all aspects of music,*. ([Oxford ; New York]: Oxford University Press.), http://0-www.oxfordmusiconline.com.library.ecu.edu.au. (accessed August 9, 2010)

According to Lester[29], most performances of Bach's solo violin works accept rubato on the slow side of the base metronomic tempo. Rubato played faster than the base metronomic tempo, however, is frowned upon and considered to be "rushing". Hudson notes that this view is also reflected in Türk, writing in 1802.[30]

Despite the apparent justifications for tempo flexibility, Lester notes that most recordings of Bach's *Solo Violin Sonata in G minor* employ very little:

> ...most recorded performances by twentieth-century violinists tend to keep a virtually metronomic tempo throughout, such as Yascha Heifetz's and Yehudi Menuhin's 1935 recordings. The same is true of many more recent violinists, whether they play on modern instruments or period instruments. Recordings in the 1980's by violinists as markedly different as Gidon Kremer, Itzhak Perlman, and Jaap Schröder generally keep a fairly constant beat throughout the *Adagio*, despite other considerable differences between their interpretations.[31]

3.2.1 Results and Discussion

The KORG KDM-2 Digital metronome, which allows me to "tap in" a beat, also provides a visual readout of the metronome marking in real time. This allowed me to gauge the amount of tempo variation taking place, and thus make an approximate estimate of the amount of rubato employed.

In order to illustrate my findings, I have used a table and a graph for each movement. The table describes the type of rubato (i.e. by phrase, bar, or section), how often it occurs, and whether or not it is driven by the bass line (as per Hudson's description). Furthermore, the amount of ritardando used at cadences is classified on a scale of one to five (one being little or no rubato, five being excessive use) and these judgments are displayed graphically.

[29] Lester, *Bach's Works for Solo Violin: Style, Structure, Performance*, 47.

[30] Hudson, "Rubato."

[31] Lester, *Bach's Works for Solo Violin: Style, Structure, Performance*, 48.

Figure 8. Tempo flexibility (Grave)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	van Dael 1996	Podger 1999
Many fluctuations in tempo	**By phrase**		**By phrase**	**By phrase**			**By phrase**			**By phrase**			**By phrase**	**By phrase**
Few fluctuations in tempo		●			●	●		●	●		●	●		
Rubato determined by Bass								●	●	●	●		●	●

b)

1 – Little or no amount
2 – Some amount used occasionally
3 – Moderate amount
4 – Liberal amount
5 – Excessive amount

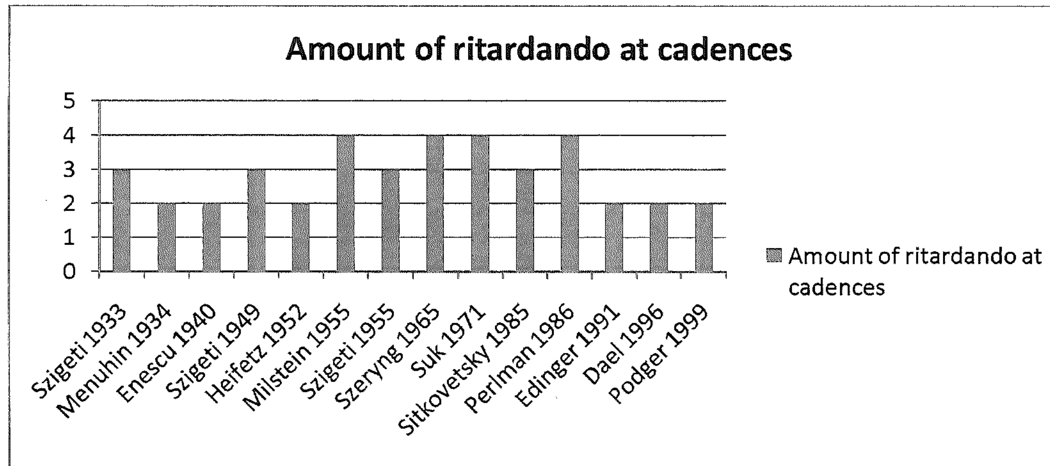

Figure 9. Tempo flexibility (Fuga)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	van Dael 1996	Podger 1999
Many fluctuations in tempo														
Few fluctuations in tempo	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rubato determined by Bass						•			•	•	•	•	•	•

b)

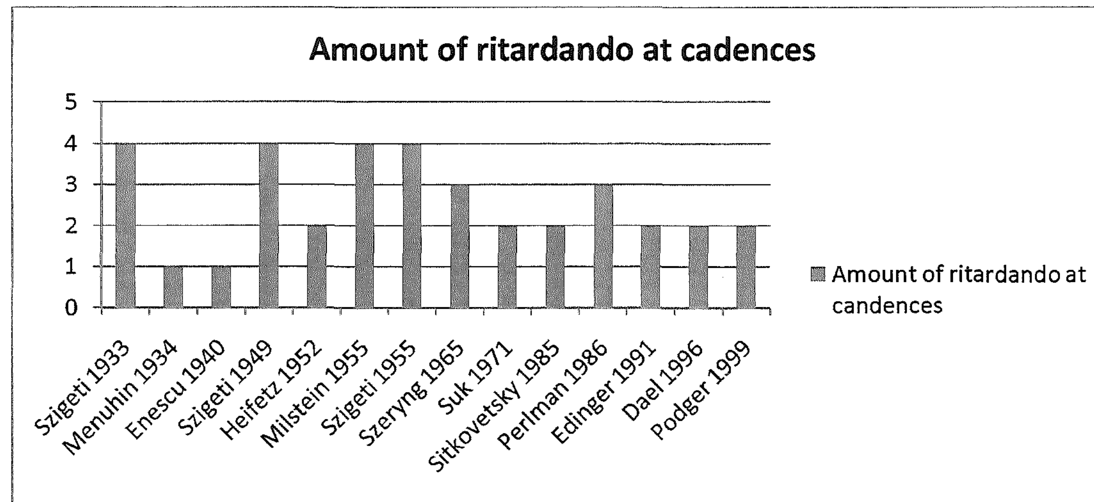

Figure 10. Tempo flexibility (Andante)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	van Dael 1996	Podger 1999
Many fluctuations in tempo													**By phrase**	**By phrase**
Few fluctuations in tempo	•	•	•	•	•	•	•	•	•	•	•	•		
Rubato determined by Bass						•			•		•		•	•

b)

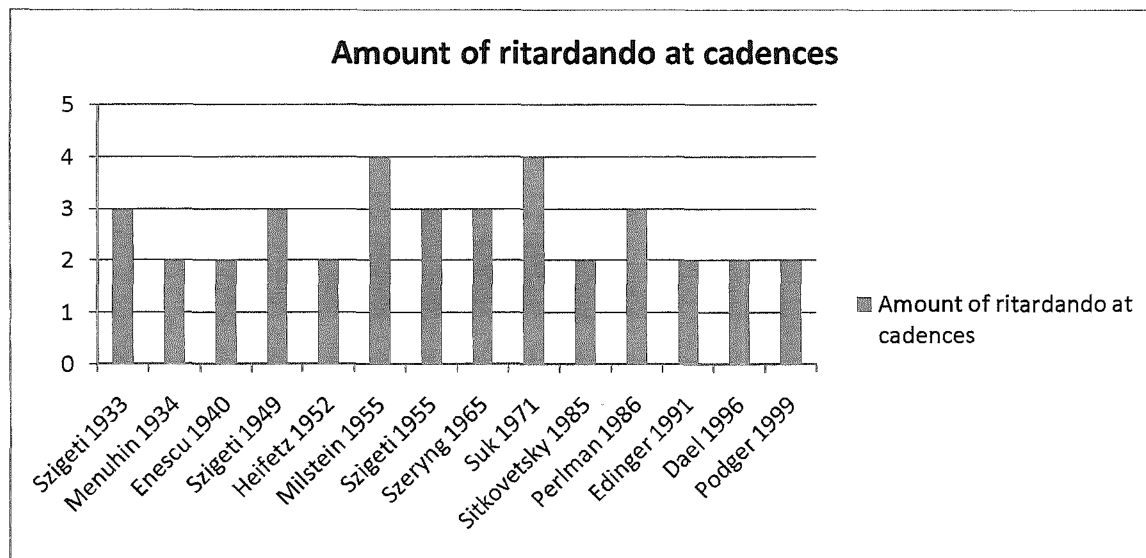

Figure 11. Tempo flexibility (Allegro)

a)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	van Dael 1996	Podger 1999
Many fluctuations in tempo														
Few fluctuations in tempo	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rubato determined by Bass														

b)

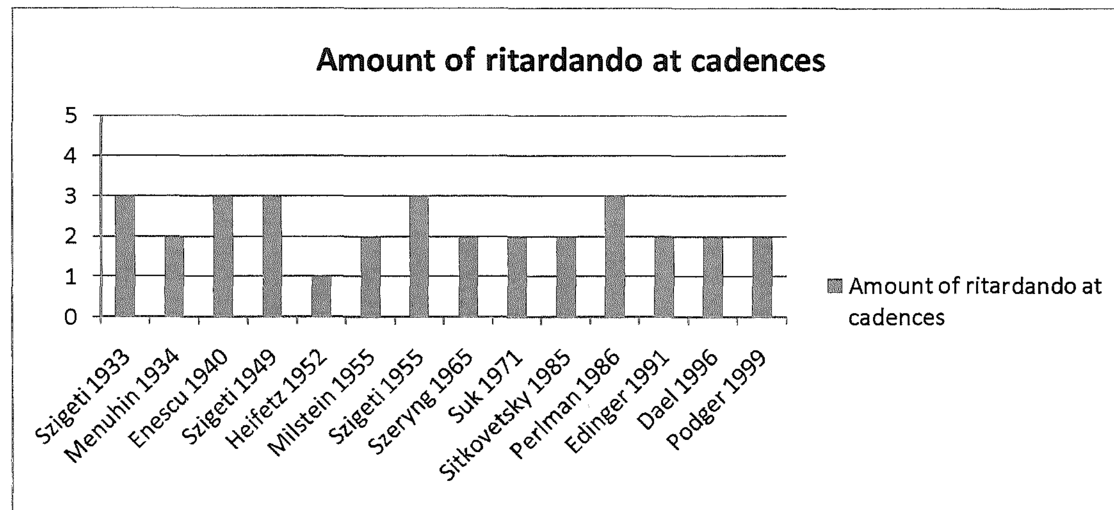

Figure 8a demonstrates that a wide variety of approaches to rhythmic flexibility occur in the Grave. For the other movements (shown in **Figures 9, 10,** and **11**), differences lie primarily in the amount of ritardando used at cadences. The only exception to this is with the *Andante* movement (**Figure 10**) where Van Dael (1996) and Podger (1999) have a more liberal treatment of tempo rubato created through the phrasing. Presumably, this is due to the more lyrical nature of this movement. It is somewhat surprising to note, however, that the other early twentieth century recordings do not appear to share this same degree of flexibility here.

With regards to the *Grave* movement (**Figure 8**), it is possible to observe that across all of Szigeti's recordings, there is a significant amount of tempo fluctuation performed through phrasing, with a moderate amount of retardation at cadences. This is characteristic of the more typical romantic performance practice idea, where rubato is considered as a characteristic feature and commonly as an expressive device.

Similarities also occurred between the recordings of Milstein (1955), Szeryng (1965), Suk (1971) and Perlman (1986). Throughout these four recordings, the performers rarely changed tempo throughout the movement, but used a liberal amount of retardation at cadences. This is characteristic of a more modernist performance practice, and was created as a reaction against over-romanticising early music.

With the recordings by Van Dael (1996) and Podger (1999), both performers contain frequent fluctuations in tempo organized by the bass but only occasionally used ritardandos at the cadences. This is characteristic of a historically-informed performance practice. While Sitkovetsky's 1985 recording holds similar properties to Van Dael's and Podger's (in that it has many fluctuations in tempo organized by the bass and creates the rubato through phrasing); it does, however, retard at cadences more frequently.

3.3 Rhythmic Alterations

The main focus of rhythmic alteration in this dissertation is through the use of over-dotting and *inégales*, mainly situated with historically-informed practices. Playing *inégale* (literally, 'unequal') is to make certain divisions of the beat move in alternately long and short values, despite being written equally. 'Over-dotting' (sometimes called double-dotting) is the degree in which the length of a dotted note is exaggerated (making the following notes shorter and quicker in compensation).[32]

Notes inégales were first practiced in France and began to take on an important role in the late sixteenth century. The typical rule of *notes inégales* from the seventeenth century until the French Revolution in the late eighteenth century is that in duple meters, *notes inégales* applies to all notes moving stepwise that have a duration of a quarter of that designated by the denominator of the meter. For a triple or compound meter, *notes inégales* applies to the note values that are half of the designated denominator.[33]

There are however, exceptions to the rule, as in slow meters - e.g. in cut common time, the semiquaver (as opposed to the quaver) is made unequal. According to Lawson and Stowell, inequality never applied to notes that were slurred or dotted, when articulation was placed over the notes that signified equality (i.e. staccato or strokes), when the notes moved by leaps, or with repeated notes.[34]

With regards to music outside France, research by writers such as Babitz[35], Donington[36], and Sachs[37] enlarged Dolmetsch's views in order to show that inequality was

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[32] David Fuller. "Notes inégales." In *Grove Music Online*. *Oxford Music Online*, http://0-www.oxfordmusiconline.com.library.ecu.edu.au/subscriber/article/grove/music/20126 (accessed June 9, 2010).

[33] Don Michael Randel, *The Harvard Dictionary of Music: Fourth Edition* (2003), 572.

[34] Lawson and Stowell, *The Historical Performance of Music: An Introduction*, 67.

[35] Sol Babitz, "A Problem of Rhythm in Baroque Music," *The Musical Quarterly* 38, no. 4 (1952).

frequently used in Baroque music in all countries, although not necessarily used in all styles. Dolmetsch's point-of-view was that notation in 'old' music was not played with perfect accuracy. An interesting quote from Couperin states that "we write differently from what we play."[38] Alterations of time and rhythm were thus considered important and practiced quite frequently. Babitz also confirms this idea by stating that the fastest notes of a *moderate tempo* or *adagio* must be played a little unevenly despite having the appearance of the same value. He writes:

> Quantz, of course, uses the term "passing notes" only in the sense of metrically weak ones, not in the sense of dissonant non-chord tones.[...]Thus the "initial" notes of every group, namely the first, third, fifth, and seventh, must be held somewhat longer than the "passing" ones, namely the second, fourth, sixth, and eighth.

3.3.1 Results and Discussion

The lack of application of rhythmic alterations throughout these performances (as demonstrated in **Figure 12**) is notable. Partly, this could be explained by the fact that this is an Italianate sonata, not a French-style suite. However, I had initially expected that later historically-informed violinists would include some rhythmic alterations in their performances; but only Van Dael performs *notes inégales* in the *Grave* (and rarely). Podger stays to an almost stable, unaltered rhythm. Oddly enough, Szigeti uses a slight degree of *inégales* in the *Allegro* and this stays constant across all his recordings, despite the recorded year.

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[36] Donington, *The Interpretation of Early Music*, 458.

[37] Curt Sachs, *Rhythm and Tempo: A Study in Music History* (New York: W. W. Norton & Company, Inc., 1953), 277.

[38] Dolmetsch, *The Interpretation of the Music of the Xvii & Xviii Centuries*, 53.

Figure 12. Rhythmic alterations

GRAVE	None occur in the recordings, with the exception of Van Dael's recording in 1996 as she uses Lombard rhythm[39] as well as *notes inégales* (Ex. Semiquavers in Bar 2 and 5)
FUGA	None occur across all recordings
ANDANTE	None occur across all recordings
ALLEGRO	Only occurs in Szigeti's 1933, 1949, and 1955 recording where he does an inégales in the first two semiquavers of every minim beat in bars 9-10 and bar 38.

[39] Lombard rhythm is a rhythm associated with Baroque music which is a rhythmic pattern consisting of a short note value followed by a long one. This is the reverse of *notes inégales* which is the long-short rhythmic pattern. It is also known as the "Scotch Snap" Randel, *The Harvard Dictionary of Music: Fourth Edition*, 472.

3.4 Accentuation

Accentuation is a tool used by the performer in order to show expression and also contributes shape and meaning to the music in a way that vitalizes the listener to understand both the performer's and composer's intentions.[40] According to Lawson and Stowell, accentuation can be conveyed in two ways. I can either be conveyed by stress resulting from a particular note being prescribed as having an accent or sforzando, or by prolongation involving adherence to the beat hierarchy of the bar as well as the emphasis of important notes.[41]

Throughout the Baroque period, natural rhythmic stresses were implied by the beat hierarchy of the meter, and were also partly dependant on tempo as well as details of harmony, melodic contour, and phrasing. On the other hand, the romantic obsession caused them to strive for long legato lines with less obvious beat hierarchy, but with deliberate use of dynamic nuance and expression. In contrast to the romantic, the modernist style is often described as "clockwork-like" or "wallpaper music"[42] as all notes and all beats are given equal weight and importance. Another interesting point of difference is in the arpeggiations of chords.

The way violinists perform chordal progressions while playing Bach is important in understanding the way that they interpreted the accentuations of the beat. Due to time restrictions, I will be focusing on the Grave and the Fugue as they employ the most frequent and difficult chordal progressions in this sonata. According to Andrew Manze, the bass of a chord is supremely important as it defines the nature of the harmony, whether in root position or inversion, and it often shows the harmonic direction of a specific phrase— in

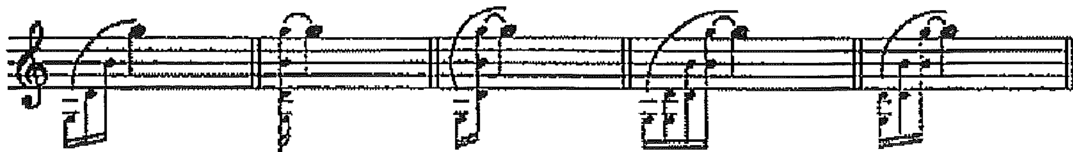
[40] Lawson and Stowell, *The Historical Performance of Music: An Introduction*, 55.

[41] Ibid., 56.

[42] Haynes, *The End of Early Music: A Period Performer's History of Music* 59.

simple terms, the bass of the chord is the beat—and therefore one must avoid playing the chords upside down.[43] This is in direct opposition to the modernist point of view where the common practice is to arpeggiate the chord downward by placing importance on the lower note, when portraying the lower and inner voices. **Figure 13** below shows that, according to Manze, there are multiple ways of actually arpeggiating a chord in the baroque style.

Figure 13 - Different arpeggiations for chords[44]



There is no example provided, however, for a chord to be broken in a 'bottom two-top two' fashion, which is the more common way throughout the twentieth century. It is thus possible to assume that this is a nineteenth century practice of breaking chords used to imply power and intensity, as well as being associated with a preference for melody (placing the top dyad on the beat).

3.4.1 Results and Discussion

Figures 14, 15, 16, and **17** below show how I analysed and examined each recording according to the accentuation of phrasing and chords. The recordings were first differentiated as to whether their chords were arpeggiated/double-stopped upwards (bass to treble) or downwards (vice-versa). The phrasing was then analysed as this plays an important part in differentiating the various schools of performing practice. For example, if the performers followed the metrical hierarchy of the beats, they would be placed in the

[43] Anthony Burton, *A Performer's Guide to Music of the Baroque Period* (London: The Associated Board of the Royal Schools of Music (Publishing) Limited, 2002), 78.

[44] Ibid.

Romantic or historically-informed school. If they played every note with almost equal weight, they are considered more modernist in orientation.

Other parameters included which part of the chord was emphasized, and whereabouts on the beat it was played (i.e. if the melody or the bass was played on the beat). The final parameter of observation employed was whether the violinists double-stopped or arpeggiated the chords. My expectations were that a majority of the violinists would double-stop the chord (usually in a two-by-two fashion) as it is considered the more common way of practising chords throughout the twentieth century.

Figure 14. Accentuation (Grave)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Arpeggiates chord upwards	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Arpeggiates chord downwards														
Every note has equal weight						●			●	●	●			
Follows the metrical structure	●	●	●	●	●		●	●				●	●	●
Bass on the beat								●	●	●	●		●	●
Melody on the beat	●	●	●	●	●	●	●					●		
Double-stops the chords (broken)	●	●	●	●	●	●	●	●	●	●	●	●		
Arpeggiates the chords													●	●

Figure 15. Accentuation (Fuga)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Arpeggiates chord upwards	●	●	●	●		●	●				●		●	●
Arpeggiates chord downwards					●			●	●	●		●		
Every note has equal weight								●	●	●	●			
Follows the metrical structure	●	●	●	●	●	●	●					●	●	●
Bass on the beat						●			●	●	●	●	●	●
Melody on the beat	●	●	●	●	●		●	●						
Double-stops the chords (broken)	●	●	●	●	●	●	●	●	●	●	●	●		
Arpeggiates the chords													●	●

Figure 16. Accentuation (Andante)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Arpeggiates chord upwards	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Arpeggiates chord downwards														
Every note has equal weight						●		●	●	●	●			
Follows the metrical structure	●	●	●	●	●		●					●	●	●

Figure 17. Accentuation (Allegro)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Every note has equal weight						●		●	●	●	●			
Follows the metrical structure	●	●	●	●	●		●					●	●	●

The results indicate some clear delineation of the three schools. Szeryng, Suk, Sitkovetsky, and Perlman, are all distinguished as modernist by giving all notes relatively equal value, by putting the bass on the beat in the arpeggiation of chords in the Grave, and some downwards arpeggiation of chords in the Fuga (when the subject was in a lower voice). The performances of Van Dael and Podger are clearly identified as historically informed due to their upwards arpeggiation of chords, placement of the bass on the beat, and adherence to metrical accents. All performers within the first half of the twentieth century (pre-1950) accented their broken chords in such a way that the melody was on the beat and the bass was played before the beat. This is highly suggestive of romanticism, and confirms the fact that the earliest part of the twentieth century was in fact highly influenced by the romantic style of performance.

What is similar between all recordings (apart from the confirmed historically-informed ones) is that all violinists broke their four-note chords according to the more romantic style of the 'bottom two- top two' fashion. Szigeti, in all of his recordings, plays a majority of his four-note chords straight i.e. a simultaneous sounding of all the notes of the chord, but breaks his chord in the 'bottom two-top two' fashion described earlier when technical influences prevent him from doing otherwise.

3.5 Articulation

Throughout the Baroque era, the theory in musical aesthetics called the *Affekt (doctrine of the affections)* was popular among Baroque theorists and composers. Butt's monograph *Bach Interpretation: Articulation Marks in Primary Sources of J.S. Bach*[45] demonstrates the importance of using articulation to define small motivic segments. He quotes Leopold Mozart in implying that the performer's knowledge of the *Affekt* would also have influenced their approach to articulation:

> One must first know how to make all variants of bowing; one must understand how to introduce weakness and strength in the right place and in the right quantity: one must learn to distinguish between the characteristics of pieces and to execute all passages according to their own particular flavour.[46]

Articulation, in its most direct sense, describes the way that the notes are to be connected. According to the *World Book Dictionary Volume One*,[47] articulation is referred to as "the state of being joined."

Bach's *Solo Violin Sonata in A minor* is composed of many small, consecutive motivic segments. A historically-informed performance should create an articulation that clearly delineates these small motivic segments (like the parsing of words), without sacrificing the overall effect of the created texture. This is totally opposite to the romantics' tendency towards long phrases and legato. The modernist employs a sameness of articulation through prolonged musical sections, whether the prolonged application of an extreme, seamless legato (even across phrases), or the prolonged application of staccato. **Figures 18, 19, 20,** and **21** organize these various types of articulation into which are the most present, per movement, throughout the recordings.

[45] Butt, *Bach Interpretation : Articulation Marks in Primary Sources of J.S. Bach.*

[46] Ibid., 38.

[47] "The World Book Dictionary: Volume One a-K," ed. Robert K. Barnhart Clarence L. Barnhart (Chicago: William H. Nault, 1992), 117.

3.5.1 Results and Discussion

Figure 18. Articulation (Grave)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Articulate small motives													●	●
Articulate longer phrases	●	●	●	●	●		●					●		
Seamless legato						●		●	●	●	●			
Other articulation used														

Figure 19. Articulation (Fuga)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Articulate small motives						•							•	•
Articulate longer phrases	•	•	•	•	•		•					•		
Seamless legato								•	•	•	•			
Other articulation used	Uses spiccato for some semiquaver passages. First bar of motif is played staccato; second bar is slurred two in a bow (legato)			Uses spiccato for some semiquaver passages. First bar of motif is played staccato; second bar is slurred two in a bow (legato)	First bar of motif is played staccato; second bar is slurred two in a bow (legato)		Uses spiccato for some semiquaver passages. First bar of motif is played staccato; second bar is slurred two in a bow (legato)			Seamless in the way that all notes have the same articulation without change. The articulation in itself is more detached rather than legato		Plays every note quite legato despite having the melodic phrasing and shape		

Figure 20. Articulation (Andante)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Articulate small motives													•	•
Articulate longer phrases	•	•	•	•	•		•	•				•		
Seamless legato						•			•	•	•			
Other articulation used												Plays every note quite legato despite having the melodic phrasing and shape		

Figure 21. Articulation (Allegro)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Articulate small motives													•	•
Articulate longer phrases	•	•	•	•	•		•					•		
Seamless legato						•		•	•	•	•			
Other articulation used	Differentiates the forte and piano by playing the forte legato, and the piano spiccato	Differentiates the forte and piano by playing the forte legato, and the piano slightly detached	Differentiates the forte and piano by playing the forte legato, and the piano spiccato	Differentiates the forte and piano by playing the forte legato, and the piano spiccato	Slurred the demisemiquavers in the 3rd and 4th bar despite being written separate in the autograph score		Differentiates the forte and piano by playing the forte legato, and the piano spiccato	Accents each beat slightly				Plays every note quite legato despite having the melodic phrasing and shape	Follows the natural bar-by-bar phrase	Follows the phrasing of the harmony, and sometimes lets the bow off the string naturally. Follows the natural bar-by-bar phrase

When analysing the type of articulation across all performances across the century, it is quite easy to note the resulting pattern across all the recordings. Across the first half of the twentieth century, all performers articulated the longer phrasing and melody rather than the smaller motifs. This is congruent to the nineteenth century style and the romantic style, characterised by long phrases and legato.

It was with Milstein's 1955 recording that I first observed any change in general articulation and phrasing. For a majority of the movements, Milstein performed with a described "seamless legato" – characteristic of the modernist school of performance practice – but performed the *Fuga* (Fugue) by concentrating on the smaller two-bar motif on which the whole fugue is based. The observation of 'seamless legato' lasted until the latter part of the twentieth century where Edinger (1991) produced a more romantic style of performance of articulating the longer phrases.

The last two recordings of Van Dael (1996) and Podger (1999) are characteristic of the historically-informed performance practice, where the articulation of the smaller motif was vital.

With regards to using other types of articulation that were not prescribed in the autograph score, the most common areas of application were the *Fugue* and the *Allegro*. In the fugue, the most common difference was where the second half of the motif (four straight quavers) is slurred two-in-a-bow (legato) yet Bach writes them as separate. The other main difference is in the first six bars of the Allegro where motifs ranging from half a bar to a bar is played forte, and then repeated piano. Although Bach did not differentiate any bow strokes, a majority of the romantic performers differentiated the forte and piano by playing the forte legato, and the piano spiccato.

3.6 Use of Portamento

Portamento is the term used to describe the audible sliding between notes and was extensively used throughout the nineteenth and early twentieth century as the primary means of showing individual expression. According to Carl Flesch[48], there are two types of slides – the technical, and the expressive. The technical shift (dubbed as the glissando by Flesch) should occur as rapidly and unnoticeably as possible, whereas the expressive shift (dubbed as the portamento) should originate through the expressive will of the performer. This is further confirmed through Leopold Auer when he states that:

> ...when used in moderation and with good taste, [the portamento is] one of the great violin effects, which lends animation and expression to singing phrases. [It] becomes objectionable and inartistic – resembling more than anything else, it seems to me, the mewing of a cat – when it is executed in a languishing manner, and used continually.[49]

The Modernist's view towards portamento was to create its sudden demise in the 1930's. Sir Adrian Boult described that portamento, like vibrating, was used as a way of bringing tears to the eyes of the young ladies.[50] A distinct feature of the Modernist influence was that 'bringing tears to the eyes of young ladies' was no longer a priority.

Evidence from the seventeenth and eighteenth centuries suggests that portamento was in use as an expressive ornamental device in singing, but to what extent this was transferred to the violin is more difficult to determine. Within the modern school of historically-informed performance practice, very little use of portamento is made on the violin. However, as Ellen Harris has pointed out, the studied avoidance of portamento by

[48] Carl Flesch, *The Art of Violin Playing: Book One* (New York: Carl Fischer, 2000), 14.

[49] Auer, *Violin Playing as I Teach It*, 51.

[50] Haynes, *The End of Early Music: A Period Performer's History of Music* 52.

many purportedly historically-informed vocalists of the latter twentieth-century cannot be justified from extent seventeenth and eighteenth-century sources.[51]

3.6.1 Results and Discussion

Figure 22 below describes the level of portamento I found was used for every performer by movement. Each recording was categorized on a scale from one to five (where one is little or no use and five is excessive use). **Figure 23** shows the total amount of portamento that was observed throughout all movements, plotted onto a single graph.

From Szeryng's recording in 1965 onwards, many of the performers chose to use little or no portamento in their performances, thereby displaying modernist influence. In early twentieth century recordings such as Szigeti and Heifetz (in particular), use of portamento is more widespread, indicating more romantic influence. On the other hand, the performances of Van Dael and Podger use almost no portamento, which is characteristic of the modernist school but does, in a way, also conform to the modern school of historically-informed performance practice.

It will be recalled that Haynes claims that the modernist school led to the sudden demise of portamento in the 1930's. Although the graph does show little use or even an absence of portamento in the 1930's and 1940's, it is not consistent with all recordings of those decades. Rather the graph above does not indicate a sudden demise from 1930 onwards, but rather shows a selected use through the latter half of the twentieth century. Clearly, the influence of the romantic school continued to be felt well throughout the century.

[51] Ellen Harris, "Portamento," Grove *Music Online, Oxford Music Online,* <http://www.oxfordmusiconline.com/grove/music/40990>(accessed 11 Sept 2010).

Figure 22. Portamento (separate movements)

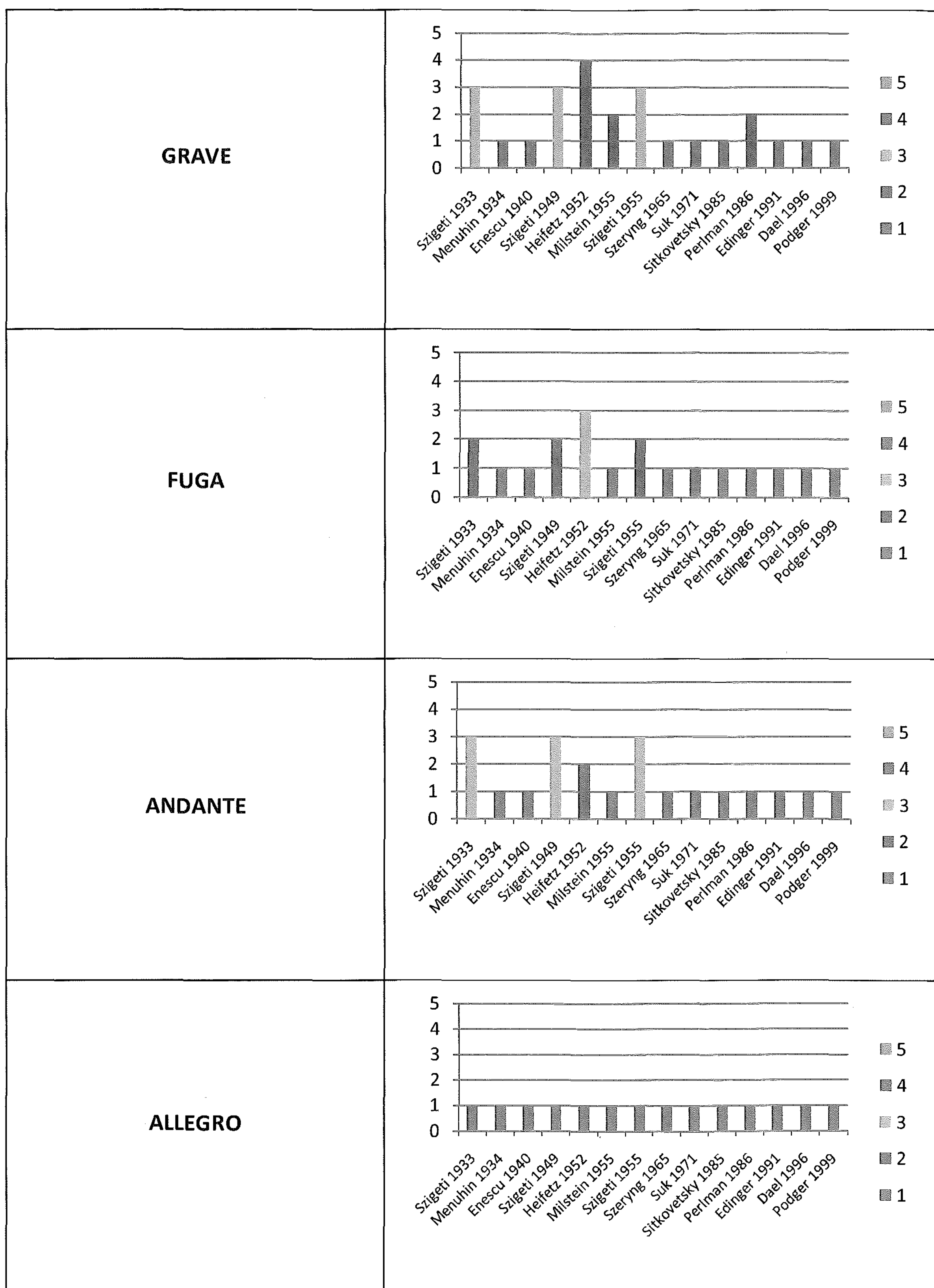
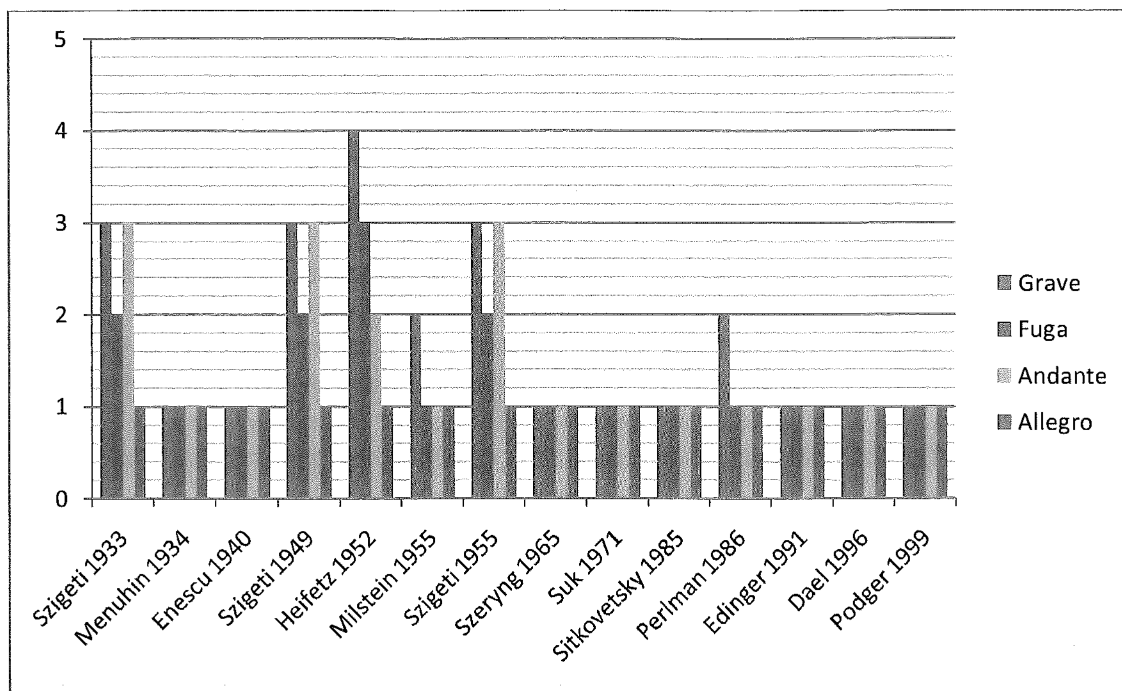


Figure 23. Collective results for portamento



3.7 Vibrato

In violin playing, vibrato is seen as a tool in order to imitate the emotional aspect of the human voice. It also serves to emphasize certain melodic notes, as well as to articulate musical phrasing and expression. In the romantic style, vibrato was used selectively and with discretion. Moens-Haenen states that:

> By the mid-18th century vibrato was gradually identified with some of its more positive connections, especially the sweetness of sound quality ('lieblich'). With many performers it seems to have been in nearly constant use – at least on all longer notes. Such theorists as Leopold Mozart, Simon Löhlein and Tromlitz warn against overuse [...] The early 19th century saw, again, a much more restricted use of the device.[52]

In reaction to the romantic style however, modernist style used a vibrato that was treated as an integrated element of tone and therefore was always used continuously and aggressively and thus, according to Haynes, creates a feeling of activity and nervousness.[53]

On the other hand, throughout the 17th and 18th century, violinists used to hold their instruments just below the collar bone and the player's chin never made contact with the instrument. Because of this implication, a wrist or finger vibrato had to be used rather than the full-arm vibrato that many players employ today. In the Baroque era, vibrato was considered to imitate the emotional range of the human voice, and was widely used by players in a solo role, and less in orchestral playing.[54] The historically-informed practice of vibrato thus links back to the idea that vibrato was usually employed on long sustained notes in phrases to help resonate the sound, using an oscillation and intensity that was required through the music's different characteristics, tempo, and dynamics.

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[52] G. Moens-Haenen. "Vibrato." In *Grove Music Online. Oxford Music Online*, http://0-www.oxfordmusiconline.com.library.ecu.edu.au/subscriber/article/grove/music/29287 (accessed August 31, 2010).

[53] Haynes, *The End of Early Music: A Period Performer's History of Music* 55.

[54] Burton, *A Performer's Guide to Music of the Baroque Period*, 74.

Treatises written by Tartini, Gemiani and Leopold Mozart confirm this idea as they refer to the different effects a performer can create by changing the speed and width of the vibrato, and only disagree about its frequency. All of the above authors agree, moreover, that the vibrato is most useful on longer notes, equal in rank to an ornament such as a trill, and—as with all ornaments—should be used with care.[55] This is further confirmed by Stowell, who states that:

> ...vibrato was generally used selectively and sparingly up to the early twentieth century as an expressive ornament linked inextricably with the inflections of the bow"[56]

Donington's point-of-view on vibrato is similar to that of the other authors. He confirms that from the middle of the Baroque period to the early mid-twentieth century, there was some controversy as to whether the instrumental vibrato should be used (in the modern way) as a continuous way of enlivening the tone, or more intermittently as a specific ornament.[57] Where there is no controversy is that vibrato was in use throughout the Baroque period. Arguably, a continuous vibrato should be adapted to the degree of intensity that the music momentarily requires, but to use no vibrato whatsoever would most likely have been considered tasteless. In performing early music, the subtle and judicious use of vibrato should be considered to be a normal ingredient.[58]

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[55] Ibid.

[56] Vibrato had a more striking effect within the 17th century than the continuous variety that is practiced today. It was executed with the fingers and the wrist, but not the lower arm, and was thus narrower and less intense, owing to the Baroque tradition of the violin hold.

Robin Stowell, *The Cambridge Companion to the Violin* (Cambridge: Cambridge University Press, 1992), 130.

[57] Donington, *The Interpretation of Early Music*, 232.

[58] Ibid., 235.

3.7.1 Results and Discussion

Due to time constraints, I have chosen to analyze the Grave and Andante movements of *Bach's Violin Sonata in A Minor.* These are the slow movements, and the places where differences in the use of vibrato can be most easily observed.

An interesting fact I found when accumulating these results is that not many performers used the continuous vibrato that was considered 'consistent' with the modernist performer. An analysis of the *Grave* movement (**Figure 24**) shows a prime example of this where all performers used a vibrato that was used to decorate long, sustained notes. This could be examined as a direct result of the number of quick notes (demi-semiquavers) written in this movement. There is no doubt that quite a few of these performers could be classified as modernist when compared with other criteria, yet when analyzed with purely vibrato many of them employed the romantic idea that vibrato was used as a constantly varying avenue of expression. Only Milstein and Perlman, in their recordings of the *Andante* (**Figure 25**), used a continuous vibrato that, in my opinion, lacked any expressive motivation. A majority of the violinists analysed used a moderate vibrato that wasn't too wide so that it lacked feeling, but wasn't so fast that could be considered 'too hectic'.

My analysis also found that the historically-informed performers did not quite conform to the baroque idea of vibrato. According to Donington, there was some controversy as to whether the instrumental vibrato, when playing Baroque music, should be used (in the modern way) as a continuous way of enlivening the tone, or more intermittently as a specific ornament, but that there was no doubt that vibrato was used in the Baroque period. My analysis of Van Dael's recording found her to use vibrato quite sparsely, rather to let the inflections of her bow change the color of her sound and nuance. Podger, on the other hand, was found to use almost no vibrato at all. Her sound, however,

could be considered far from 'dead' as the resonance of her instrument and the beauty of her phrasing were plainly evident. This therefore contradicts Donington's point of view that a total vibrato-less performance sounds dead and uninteresting.

Figure 24. Vibrato (Grave)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Slow vibrato														
Moderate vibrato	•	•	•	•			•	•		•		•	•	
Fast vibrato					•	•			•		•			
Used continuously														
Used to decorate	•	•	•	•	•	•	•	•	•	•	•	•	•	

Figure 25. Vibrato (Andante)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Slow vibrato														
Moderate vibrato	•	•	•	•	•	•	•	•	•	•		•	•	
Fast vibrato											•			
Used continuously						•					•			
Used to decorate	•	•	•	•	•		•	•	•	•		•	•	

3.8 Ornamentation

When looking at the violin score for the *Grave* of Bach's violin sonata in A minor, it is evident that the melody is heavily ornamented through the use of demisemiquaver passages and trills, and can thus be interpreted as evidence that Bach's music was fully written out in the Italianate style and requires little or no further ornamentation. This is clearly shown through the example of a score by Arcangelo Corelli (1653 – 1713), an older contemporary of Bach; one can see the differences in the amount of written notation. **Figure 26** below shows Corelli's published solo violin line (which is sparsely notated) and compares it to an ornamented version purportedly representing what Corelli actually played. In comparison to Corelli's violin parts, it is evident that Bach's music is already heavily ornamented.

Figure 26. Corelli's Violin Sonata Op. 5, No. 3 with Corelli's embellishments[59]

[59] Arcangelo Corelli, "Op. 5 No. 3 from 12 Suonati a Violino E Violone O Cimbalo " London: Augener & Co. http://imslp.org/wiki/12_Violin_Sonatas,_Op.5_(Corelli,_Arcangelo)#IMSLP21148 (Accessed 17th October 2010). This edition, put together by Estienne Roger, shows the difference between the published score and the embellishments purportedly performed by Corelli.

This illustrates the degree that performance practice in the baroque (particularly in the Italian adagio) demonstrates the art of improvisation beyond the notated score. This point is further underscored by Dorottya Fabian, who differentiates between the French and Italian styles of ornamentation:

> ...the topic of ornamentation involves at least two main issues: agréments (ornaments...indicated by signs) and decoratio (figurative embellishments). In the further context of these, [...] the improvised character of ornamentation.[60]

Throughout Bach's *Solo Violin Sonata in A Minor*, the main type of written ornamentation is the trill. According to Dolmetsch, the rule for the Baroque trill is that it must start on the beat and from the note above. He states that the chief characteristics of the trill are as follows:

> A principal note, part of the harmony, and an auxiliary note a whole-tone or a semitone above it; the rapid alternation of these two notes so arranged rhythmically that the accent falls upon the upper note, at least at the beginning.[61]

There has always been some dispute as to the Baroque performance practice of ornamentation, but Dolmetsch's dogmatic assertions can be seen as a base to compare the various performance styles.

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[60] Fabian, *Bach Performance Practice, 1945-1975: A Comprehensive Review of Sound Recordings and Literature*, 135.

[61] Dolmetsch, *The Interpretation of the Music of the Xvii & Xviii Centuries*, 155.

3.8.1 Results and Discussion

Observations are focused on three principal questions: (1) is additional ornamentation added?; (2) how are trills executed?; and (3) does the execution of small rhythmic values reflect an improvisational nature? In other words, are all the small notes performed with equal strength and weight, or played lightly with an air of spontaneity? Due to time constraints, I have analyzed only the *Grave* (**Figure 27**) and the *Fuga* (**Figure 28**).

The accumulated findings were quite telling for this observation criterion, clearly demonstrating the clear evidence of the three schools of performance practice. Trills performed starting on the upper note and on the beat (suggested by Dolmetsch) are seen in Edinger, Van Dael, and Podger, a defining facet of the historically-informed school. Suk, Sitkovetsky, and Perlman all execute trills beginning on the upper note but starting before the beat (modernist?), while all the earlier recordings performed trills starting on the principal note. Suk, Sitkovetsky, and Perlman also exhibit a certain modernist heaviness and equality of tone, detracting from the improvisational air of small rhythmic values.

Figure 27. Ornamentation (Grave)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Adds no additional ornamentation			●		●			●						
Adds additional ornamentation	●	●		●		●	●		●	●	●	●	●	●
Trills starting from the upper note									**before the beat**	**before the beat**	**before the beat**	**on the beat**	**on the beat**	**on the beat**
Trills starting on the principal note	●	●	●	●	●	●	●	●						
Reflects improvisational nature	●	●	●	●	●		●	●				●	●	●

Figure 28. Ornamentation (Fuga)

	Szigeti 1933	Menuhin 1934	Enescu 1940	Szigeti 1949	Heifetz 1952	Milstein 1955	Szigeti 1955	Szeryng 1965	Suk 1971	Sitkovetsky 1985	Perlman 1986	Edinger 1991	Van Dael 1996	Podger 1999
Adds no additional ornamentation					●			●						
Adds additional ornamentation	●	●	●	●		●	●		●	●	●	●	●	●
Trills starting from the upper note									**before the beat**	**on the beat**	**before the beat**	**on the beat**	**on the beat**	**on the beat**
Trills starting on the principal note	●	●	●	●	●	●	●	●						
Reflects improvisational nature	●	●	●	●	●	●	●					●	●	●

4 Interpreting the Results: A Concluding Discussion

Having examined each criterion in detail, it now remains to evaluate the original hypothesis. To what extent do these observations confirm or repudiate Haynes's claim that there are three principal schools of Baroque performance practice in the twentieth-century: romantic, modernist, and historically-informed? To begin with, I summarize the expected characteristics of each of the three schools in **Figure 29**. This shows the traits each of the schools are expected to illustrate, based on the literature review interwoven throughout the heart of the thesis. Having established this, I then attempt to demonstrate how closely each recording conforms to these expectations. In **Figure 30,** I examine each recording criterion in the context of the Grave, and attempt to categorize each recording[62] according to one of the three main schools. **Figures 31, 32,** and **33** do the same for the other movements. In the context of an individual criterion, it was easy enough to classify each recording according to Haynes tripartite scheme. However, several recordings do not fit into the same school for each criterion. By examining the internal consistency within the classification of each recording (scanning vertical columns), we are able to evaluate to what degree these recordings neatly conform to Haynes classifications in every respect. As can be seen, there are several inconsistencies.

While some violinists are considered to be of a particular school (i.e. Szigeti performs with strictly Romantic characteristics with few exceptions, whereas Podger and van Dael perform with almost totally historically-informed influences), a majority of the performers share influences throughout the various schools and do not, therefore, completely conform

[62] The fields that were left blank were either not analysed, none of that particular criteria occurred in the recording, or were not accurately defined (i.e. tempo). What these results do not take into consideration is the technical difficulty and structure of the piece but provide an aural analysis of how a listener perceives a particular recording.

to a specific school. Examples that prove this fact are shown through Szigeti's recordings, where he adds in rhythmic alterations (considered a historically-informed influence) but is clearly considered to be a Romantic performer. Also, the characteristics of his playing are almost consistent across all his recordings despite the recorded decade, showing that the influence of his background teachings is more significant than any contemporaneous trends at the time of recording. Another interesting performer is Edinger, as she contains the broadest sphere of influence within her playing. Although I consider her to be a Romantic performer, she does contain the influences of both the modernist and historically-informed schools.

It is therefore possible to deduce that although the influence of the three main schools is clearly shown in chronological order (the romantic school gave way to modernism, and modernism to historically-informed), there is no defined period of time where a particular school or practice started to exist. Through the figures below, it is possible to evaluate to what extent this chronological order prevails, and how quickly and cleanly such stylistic changes have taken place. We can see, for instance, that the modernist influence, although present in the 1930's, did not become a large influence in the performance practice of Bach until the 1950's. There is, however, not enough information present to accurately contradict Hayne's statement[63] that the modernist influence was the norm in the 1930's; only the outcome that Milstein's 1955 recording is the first, distinct, modernist recording to present itself in my accumulated results.

The transition of one school to another throughout the twentieth century was to be expected—in particular, elements of romanticism continue to coexist with modernism

[63] Haynes, *The End of Early Music: A Period Performer's History of Music* 49.

throughout much of the century. This confirms Philip's[64] idea that no style can simply arise overnight. We can therefore conclude that Haynes' hypothesis is a generalisation that has some validity and is a useful conceptualisation in the attempt to come to grips with the many and complex aspects of baroque performance practice in the twentieth century.

One other area of possible further research would be to investigate the extent to which all three schools might actually coexist among contemporary violinists. Such a study would need to sample a selection of contemporary, living violinists. Would Haynes's categories continue to have validity? Do they coexist among contemporary violinists? Would other groupings emerge, such as geographical ones?

This study was a longitudinal one, deliberately taking a sample of recordings spread as evenly as possible across the twentieth century. It was, by nature, of a limited basis due to limits of time and resources. It has not collected sufficient evidence at this stage to suggest any refinement to Haynes's tripartite classification. Haynes's classification remains a useful generalisation, despite the fact that the real situation is a lot messier, and a lot more complicated. Further studies of a similar kind may eventually suggest more sophisticated conceptual models and shed further light on the ways that performance practices develop and change over time.

[64] Philip, *Early Recordings and Musical Style*, 49.

Figure 29. A collective analysis across all schools

	TEMPO	TEMPO FLEXIBILITY	RHYTHMIC ALTERATIONS	ACCENTUATION	ARTICULATION	PORTAMENTO	VIBRATO	ORNAMENTATION
ROMANTIC (R)	Not Accurately Defined	• Rubato considered a main characterization • Moderate amount of ritardando at cadences	None expected to occur	•Arpeggiates chord up •Follows metrical structure •Melody on the beat •Double-stops the chord	Concentrates on the longer phrase	Primary means of showing expression (L. 3+) 1 2 3 4 5	Used selectively, with discretion, and used to decorate certain notes	•Additional ornamentation may be added •Trills start on principal note •Improvisational nature
MODERNIST (M)	Not Accurately Defined	• An almost steady rhythm • Significant amount of ritardando at cadences	None expected to occur	•Arpeggiates chord down •Equal-weighted notes •Melody on the beat •Double-stops the chord	"Seamless legato" is a common characteristic	Rarely used (L. 1 - 2) 1 2 3 4 5	Always used continuously and aggressively	Notes are equally-weighted
HISTORICALLY-INFORMED (H)	Not Accurately Defined	• Rubato is highly likely • Ritardando is determined by the bass	Notes inégales is highly likely to occur	•Arpeggiates chord up •Follows metrical structure •Bass on the beat •Arpeggiates the chord	Brings out the smaller motifs	Typically performed through expression (L. 2 - 3) 1 2 3 4 5	Employed to decorate longer, sustained notes in phrases	•Additional ornamentation •Trills start on the beat on the upper note •Improvisational nature

Figure 30. A collective analysis for the *Grave*

GRAVE	Szigeti 1933			Menuhin 1934			Enescu 1940			Szigeti 1949			Heifetz 1952			Milstein 1955			Szigeti 1955			Szeryng 1965			Suk 1971			Sitkovetsky 1985			Perlman 1986			Edinger 1991			Van Dael 1996			Podger 1999		
SCHOOL	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H
TEMPO FLEXIBILITY	●				●		●			●				●			●		●				●			●		●				●			●				●			●
RHYTHMIC ALTERATIONS																																							●			
ACCENTUATION	●			●			●			●			●				●		●			●				●			●			●		●					●			●
ARTICULATION	●			●			●			●			●				●		●				●			●			●			●		●					●			●
PORTAMENTO	●				●			●		●			●					●	●				●			●			●				●		●			●			●	
VIBRATO	●			●			●			●				●			●		●			●				●		●				●		●					●			
ORNAMENTATION	●			●			●			●			●				●		●			●				●			●			●				●			●			●

Figure 31. A collective analysis for the *Fuga*

FUGA	Szigeti 1933			Menuhin 1934			Enescu 1940			Szigeti 1949			Heifetz 1952			Milstein 1955			Szigeti 1955		
SCHOOL	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H
TEMPO FLEXIBILITY																					
RHYTHMIC ALTERATIONS																					
ACCENTUATION	●			●			●			●			●			●			●		
ARTICULATION	●			●			●			●			●					●	●		
PORTAMENTO			●		●			●				●	●				●				●
VIBRATO																					
ORNAMENTATION	●			●			●			●			●			●			●		

FUGA	Szeryng 1965			Suk 1971			Sitkovetsky 1985			Perlman 1986			Edinger 1991			van Dael 1996			Podger 1999		
SCHOOL	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H
TEMPO FLEXIBILITY																					
RHYTHMIC ALTERATIONS																					
ACCENTUATION		●			●			●			●		●					●			●
ARTICULATION		●			●			●			●		●					●			●
PORTAMENTO		●			●			●			●			●			●			●	
VIBRATO																					
ORNAMENTATION		●			●			●			●				●			●			●

Figure 32. A collective analysis for the *Andante*

ANDANTE	Szigeti 1933			Menuhin 1934			Enescu 1940			Szigeti 1949			Heifetz 1952			Milstein 1955			Szigeti 1955		
SCHOOL	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H
TEMPO FLEXIBILITY																					
RHYTHMIC ALTERATIONS																					
ACCENTUATION	●			●			●			●			●				●		●		
ARTICULATION	●			●			●			●			●				●		●		
PORTAMENTO	●				●			●		●					●		●				●
VIBRATO	●			●			●			●			●				●		●		
ORNAMENTATION																					

ANDANTE	Szeryng 1965			Suk 1971			Sitkovetsky 1985			Perlman 1986			Edinger 1991			van Dael 1996			Podger 1999		
SCHOOL	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H
TEMPO FLEXIBILITY																		●			●
RHYTHMIC ALTERATIONS																					
ACCENTUATION		●			●			●			●				●			●			●
ARTICULATION	●				●			●			●		●					●			●
PORTAMENTO		●			●			●			●			●			●			●	
VIBRATO	●			●			●				●		●					●			
ORNAMENTATION																					

Figure 33. A collective analysis for the *Allegro*

ALLEGRO	Szigeti 1933			Menuhin 1934			Enescu 1940			Szigeti 1949			Heifetz 1952			Milstein 1955			Szigeti 1955			Szeryng 1965			Suk 1971			Sitkovetsky 1985			Perlman 1986			Edinger 1991			van Dael 1996			Podger 1999		
SCHOOL	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H	R	M	H
TEMPO FLEXIBILITY																																										
RHYTHMIC ALTERATIONS			●									●									●																					
ACCENTUATION	●			●			●			●			●				●		●				●			●			●			●				●			●			●
ARTICULATION	●			●			●			●			●				●		●				●			●			●			●		●					●			●
PORTAMENTO		●			●			●			●			●			●			●			●			●			●			●			●			●			●	
VIBRATO																																										
ORNAMENTATION																																										

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