HEINZ VON LOESCH / FABIAN BRINKMANN Tempo Measurements in Piano Sonatas by Ludwig van Beethoven





berlin

https://doi.org/10.5281/zenodo.8081731

A publication of the Staatliches Instituts für Musikforschung Preußischer Kulturbesitz https://doi.org/10.5281/zenodo.8081731 — version 3.0 (26.6.2023)

Bibliographic information published by the Deutsche Nationalbibliothek The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available at https://www.dnb.de.

© Berlin, 2013 and 2023 Heinz von Loesch and Fabian Brinkmann

This is an open access publication, licensed under the terms of the Creative Commons Attribution 4.0 International Licence (CC BY 4.0). https://creativecommons.org/licenses/by/4.0

The German version can be found at https://doi.org/10.5281/zenodo.8081745, a data set of all measurement data at https://doi.org/10.14279/depositonce-7002.

Editing: Elisabeth Heil, Katrin Simon, Lukas Michaelis Graphics: Anne-Katrin Breitenborn Layout and typesetting: Jo Wilhelm Siebert



Staatliches Institut für Musikforschung Preuβischer Kulturbesitz

Contents

| | Preface | 3 |
|-----|--|----|
| 1. | Tempo and Tempo Variations. A Brief Preliminary Consideration of | |
| | the Relevance of the Line of Questioning | 5 |
| 2. | On the Methodology of the Tempo Measurements | 7 |
| 3. | On the Selection of the Pieces | 9 |
| 4. | On the Selection of the Interpretations | 10 |
| 5. | Autograph Tempo in Beethoven's Hammerklavier Sonata. | |
| | Practice and Theory | 13 |
| 6. | Tempo Results | 18 |
| | a. Spectrum of Average Tempi | 18 |
| | b. History of the Average Tempo | 20 |
| | c. Tempo, Tempo Variations and Tempo Amplitude: | |
| | Austro-German and Russian/Soviet Pianists | 22 |
| 7. | Tempo Interpretations | 25 |
| | a. Spectrum of Average Tempi | 25 |
| | b. History of the Average Tempo | 28 |
| | c. Tempo, Tempo Variations and Tempo Amplitude: | |
| | Austro-German and Russian/Soviet Pianists | 31 |
| 8. | Everyone Does it That Way (So machen's alle) | 31 |
| 9. | Multiple Recordings | 36 |
| 10. | Artur Schnabel against Himself | 42 |
| 11. | From Beat to Beat | 48 |
| 12. | Conclusion and Outlook | 49 |
| | | |

Tempo Measurements in Piano Sonatas by Ludwig van Beethoven

HEINZ VON LOESCH / FABIAN BRINKMANN

As part of a collaborative project between the Staatliches Institut für Musikforschung Preußischer Kulturbesitz and the Audiokommunikation Department of the Technische Universität Berlin, over the course of the last few years we measured – bar by bar – tempi in the first movements of three of Ludwig van Beethoven's piano sonatas (*Appassionata Sonata*, Sonata op. 2 Nr. 3, *Hammerklavier Sonata*) in interpretations from the 1920s through the 2000s. In so doing we examined a series of factors: Have the tempo and shaping of tempo (*>Tempogestaltung<*) changed over time? Are there national or culture-specific traditions? Can inter-subjective tempo decisions be identified? How had the shaping of tempi by an individual artist developed over the years and decades? What is the relationship between interpretational practice and the recommendations in the editions prepared by celebrated interpreters?

Preliminary results of the tempo histories of the three sonatas have already been published elsewhere.¹ As their individual, work-specific lines of questioning address issues not handled in the following text, these are also recommended. That this text will not be our last contribution on this subject should go without saying and, given the sheer amount of questions left to be answered, will be apparent to every reader. The text is to be understood as a kind of larger progress report.

¹ Heinz von Loesch and Fabian Brinkmann: Das Tempo in Beethovens *Appassionata* von Frederic Lamond (1927) bis András Schiff (2006), in: Gemessene Interpretation. Computergestützte Aufführungsanalyse im Kreuzverhör der Disziplinen, ed. Heinz von Loesch and Stefan Weinzierl, Mainz 2011 (Klang und Begriff 4), pp. 83–100;

Loesch and Brinkmann: Die Tempogestaltung in Artur Schnabels *Appassionata*-Einspielung im Kontext zeitgenössischer Interpretationen, in: Beethoven 5 – Studien und Interpretationen, ed. Mieczysław Tomaszewski and Magdalena Chrenkoff, Krakow 2012, pp. 215–24; Loesch and Brinkmann: »Diese Sonate ist als reine Virtuosen-Sonate zu beachten« – Das

Tempo in Beethovens Klavier-Sonate op. 2/3 von Josef Hofmann (1929) bis Lang Lang (2010), in: Vom Klang zur Schrift – von der Schrift zum Klang. Beiträge des Seminars in Münster 2012 (EPTA-Dokumentation 2012), Düsseldorf 2014, pp.122–34;

Loesch and Brinkmann: »Feurig« oder »majestätisch«? – Tempo und Deutung im ersten Satz von Beethovens *Hammerklaviersonate*, in: Beethoven 6 – Studien und Interpretationen, ed. Mieczysław Tomaszewski and Magdalena Chrenkoff, Krakow 2015, pp. 309–20.

We would like to first thank all of the students of the Audiokommunikation department of the Technische Universität Berlin, who, over the course of several semesters as part of the »Appassionata Project,« contributed to the extensive and time-consuming tempo measurements and their statistical analysis. We thank the director of the Staatliches Institut für Musikforschung, Dr. Thomas Ertelt, and the director of the Audiokommunikation department of the Technische Universität Berlin, Prof. Dr. Stefan Weinzierl for their generous and active support of this project.

A special thanks goes to Dr. Simone Hohmaier of the SIMPK for her efforts and critical reading of the text, to Dr. Andrew Noble for the translation of the text and to Anne-Katrin Breitenborn for her work on the graphics; to Elisabeth Heil, Katrin Simon and Lukas Michaelis (all at the SIMPK), who were so kind as to install the text on the SIMPK's website, and finally to Jo Wilhelm Siebert for layouting and typesetting this digital edition.

☆

This publication is the second, unchanged edition of the text from 2013, which was previously archived on the SIMPK homepage under different addresses. Only one footnote was added in October 2014 and the present edition required one further acknowledgement. The original German version of the text can be found at https://doi.org/10.5281/zenodo.8081745 and all measurement data are published at https://doi.org/10.14279/depositonce-7002.

Berlin, September 1st, 2013 and May 22nd, 2023 Heinz von Loesch and Fabian Brinkmann

Tempo and Tempo Variations. A Brief Preliminary Consideration of the Relevance of the Line of Questioning

»You know how little time I have for arguments about tempo and how for me it is the inner rate of movement alone that matters. Then the faster allegro of the cold carries more weight than the slower of the sanguine.«²

It is with these skeptical words that Robert Schumann begins his discussion of Mendelssohn's interpretation of Ludwig van Beethoven's 4th Symphony, in order to then explain at length the reasons why he felt the tempo of the Scherzo was too slow.

No matter how you spin it, tempo is an important musical parameter and parameter of musical interpretation. Anton Schindler reported on Beethoven that whenever a work of his was performed, his first question was always: »>How were the tempi?< Everything else seemed to be secondary to him.«³ Sir George Smart, conductor of the English premieres of several of Beethoven's works including the 9th Symphony, traveled himself to Vienna in the summer of 1825 in order to receive Beethoven's exact tempi from him. Even if he did find these »totally impossible« after Beethoven had played him several of the themes at the piano.⁴ With the advent of the metronome, an instrument became available with which one could define the tempo exactly and, as has been well documented, Beethoven made extensive use of this. Equally well known is that as this happened, a fight about the correct tempi in Beethoven's music broke out that continues to this day; a fight that most likely reached its pinnacle with Rudolf Kolisch's Tempo and Character in Beethoven's Music from 1942/43.⁵ The central argument of the primarius of the Kolisch and the Pro Arte Quartets is that by way of a comparison of themes and characters of Beethoven's works that had been given exact metronome markings, one could also unquestionably establish the correct tempi for those of Beethoven's works, to which he did not attribute metronome markings. With this thesis, Kolisch had a loud exchange of words at the

² Robert Schumann: Gesammelte Schriften über Musik und Musiker, Leipzig 1854, vol. 1, p. 194.

³ Anton Schindler: Biographie von Ludwig van Beethoven, Münster ⁴1871, vol. 2, p. 247.

⁴ Sofia Krastev and Michael Haenisch: Art. »Smart, Sir George (Thomas)«, in: Das Beethoven-Lexikon, ed. Heinz von Loesch and Claus Raab, Laaber 2008, p. 697.

⁵ Rudolf Kolisch: Tempo and Character in Beethoven's Music, in: The Musical Quarterly 1943, pp. 169–187, 291–312.

1942 Congress of the the American Musicological Society in New York with Artur Schnabel; who, although he himself had recorded the *Hammerklavier Sonata* with Beethoven's metronome markings (see pp. 16 and 46f. below for an extensive discussion thereof), nevertheless found Kolisch's thesis exaggerated and arrogant.⁶

Of equal importance to the overall tempo, is the question of tempo variation, the question of tempo flexibility and constancy of tempo. Richard Wagner's well known polemics against Mendelssohn's conducting were sparked by the supposedly too fast and too constant tempi.⁷ More specifically that he didn't slow down enough in the lyrical passages.⁸ On the other end of the spectrum, interpretations with a freer approach to the shaping of tempo became so discredited in the 20th century, that their protagonists were even subjected to moral judgment. Arnold Steinhardt, of the Guarneri Quartet, once reported the following about a rehearsal of Beethoven's Violin Concerto under George Szell:

»When I wanted to take more time during the lyrical G-minor section in the development of the first movement, he [Szell] became furious with me, finding it maudlin and disruptive of the architectural structure; he insisted that I play it absolutely in tempo at the concert. Szell could on occasion let himself go and change tempos, but he probably thought I was a terribly self-indulgent and needed to be taught a lesson.«⁹

What is remarkable about this anecdote, assuming it is an accurate representation of the events, is not only that Szell passes moral judgment on Steinhardt for his taking liberties with tempo, but also that Steinhardt does the same with Szell. Steinhardt also calls Szell's tempo liberties »let himself go.« Svjatoslav Richter was even more rigid in this regard. In an interview on the Appassionata on the occasions of Beethoven's 200th birthday and Lenin's 100th birthday in the Sovetskaja muzyka 1970, he accuses pianists who do not maintain the tempo in the transition of the first movement of a lack of discipline, indolence and of having a »washcloth mentality.«¹⁰ Tempo variations became so frowned upon in the 20th century that these were sometimes avoided even where the composer specifically asks for them. Among others, José Bowen demonstrates this with interpretations of Pyotr Ilyich Tchaikovsky's 6th Symphony.¹¹ Even advocates of so-called historically informed performance practice are hardly willing or capable of realizing the appropriate measure of tempo variations when approaching music of the Classical and Romantic periods suggested by current knowledge of source materials.¹²

⁶ Konrad Wolff: Interpretation auf dem Klavier. Was wir von Artur Schnabel lernen, Munich and Zurich 1979, p. 20. 7 Richard Wagner: Über das Dirigieren (1869), in: Gesammelte Schriften und Dichtungen, vol. 8, ed. Wolfgang Golther, Berlin etc. n. d., pp. 261–337.
8 Ibid., pp. 289–90. 9 The Art of Quartet Playing. The Guarneri Quartet in Conversation with David Blum, Ithaca/New York 1987, ²1992, p. 90. 10 Appassionata. Mysli masterov, in: Sovetskaja muzyka (1970/4), p. 86. 11 José Antonio Bowen: Tempo, Duration, and Flexibility: Techniques in the Analysis of Performance, in: The Journal of Musicological Research 16 (1996), pp. 111–56, especially 137–40. 12 Richard Taruskin: Resisting the Ninth, in: 19th-Century Music 12/3 (1988/89), pp. 241–56; Wolfgang Auhagen: Furtwänglers Tempogestaltung im Spannungsfeld zwischen Konzerttradition und Reproduktionstechnik, in: Jahrbuch des Staatlichen Instituts für Musikforschung Preußischer Kulturbesitz 2005, pp. 35–51.

2. On the Methodology of the Tempo Measurements

Of course, not only can one address tempo questions normatively, but also descriptively. For example, we could ask who plays what in which tempo, if and how the shaping of tempi has changed over time and whether or not there are national or culturally specific tempo traditions. Thanks to the computer, it is now much easier to measure tempo and tempo variations. However, this still half automated, as the margin of error for fully automated measurement is too high. The most common software for tempo measurement is the so-called Sonic Visualiser. With the aid of this software, one can set audible and visual markers while listening to a recording and then check these for accuracy through repeated listening.¹³ It is enough when examining tempi – in contrast to examinations of rhythm or agogic - to mark the downbeat of each measure, through which one can establish the average tempo of each measure. There are also studies that show that tempi established by these means are very closely related to the perceived average tempo of the measured piece of music or passage.¹⁴ Based on these values, we can create graphic representations of the tempi such as the following, which shows the tempo progression of Claudio Arrau's 1986 recording of the first movement of Beethoven's Piano Sonata op. 2/3 (see figure 1). The measures are indicated on the x axis and the tempo (in BPM >beats per minute< = M. M.) on the y axis. This is a logarithmic representation representative of proportional tempo hearing. The connecting line between the individual measures serves to better display the progression of tempo from measure to measure and says nothing about the progression of tempo within an individual measure.

In addition to the production of these kinds of tempo curves, one can also average the tempo over the course of several measures. This allows us to identify what average tempo, for example, a particular pianist plays a particular theme and what relationship this tempo has to that of another theme. One can calculate tempo variations from measure to measure from the relationship of successive tempi, average these and then say whether or not a pianist plays on average more strictly or more freely in tempo. We can also identify the tempo amplitude – the span or relation between the fastest and the slowest values of a particular recording. And of course one can also measure the actual duration of a recording and calculate the average tempo.

When establishing the tempo amplitude – the relation between the fastest and slowest tempo values of a recording – one cannot however consider all tempo values. Specific measures must be excluded: extreme ritardandi, extended measures, the endings of sections and the like. If these were included, isolat-

¹³ On the Software Sonic Visualiser, see Homepage of CHARM (The AHRC Research Centre for the History and Analysis of Recorded Music), the English institution, to which computer aided interpretation research owes so much: www.charm.rhul.ac.uk/analysing/p9_0_1.html [9.5.2023].
14 See Stefan Weinzierl and Hans-Joachim Maempel: Zur Erklärbarkeit der Qualitäten musikalischer Interpretationen durch akustische Signalmaße, in: Gemessene Interpretation, ed. Loesch and Weinzierl (as fn. 1), pp. 213–36.



Figure 1 Tempo Curve Sonata op. 2/3 Claudio Arrau (1986)

ed extreme ritardandi in interpretations that were otherwise strictly in tempo would result in tempo amplitudes that aren't actually representative of those of the recording. In specific cases, decisions about which measures to exclude and which to include is no simple matter and already requires an interpretive act. Further, in order to avoid overestimating the importance of individual highs and lows of tempi, the top and bottom 2 % of tempo values have not been taken into consideration.

As far as tempo variations are concerned, here we are talking about the tempo variations from measure to measure. When looking at the Sonata op. 2/3, we also experimented with measurements at the level of every two measures and at the level of formal divisions. Often the tempo variations from measure to measure are not real tempo >variations< but rather elements of phrasing/phrase shaping – meaning, something that one could characterize as >large-scale rhythm.< A good example of this would be the first measures of op. 2/3 (see Figure 1). The strongly diverging tempo values from measure to measure are neither intended as tempo variations nor are they perceivable as such. They are solely the result of a marked two-measure phrasing in which there is a very small extension of the rests in the 2^{nd} and 4^{th} measures.

If we were so inclined to approach the category of tempo variation in a manner other than from measure to measure, we would see that regarding all of the differences of detail, significant connections can be drawn between the different forms of variations. Those whose tempi vary more from measure to measure, also usually do so from two-measure group to two-measure group or from formal section to formal section. For this reason, the following presentation of our findings will focus on tempo variations from measure to measure.

3. On the Selection of the Pieces

The fact that we have chosen to focus on the works of Ludwig van Beethoven for our tempo studies has to do on the one hand with the personal preferences and interests of the authors. On the other hand however, this also has to do with a series of practical considerations. The question of tempo in Beethoven's music has always played a prominent role (see also Chapter 1). First of all, there are a number of pieces with metronome markings given by the composer, which to this day provide a seemingly inexhaustible source of material for discussion. The secondary literature on the subject alone is virtually impossible to overlook. Secondly, we repeatedly find strongly divergent tempo decisions made by interpreters of Beethoven's works. Our tempo measurements will also demonstrate a particularly extreme example of this. Third, since Richard Wagner's text Über das Dirigieren (1869) it has been repeatedly asserted that in the case of Beethoven, tempo must be addressed especially flexibly, more so than with Mozart for example – also a much revisited topic of discussion.¹⁵ And fourth, there are a number of instructive editions of Beethoven's Piano Sonatas prepared by renowned interpreters between the 1870s and the 1920s - Hans von Bülow 1873, Eugen d'Albert 1902, Frederic Lamond 1923 and Artur Schnabel 1924-1927 which express the editors' flexible approches to tempi using differentiated metronome markings, and which provide a concrete point of departure from which to approach historical tempo study of Beethoven's work. In addition, since Ignaz Moscheles (1838/39) and Carl Czerny (1842) there appeared a number of further editions and annotated editions which, although they don't give any specific indications on tempo modification within individual movements, do give concrete metronome markings for every movement of the 32 Sonatas.

The decision for Beethoven's Piano Sonatas – and not for Symphonies, String Quartets or Violin Sonatas – was made on the one hand based on the amount of historical source material provided by the various editions, which does not exist for any other genre in Beethoven's output. On the other hand, to our knowledge there has yet to have been any extensive tempo measurement study of Beethoven's Piano Sonatas – unlike the Symphonies for example.¹⁶ Finally, we also believed that it would be easier to conduct tempo measurements of piano pieces given the clear points of attack, in contrast to those of string instruments or larger ensembles. This assumption turned out to be erroneous: The markings of the strong beats of the virtuoso passages before the *Più Allegro*

¹⁵ Wagner: Über das Dirigieren (as fn. 7).

¹⁶ Bowen: Tempo, Duration, and Flexibility (as fn. 11); Auhagen: Furtwänglers Tempogestaltung (as fn. 12); Nicholas Cook: The Conductor and the Theorist. Furtwängler, Schenker and the First Movement of Beethoven's Ninth Symphony, in: The Practice of Performance. Studies in Musical Interpretation, ed. John Rink, Cambridge 2005, pp. 105–25; Lars E. Laubhold: Annäherung ans »Unmerkliche«. Zur Methodik der Analyse musikalischer Zeitgestaltung am Beispiel von Beethovens 5. Sinfonie, in: Musicologica Austriatica 29 (2010), pp. 71–88.

of the first movement of the *Appassionata* proved to be extremely difficult – particularly for the pre-war recordings but by not means only these. The same was true – and surprisingly so – of the Sonata op. 2/3 in the cantabile passages in which the notes in the right and left hands are not attacked simultaneously, resulting in a situation in which decisions about which note defines the beat have to be made on a case by case basis.

We chose Piano Sonatas op. 2/3, op. 57 (*Appassionata*) and op.106 (*Hammerklavier Sonata*) because with these specific Sonatas we have one >early<, one >middle period< and one >late< Beethoven work, each with an extended, fast first movement in sonata allegro form, all having approximately the same length. For each of these movements, on account of its length and also on account of its specific make up, the question of tempo modification seemed relevant. Regarding the *Hammerklavier Sonata* we were also particularly interested in how interpreters addressed the often discussed and controversial extremely fast metronome markings of the autograph score.

4 On the Selection of the Interpretations

Since it is very time consuming to make measure by measure markings by hand given all of the unavoidable correction phases – not to mention the sheer length of the movements – it was clear from the outset that we could not use an extremely large amount of recordings. Taking practicability into account on the one hand, and methodological considerations of how to compile the discographies on the other (more on this below), we decided on between 45 and 50 recordings per movement. Faced with a specific unusual result, we decided to increase the number of recordings of the study of the absolute length of the performances of the *Appassionata* by 25 recordings to a total of 75. This presented no problems since there are no repeats in the movement that a performer could choose to include or not. We simply needed to measure the times from the first to the last measures; or rather penultimate measures – since the last measure often dissipates into the sound-mists (>Klangnebel<) – and already we had valid results.

When compiling the discographies we selected recordings: 1. by renowned pianists, 2. from every decade of recording history, 3. where there were multiple recordings by a single artist of the course of several decades. As a result, this means that we examined all or almost all accessible recordings from the 1920s through the 1940s.¹⁷ For the time thereafter we attempted to collect a relatively balanced distribution across the decades. In order to avoid tampering too much with the statistical analysis, we excluded repeat recordings by a single interpreter within a single decade; either from the outset or in some cases the results

¹⁷ A reliable source for this time is The World's Encyclopædia of Recorded Music, ed. Francis F. Clough and G.J. Cuming (vol. 1: 1950–51, vol. 2: 1951–52, vol. 3: 1953–55), London 1966, Westport / CT R1970. It lists recordings of the pre-war era as well as recordings from the Soviet Union.

were removed from the statistical calculations. In spite of our best efforts, there remains an element of chance regarding both the decisions of which pianists should be considered of significant renown and what recordings are currently available.

The source material available for the *Appassionata* is fantastic (see Figure 2). There are a large number of recordings made by renowned pianists, many of which from the 1920s–1940s. Many of these pianists recorded the sonata multiple times over the course of several decades. Finally, the piece was of special importance to the Soviet musical ideology, not least because it was supposedly Lenin's favorite piece, and there are many recordings by Russian and/or Soviet pianists.

| 1927 | Harold Bauer | 1950er? | Grigory Ginzburg | 1975 | Emil Gilels | 2002 | Maurizio Pollini |
|--------|--------------------|---------|----------------------|---------|----------------------|------|---------------------|
| | Frederic Lamond | 1960 | Maria Grinberg | | Maria João Pires | 2003 | Mari Kodama * |
| 1932 | Wilhelm Kempff | | Svjatoslav Richter | 1978 | Vladimir Ashkenazy * | | Artur Pizarro * |
| 1933 | Artur Schnabel | | Vladimir Sofronitsky | 1980/82 | Rudolf Buchbinder | 2004 | Freddy Kempf * |
| 1935 | Edwin Fischer | 1961 | Emil Gilels | 1981 | Daniel Barenboim | | Jonathan Biss * |
| 1936 | Rudolf Serkin | 1962 | Alfred Brendel | 1982 | Claudio Arrau * | 2005 | Angela Hewitt * |
| 1939 | Walter Gieseking | 1963 | Rudolf Kerer (Ton- | 1984 | Claudio Arrau * | | Christian Leotta * |
| späte | | | spur zum Film Appas- | 1985 | Murray Perahia | | Fazil Say |
| 1930er | Samuil Feinberg | | sionata) | 1987 | Melvyn Tan | | Gerhard Oppitz * |
| 1946 | Nikolai Medtner | | Arthur Rubinstein | | (Hammerklavier) | 2006 | András Schiff |
| 1947 | Rudolf Serkin | | Rudolf Serkin | 1988 | Istvan Székely * | | Igor Kamenz * |
| 1951 | Walter Gieseking | 1964 | Wilhelm Kempff | | Mikhail Pletnev | 2007 | Ronald Brautigam |
| | Emil Gilels | 1965 | Claudio Arrau | 1992 | Svjatoslav Richter | - | (Hammerklavier) |
| | Wilhelm Kempff | 1967 | Daniel Barenboim | | Garrick Ohlsson * | | Andreas Haefliger * |
| 1952 | Elly Ney | | Glenn Gould | 1993 | Tatjana Nikolajewa * | | Lilya Zilberstein |
| 1954 | Solomon | | Friedrich Gulda | | Richard Goode | | Paul Lewis * |
| 1958 | Wilhelm Backhaus | 1969 | Dieter Zechlin * | 1995 | Alfred Brendel | | Alice Sara Ott * |
| | Van Cliburn * | 1970 | Paul Badura-Skoda * | 1999 | Stephen Kovacevich * | 2010 | Lang Lang * |
| | Friedrich Gulda | | Alfred Brendel | | Aldo Ciccolini * | | |
| 1959 | Vladimir Horowitz | 1972 | Lazar Berman * | 2001 | Pierre-Laurent | | |
| | Svjatoslav Richter | | Vladimir Ashkenazy * | | Aimard | | |

Figure 2 Discography Appassionata

The source material available for the other two sonatas is not quite as ideal. The number of recordings of the Sonata op. 2/3 (see Figure 3) before the 1950s is much smaller whereby both of the recordings from the 1940s are by a single pianist (the young Arturo Benedetti Michelangeli). In addition there are fewer repeat recordings and fewer Russian/Soviet recordings.

There are only two recordings of the *Hammerklavier Sonata* (see Figure 4) from the 1930s and 1940s.¹⁸ Recordings of Russian/Soviet pianists are as infre-

¹⁸ Except for a further recorded radio broadcast by Walter Gieseking from 1949. – P. S. October 24th, 2014: And except for three further recordings from the 1930s that, in spite of thorough research, had escaped our notice: Wilhelm Kempff 1936, Richard Bühlig ca. 1938, and Louis Kentner 1939. In fact, the recordings of Kempff and Kentner are listed in *The World's Encyclopædia of Recorded Music* (as fn. 17), but since the entry does not indicate a date, we expect-

| 1929 | Josef Hofmann | 1956 | Solomon | 1974/75 | Anton Kuerti | 1990 | Murray Perahia |
|----------|----------------------|---------|--------------------|---------|--------------------|----------|------------------|
| 1934 | Artur Schnabel | 1962 | Dieter Zechlin | 1975 | Svjatoslav Richter | 1992 | Louis Lortie |
| 1938 | Claudio Arrau | 1962/64 | Alfred Brendel | 1975 | Arturo Benedetti | 1992 | Melvyn Tan |
| 1941/49 | Arturo Benedetti | 1963 | Artur Rubinstein | | Michelangeli | | (Hammerflügel) |
| | Michelangeli | 1964 | Wilhelm Kempff | 1976/79 | Glenn Gould | vor 1993 | Richard Goode |
| 1950 | Svjatoslav Richter | 1965 | Maria Grinberg | 1977/78 | Annie Fischer | 1994 | Alfred Brendel |
| 1952 | Emil Gilels | 1967 | Friedrich Gulda | 1981 | Emil Gilels | 2004 | András Schiff |
| 1952 | Wilhelm Backhaus | 1969 | Wilhelm Backhaus | 1981/84 | Daniel Barenboim | 2004 | Gerhard Oppitz |
| 1953 | Wilhelm Kempff | 1969 | Daniel Barenboim | 1983 | Tatjana Nikolajewa | 2004 | Ronald Brautigam |
| 1954 | Friedrich Gulda | 1970 | Paul Badura-Skoda | 1986 | Claudio Arrau | | (Hammerklavier) |
| 1955 | Yves Nat | 1970 | Dino Ciani | 1988 | Jenő Jandó | 2006 | Maurizio Pollini |
| 1956 | Walter Gieseking | 1974 | Vladimir Ashkenazy | 1989 | Paul Badura-Skoda | 2010 | Lang Lang |
| | | | 5 | | (Hammerklavier) | | |
| Figure 3 | Discography Sonata o | p.2/3 | | | | | |
| | | | | | | | |
| 1 | | 1 | | | | I | |

| 1949 Walter Gieseking 1966 Maria Grinberg (Hammerklavier) 1995 Alfred Brend | el |
|--|-------|
| | |
| 1951 Friedrich Gulda 1967 Friedrich Gulda 1978 Grigory Sokolov 1998 Garrick Ohls | son |
| 1951 Egon Petri 1968 Rudolf Serkin 1980 Vladimir Ashkenazy 1999 Aldo Ciccolir | ni |
| 1952 Wilhelm Backhaus 1968/69 Dieter Zechlin 1980/82 Rudolf Buchbinder 2003 Michael Kors | stick |
| 1952 Solomon 1970 Daniel Barenboim 1981/84 Daniel Barenboim 2006 Gerhard Opp | oitz |
| 1952 Maria Judina 1970 Alfred Brendel 1982 Emil Gilels 2006 András Schif | f |
| 1954 Yves Nat 1970 Glenn Gould 1983 Tatjana Nikolajewa 2007 Mitsuko Uch | ida |
| 1956 Wilhelm Backhaus 1975 Svjatoslav Richter 1984 Emil Gilels 2008 Ronald Brau | tigam |
| 1956 Wilhelm Kempff 1976/77 Maurizio Pollini 1985 Idil Biret (Hammerkla | vier) |
| 1962/64 Alfred Brendel 1977/78 Annie Fischer 1988 Jenő Jandó 2008 Christian Lee | otta |
| 1963 Claudio Arrau vor 1993 Richard Goode 2008 Michael Lesl | ie |



quent as those of op. 2/3. The most remarkable thing is though, that there are far fewer recordings made by a single pianist over the years or decades, fewer not only than the *Appassionata* but also than op. 2/3. A cursory glance at catalogues of recordings is misleading. Many of the second or third recordings found there are radio broadcast or concert recordings from exactly the same year in which the pianist recorded the sonata in the studio. This is the case, for example with Gieseking, Backhaus, Serkin, Richter, Sokolov and Gilels. The second

ed them to be postwar recordings. Thus, we are much obliged Dr. Ulrich Bartels from the University of Hildesheim, for giving us this valuable hint and we would like to seize the opportunity to draw attention to his highly interesting study: Ulrich Bartels: Zur Interpretation von Beethovens *Hammerklaviersonate* op. 106. Eine diskographisch-analytische Studie, in: Musiktheorie 14 (1999), pp. 149–69. – Even if it is virtually impossible at the present time to measure the tempi of these recordings bar by bar with a following comprehensive statistical analysis, it is possible to answer at least one important question with due regard to the results of our study presented here: That is the question of the performance durations, or rather the realized average tempi. In Kempff's and Bühlig's recordings the performance duration of the movement without the repeat of the exposition is 8:34 min. respectively, whereas in the case of Kentner it is 10:14 min. Hence, there is no reason to doubt the validity of the statement at the end of Chapter 6b – on the contrary, these new results confirm our previous conclusions: Schnabel's and Gieseking's fast tempi are not representative of the 1930/40s.

sets recordings of the complete sonatas by Backhaus and Arrau include only the recording of the sonata from their first complete sets (in the case of Backhaus a mono recording in an otherwise stereo cycle). Both Backhaus and Arrau made only one recording of the *Hammerklavier Sonata*.

This is of course significant beyond the scope of the discography of our study. It is significant for the reception of the work as a whole, as it demonstrates how small the timeframe was in which some pianists engaged with the piece in public (Richter, Gilels, Sokolov), and how unwilling or unable some pianists were to present the piece in a recordable condition – and maybe even with a new interpretation – after several years (Backhaus, Arrau).¹⁹

5 • Autograph Tempo in Beethoven's *Hammerklavier Sonata*. Practice and Theory

Before we begin with a comparative look at the individual tempo parameters of all three sonatas, we would like to address a question that applies only to the *Hammerklavier Sonata*: To what extent do pianists realize Beethoven's autograph metronome markings? Since it is generally not clear whether a metronome marking applies to the average tempo of a movement or only to its opening measures, it seems reasonable to give a double answer. Since so many pianists adopted the position that the tempo was especially problematic for the opening measures, we excluded this line of questioning from the outset. A statement about the tempo of the first measures would be just that, nothing else.

However, regarding an average tempo we must consider that the movement is filled with ritardandi and fermatas that would drastically reduce the average tempo and which Beethoven was certainly not considering as being included when assigning metronome marks to the movement. We removed all of these measures accordingly when calculating the average tempo.

If we view the average tempo of the movement established in this manner (see Figure 5), we see that very few pianists come close to Beethoven's \downarrow = 138: Artur Schnabel (1935) and at best Michael Korstick (2003) and Walter Gieseking (1949). Even Friedrich Gulda in both of his recordings (1951, 1967) and Michael Leslie (2008) fall far short. The majority of pianists remain in the range suggested by performance editions and other work commentary, from those of Ignaz Moscheles (1841) to William S. Newman (1971): between \downarrow = 116 and 92 (more on this below). Two pianists even play as slowly as is suggested by Felix Weingartner in his transcription of the work for orchestra (1926): Glenn Gould (1970) and Tatjana Nikolajewa (1983). Weingartner suggests \downarrow = 80.²⁰

Before delving into a comparative interpretation of these tempo data, we would first like to take a detailed look at the various discussions on the correct

¹⁹ Remarkably, according to Cesar Searchinger, even Artur Schnabel played the *Hammerklaviersonate* »only rarely in public« before 1926, which is why he organized a concert in London that year for »self examination,« and on which he made his plan to perform all of the sonatas dependant. Cesar Searchinger: Artur Schnabel. A Biography, London 1957, pp. 180–82.
20 Breitkopf & Härtel, Leipzig.

| 131.0 | Schnabel 1935 | 108.9 | Zechlin 1969 | 102.3 | Brendel 1964 | 97.0 | Ciccolini 1999 |
|-------|-------------------|-------|----------------|-------|---------------|-------|-----------------|
| 126.9 | Korstick 2003 | 108.7 | Brautigam 2008 | 102.2 | Grinberg 1966 | 96.3 | Backhaus 1952 |
| 126.3 | Gieseking 1949 | 108.6 | Pollini 1977 | 102.0 | Uchida 2007 | 93.8 | Gilels 1984 |
| 120.0 | Gulda 1967 | 108.5 | Petri 1951 | 101.8 | Fischer 1978 | 93.0 | Gilels 1982 |
| 119.0 | Gulda 1951 | 107.2 | Nat 1954 | 101.8 | Brendel 1995 | 92.3 | Serkin 1968 |
| 117.1 | Leslie 2008 | 105.3 | Arrau 1963 | 99.5 | Jandó 1988 | 89.5 | Barenboim 1984 |
| 115.9 | Badura-Skoda 1978 | 105.2 | Richter 1975 | 99.2 | Sokolov 1978 | 87.1 | Barenboim 1970 |
| 112.5 | Solomon 1952 | 104.4 | Schiff 2006 | 99.0 | Brendel 1970 | 80.0 | Gould 1970 |
| 112.4 | Oppitz 2006 | 103.8 | Ashkenazy 1980 | 98.9 | Ohlsson 1998 | 77.8 | Nikolajewa 1983 |
| 110.4 | Buchbinder 1982 | 103.4 | Lortie 1994 | 98.5 | Backhaus 1956 | | |
| 110.0 | Judina 1952 | 103.1 | Biret 1985 | 97.7 | Kempff 1956 | 109.2 | dt./österr. |
| 109.1 | Leotta 2008 | 102.7 | Goode 1993 | 97.4 | Kempff 1964 | 98.1 | russ./sowjet. |

Figure 5 Average Tempo Hammerklavier Sonata (without ritardando and fermata measures)

tempo of the first movement of the *Hammerklavier Sonata* since the 1840s. Only Carl Czerny, who studied the sonata repeatedly with Beethoven and who premiered the piece, was apparently of the opinion that the tempo d = 138 was possible and also made sense aesthetically. He writes in the chapter on Beethoven from the *Kunst des Vortrags der älteren und neueren Klavierkompositionen* in the *Klavierschule* op. 500 (1842):

»The principle difficulty comes from the tremendously fast and fiery tempo given by the author himself, and then in the performance of the melodic but polyphonic passages to be performed strictly *Legato*, in the clean performance of the passages, tensions and leaps and finally in the endurance that all of this requires. All of the individual difficulties require attentive practice, and the conception of the grand, whole first movement, kept more in the symphony style develops after repeated performance then after it has been learned, accorded the proper amount of time.«²¹

So Czerny also thought that the »tremendously fast and fiery« autograph tempo provided extraordinary difficulties, but at the same time he asserts that an appropriate interpretation of the work is only possible as a result of the »proper amount of time.«

Other than Czerny, since Ignaz Moscheles (1841) the metronome marking was considered too high, and this increasingly so. Moscheles recommends $J = 116.^{22}$ Hans von Bülow $(1873)^{23}$, Eugen d'Albert $(1902)^{24}$, Alfredo Casella $(1920)^{25}$, and Frederic Lamond $(1923)^{26}$, recommended 112. Bülow comments extensively on this decision in a footnote in his edition:

»With the metronomisation, in so far as it principally affects the character of the principal motive, the Editor finds himself considerably at variance with the

²¹ Carl Czerny: Über den richtigen Vortrag der sämtlichen Beethovenschen Klavierwerke nebst Czerny's »Erinnerungen an Beethoven«, edited with commentary by Paul Badura-Skoda, Vienna 1963, p. 58 [66].
22 Anton Schindler: The Life of Beethoven, including His Correspondence with His Friends, ed. Ignaz Moscheles, vol. 2, London 1841, p. 252.
23 Stuttgart and Berlin: J. G. Cotta'sche Buchhandlung Nachfolger.
24 Otto Forberg, Leipzig.
25 G. Ricordi, Rome.
26 Breitkopf & Härtel, Leipzig.

statement of CARL CZERNY (>Art of Delivery,< Part IV of the Pianoforte-school, Op. 500), who, in his quality of first and contemporaneous interpreter of the later pianoforte-works of BEETHOVEN deserves to be consulted as an authority; of course, not altogether an infallible one. CZERNY'S tempo, J = 138, that so little agrees with the ponderous energy of the theme, and seems to be taken too quickly even for the sections of this movement which admit of a greater acceleration, perhaps finds in the lack of sonority of the Viennese pianofortes of the time a kind of justification. On a modern concert-grand of the first quality (and such a one, in a certain sense a substitute for the orchestra, is required for the due rendering of this Sonata), CZERNY'S tempo would have a bewildering and blurring effect.«²⁷

Bülow thought that Czerny's tempo was definitely too fast, especially considering the »ponderous energy« of the primary theme. He suggests that the »lack of sonority of the Viennese pianofortes« might be a possible explanation for the tempo being too fast. He also, however, questions Czerny's authority on the subject. Carl Friedberg (1920)²⁸ calls for J = 104, Samuil Feinberg²⁹ and William Newman (1971)³⁰ 96 – at most 100 – before Donald Francis Tovey (1931)³¹ finally arrives at 80–92, the tempo that Weingartner (1926) calls for in his orchestral version.

Although the tempo marking J = 138 was included in the first two editions of the work (Vienna and London), and although the metronome marking was well known after the appearance of Franz Gerhard Wegeler and Ferdinand Ries's *Biographische Notizen über Ludwig van Beethoven* (1838), which included Beethovens letter to Ries with the metronome markings in question,³² the old Beethoven-Gesamtausgabe (1862–1865)³³ does not include any metronome markings for the *Hammerklavier Sonata*. Hans von Bülow (1873; see above) obviously assumed that the metronome markings came from Carl Czerny (an assumption that was unexplainably repeated still in 1966 by Alexander Goldenweiser, the influential Soviet pianist and piano pedagogue, as well as by the Beethoven scholar Martin Cooper in 1970³⁴). It was Carl Reinecke who finally once more made clear that the metronome markings came from Beethoven in his widely read and repeatedly reprinted study *Die Beethoven'schen Clavier-Sonaten* (1897) – even if Reinecke himself did find the markings too fast for the first movement:

»B[eethoven] himself set the tempo of the Allegro at \downarrow = 138 M. M., but certainly anyone would ask himself, if the grand character of the movement would not be better brought out at a somewhat slower tempo.«³⁵

²⁷ Stuttgart and Berlin: J. G. Cotta'sche Buchhandlung Nachfolger. 28 B. Schott's Söhne, 29 Samuil Feinberg's text, Bethoven. Sonata op. 106 (ispolnitel'skij Mainz and Leipzig. kommentarij), was published in Moscow in 1968 in Voprosy fortepiannogo ispolniteľ stva, Vypusk 2, must however be much older as Feinberg died in 1962. 30 William S. Newman: Performance Practices in Beethoven's Piano Sonatas. An Introduction, New York 1971, p. 52. **31** Associated Board of the Royal School of Music, London. **32** Franz Gerhard Wegeler and Ferdinand Ries: Biographische Notizen über Ludwig van Beethoven, Koblenz 1838, pp. 148-50. 33 Breitkopf & Härtel, Leipzig. 34 Aleksandr Gol'denvejzer: Tridcat' dve sonaty Bethovena. Ispolnitel'skie kommentarii, Moscow 1966, p. 219; Martin Cooper: Beethoven. The Last Decade 1817–1827, Oxford etc. 1970, Revised and reprinted in paperback 1985, p. 159. 35 Carl Reinecke: Die Beethoven'schen Clavier-Sonaten. Briefe an eine Freundin, Leipzig [²1897], p. 97.

At the end of the notes on the first movement Reinecke cites Robert Schumann, who reportedly once said to a student after hearing him play the movement »>You should hear Clara play this.

"³⁶ So perhaps one might speculate that Clara Schumann, one of the first important interpreters of the piece, didn't play the original metronome markings either; her student Carl Friedberg only suggests d = 104 in his own edition (see above).

In editions from 1910 onward, which increasingly came to be understood as >Urtext< editions, the number 138 appears more and more – not criticized but also uncommented. Once again, Artur Schnabel pointed out the fact that the markings came from Beethoven himself in his own edition $(1924-1927)^{37}$ and more significantly, he recorded the movement in 1935 at this tempo (see Figure 5).

This did nothing to change the reigning view that the tempo is wrong. On the contrary, it actually fueled many in this view: Edwin Fischer,³⁸ Hermann Keller,³⁹ Claudio Arrau,⁴⁰ Samuil Feinberg,⁴¹ Rudolf Serkin,⁴² William Newman,⁴³ Martin Cooper,⁴⁴ Svjatoslav Richter⁴⁵ and Alfred Brendel⁴⁶ continued to argue that the tempo was too fast, many expressly citing Schnabel's »distressingly hectic« (Newman), »totally unacceptable recording« (Richter). The reasons offered for rejecting the quick tempo are generally comprehensibility, feeling and character (Fischer, Keller, Serkin, Brendel), but also more specifically »grand character« (Feinberg) and even »Majesty« (Arrau). Brendel especially repeatedly points to sheer pianistic impossibility. He wrote in 1976: »the prescribed tempo cannot be attained, or even approached, on any instrument in the world, by any player at all, be he the devil incarnate!«⁴⁷ 29 years later he would repeat this assertion in slightly different words: »There is no human being on earth who can play the first movement of the >Hammerklavier< sonata acceptably, following Beethoven's metronome marking (crotchet = 138).«⁴⁸

In spite of all of this, we find a gradual change of attitude since 1970 (to which Brendel's remarks above respond). There are an increasing number of voices calling for the feasibility of the tempo, or at least suggesting that one could come close, and who also point out that the work develops a very different and much more appropriate character at the quicker tempo. Charles Rosen argues against the maestoso character of the first movement in his influential study on the Classical style from 1971, and makes a plea for the »harshness« of the piece as well as for its rhythmic vitality. It is solely on these grounds that he sees its »reputation for greatness« justifiable. Any difficulties in understanding on the part of the listener he doesn't see as being particularly problematic.

³⁶ Ibid., p. 101. **37** Ullstein, Berlin. **38** Edwin Fischer: Ludwig van Beethovens Klaviersonaten. Ein Begleiter für Studierende und Liebhaber, Wiesbaden 1956,

³⁹ Hermann Keller: Die Hammerklaviersonate, in: Neue Zeitschrift für Musik, pp. 118–19. December 1958, www.hermann-keller.org/content/aufsaetzeinzeitschriftenundzeitungen/ 1958diehammerklaviersonate.html [8.5.2023]. 40 Claudio Arrau: Leben mit der Musik. Aufgezeichnet von Joseph Horowitz, Bern etc. 1984, p. 185. 41 Feinberg: Bethoven. Sonata 42 Stephen Lehmann and Rudolf Serkin: A Life, New York 2003, p. 80. op. 106 (as fn. 29). **43** Newman: Performance Practices (as fn. 30). 44 Cooper: Beethoven (as fn. 34), p. 160. 45 Bruno Monsaingeon: Sviatoslav Richter. Notebooks and Conversations, Princeton / N.J. **46** Alfred Brendel: Musical Thoughts and Afterthoughts, London 1976, p. 29; 2001, p. 208. id.: Me of All People. Alfred Brendel in Conversation with Martin Meyer, transl. by Richard Stokes, Ithaca / N.Y. 2002, pp.156-7. 47 Brendel: Musical Thoughts and Afterthoughts (as fn. 46). 48 Brendel: Me of All People (as fn. 46), p. 157.

»[...] there is no excuse, textual or musical, for making it sound majestic, like Allegro maestoso, and such an effect is a betrayal of the music. It is often done, because it mitigates the harshness of the work, but this harshness is clearly essential to it. A majestic tempo also saps the rhythmic vitality on which the movement depends. As we have seen, the actual material of the work is neither rich nor particularly expressive; it only lives up to its reputation for greatness if its rhythmic power is concentrated. And it is meant to be difficult to listen to.«⁴⁹

In the very same year, Paul Badura-Skoda dismisses the idea in his guide to the piano sonatas that the *Hammerklavier Sonata* was something like the 9th Symphony for the piano.⁵⁰ In the commentary to his edition of Carl Czerny's performance notes on Beethoven's piano works (1963), he does note that »in Beethoven's tempi, particularly in the first and third movements,« »an appropriate articulation would be impossible.« Still, he recommends just a 10–15% reduction from the original tempi, which would still be a comparatively fast tempo of about 120 – approximately Friedrich Gulda's tempo.⁵¹

In 1975, Joachim Kaiser adopts Badura-Skoda's criticism of the idea of the *Hammerklavier Sonata* as the 9th Symphony of the piano in order to argue that the enormous technical, pianistic difficulties are inextricably bound to the aesthetic substance of the sonata and that an effortless overcoming of these challenges is in no way desirable.

»The virtual impossibility, the tremendous tension and exertion on the part of the performer is truly a part of the thing itself.« 52

»Almost unattainable tempi that force the riskiest of entries, are not a choice in this sonata, but something that Beethoven demands.« 53

Kaiser also asserts that Beethoven's metronomic demands are close to possible, and even realizable in a way that makes musical sense. Further he refutes the opinion (held by, among others, Edwin Fischer) that:

»the beginning of the first movement quotes an unfinished celebratory cantata to the dedicatee of the Hammerklavier Sonata, the Erzherzog Rudolph von Österreich (»Vivat vivat Rudolfus«), which is why this Allegro movement should be played at the tempo of a celebratory cantata.«⁵⁴

And he argues against Hans von Bülow's assertion that the only justification for the given metronome markings is the »lack of sonority of the Viennese pianofortes of the time.«

Charles Rosen repeats his 1971 position rhetorically refined in his book *Beethoven's Piano Sonatas. A Short Companion* (2002). He argues that it is high time to abandon conceptions of the *Hammerklavier Sonata* as a »mammoth« or »pyramid.« The first movement is not »majestic;« it is not a »commemorative« work but rather an »explosion of energy.«

⁴⁹ Charles Rosen: The Classical Style. Haydn, Mozart, Beethoven, New York 1971, Revised Edition London and Boston 1980, pp. 421–22. 50 Paul Badura-Skoda: Große Sonate für das Hammerklavier op. 106 B-Dur, in: id. and Jörg Demus: Die Klaviersonaten von Ludwig van Beethoven, Wiesbaden 1970, p. 174–75. 51 Carl Czerny: Über den richtigen Vortrag (as fn.21), Kommentar, p. 6. 52 Joachim Kaiser: Beethovens 32 Klaviersonaten und ihre Interpreten, Frankfurt/M. 1984, p. 508. 53 Ibid., p. 509. 54 Ibid.

»In any case, I think we ought to abandon the view of this work as a kind of musical mammoth, or a construction comparable to the larger pyramids. [...] There is no reason to think that the first movement is majestic; that would go against the grain of most of it. It is not a commemorative work. More than anything else, it is an explosion of energy.« 55

In general, since the 1970s, the conviction becomes increasingly common that it is virtually impossible to continue to ignore the only existing metronome marking given to a piano sonata by Beethoven (Rainer Riehn 1979⁵⁶, Robert Taub 2002⁵⁷). One even encounters now statements of this kind from pianists, based on whose performances of the *Hammerklavier Sonata* one would not expect them from. In a conversation with Martin Meyer from 2007, András Schiff suggests »that one-sided monumentalizing performances have distorted the true image of the sonata.« Schiff recommends the »tempo precisely given by Beethoven in metronome numbers« as the antidote, and comes to the conclusion: »whoever takes the half note at 138 offers himself and the audience the opportunity to explore the dancing, rhythmically charged presence of the first movement.«⁵⁸ On his own recording, Schiff plays the first movement at an average tempo of J = 104.4 (see Figure 5).

6. Tempo Results

a. Spectrum of Average Tempi

We begin our comparative observation of the tempo data of all three sonatas with a look at the spectrum of the realized average tempi, or performance durations. For the *Appassionata* (see Figure 6), the difference between the fastest and slowest recordings is an unbelievable 7 minutes and 20 seconds between the recordings by Friedrich Gulda and Glenn Gould, both from 1967; the first is approximately twice as fast as the second. Ignoring these two recordings, the difference is 3:39, between Frederic Lamond (1927) and Svjatoslav Richter (1992).

The difference between the fastest and slowest recordings of the Sonata op. 2/3 is considerably smaller (see Figure 7). Here it is only 2:01 between Maurizio Pollini (2006) and Claudio Arrau (1986). If we again remove these two fastest and slowest recordings, the difference is 1:36 between Emil Gilels (1952) and Josef Hofmann (1929).

⁵⁵ Charles Rosen: Beethoven's Piano Sonatas. A Short Companion, New Haven/CT etc. 2002,
p. 219. 56 Rainer Riehn: Eine musikalische Schlittenfahrt oder Wie man sich um Beethovens Anweisungen scherte, in: Beethoven. Das Problem der Interpretation, ed. Heinz-Klaus Metzger and Rainer Riehn (Musik-Konzepte 8), Munich 1979, pp. 97–103. 57 Robert Taub: Playing the Beethoven Piano Sonatas, Portland/OR 2002, p. 211. 58 Beethovens Klaviersonaten und ihre Deutung. »Für jeden Ton die Sprache finden …« – András Schiff im Gespräch mit Martin Meyer, Bonn 2007, p. 84.

| 14:38 | Gould 1967 | 10:03 | Ashkenazy 1973 | 9:29 | Biss 2004 | 8:54 | Kodama 2003 |
|-------|------------------|-------|------------------|------|------------------|-------|--------------------|
| 11:28 | Richter 1992 | 10:00 | Richter 1959 | 9:28 | Brendel 1962 | 8:53 | Pollini 2002 |
| 11:13 | Arrau 1984 | 9:57 | Kempf 2004 | 9:26 | Kempff 1951 | 8:50 | Badura-Skoda 1970 |
| 11:10 | Nikolajewa 1993 | 9:57 | Medtner 1946 | 9:22 | Gilels 1961 | 8:47 | Say 2005 |
| 11:04 | Leotta 2005 | 9:53 | Ohlsson 1992 | 9:22 | Zechlin 1969 | 8:45 | Gieseking 1951 |
| 10:53 | Arrau 1965 | 9:53 | Perahia 1985 | 9:18 | Tan 1987 | 8:45 | Schnabel 1933 |
| 10:50 | Gilels 1975 | 9:50 | Kerer 1963 | 9:18 | Székely 1988 | 8:44 | Goode 1993 |
| 10:44 | Pletnev 1988 | 9:50 | Kovacevich 1999 | 9:18 | Ashkenazy 1978 | 8:30 | Solomon 1954 |
| 10:33 | Arrau 1982 | 9:48 | Kempff 1932 | 9:16 | Ginzburg 1950er | 8:25 | Buchbinder 1980/82 |
| 10:32 | Lang Lang 2010 | 9:43 | Horowitz 1959 | 9:15 | Rubinstein 1963 | 8:24 | Gulda 1958 |
| 10:31 | Richter 1960 | 9:43 | Oppitz 2005 | 9:14 | Kamenz 2006 | 8:22 | Fischer 1935 |
| 10:22 | Barenboim 1967 | 9:43 | Brendel 1995 | 9:14 | Backhaus 1958 | 8:21 | Serkin 1947 |
| 10:18 | Zilberstein 2007 | 9:42 | Ott 2007 | 9:12 | Pires 1975 | 8:09 | Brautigam 2007 |
| 10:17 | Barenboim 1981 | 9:38 | Grinberg 1960 | 9:09 | Serkin 1936 | 8:05 | Gieseking 1939 |
| 10:10 | Ciccolini 1999 | 9:37 | Kempff 1964 | 9:07 | Berman 1972 | 8:01 | Feinberg 1930er |
| 10:10 | Lewis 2007 | 9:36 | Ney 1952 | 9:05 | Serkin 1963 | 7:57 | Bauer 1927 |
| 10:09 | Haefliger 2007 | 9:35 | Sofronitsky 1960 | 9:03 | Gilels 1951 | 7:49 | Lamond 1927 |
| 10:07 | Aimard 2001 | 9:35 | Pizarro 2003 | 8:57 | Hewitt 2005 | 7:18 | Gulda 1967 |
| 10:03 | Schiff 2006 | 9:34 | Brendel 1970 | 8:54 | Van Cliburn 1958 | | |
| | | | | | | 09:51 | russ./sowjet. |

Figure 6 Performance Durations Appassionata

09:05 dt./österr.

| 8:45 | Arrau 1986 | 7:43 | Barenboim 1984 | 7 |
|------|-------------------|------|-------------------|---|
| 8:22 | Hofmann 1929 | 7:43 | Arrau 1938 | 7 |
| 8:15 | Schiff 2004 | 7:42 | Brendel 1994 | 7 |
| 8:06 | Grinberg 1965 | 7:40 | Oppitz 2004 | 7 |
| 8:05 | Benedetti Michel- | 7:39 | Richter 1975 | |
| | angeli 1975 | 7:37 | Benedetti Michel- | 7 |
| 7:58 | Lang Lang 2010 | | angeli 1941 | 7 |
| 7:57 | Nikolajewa 1983 | 7:37 | Jandó 1988 | 7 |
| 7:53 | Barenboim 1969 | 7:35 | Solomon 1956 | 7 |
| 7:46 | Rubinstein 1963 | 7:34 | Kuerti 1975 | 7 |
| 7:46 | Brautigam 2004 | 7:32 | Kempff 1953 | 7 |
| 7:44 | Brendel 1964 | 7:32 | Ciani 1970 | 7 |
| | | | | |

Figure 7 Performance Durations Sonata op. 2/3 (without the repeat of the exposition)

| 7:31 | Gilels 1981 | 7:16 | Gulda 1954 |
|------|-------------------|------|-------------------|
| 7:31 | Schnabel 1934 | 7:15 | Backhaus 1952 |
| 7:29 | Nat 1955 | 7:14 | Tan 1992 |
| 7:29 | Benedetti Michel- | 7:12 | Richter 1950 |
| | angeli 1949 | 7:12 | Backhaus 1969 |
| 7:27 | Ashkenazy 1974 | 7:11 | Gieseking 1956 |
| 7:24 | Gould 1979 | 7:10 | Zechlin 1962 |
| 7:23 | Goode bis 1993 | 7:10 | Perahia 1990 |
| 7:19 | Lortie 1992 | 7:03 | Badura-Skoda 1970 |
| 7:19 | Fischer 1978 | 7:01 | Badura-Skoda 1989 |
| 7:19 | Kempff 1964 | 6:46 | Gilels 1952 |
| 7:17 | Gulda 1967 | 6:44 | Pollini 2006 |
| | | | |
| | | 7:31 | russ./sowjet. |

| 10:52 | Gould 1970 | 8:40 | Kempff 1956 | 8:20 | Schiff 2006 | 7:51 | Judina 1952 |
|-------|-----------------|------|---------------|------|----------------|------|-------------------|
| 10:50 | Nikolajewa 1983 | 8:39 | Kempff 1964 | 8:16 | Grinberg 1966 | 7:50 | Buchbinder 1982 |
| 9:56 | Barenboim 1970 | 8:38 | Uchida 2007 | 8:15 | Ashkenazy 1980 | 7:45 | Oppitz 2006 |
| 9:45 | Barenboim 1984 | 8:38 | Backhaus 1956 | 8:14 | Lortie 1994 | 7:44 | Leotta 2008 |
| 9:19 | Gilels 1982 | 8:36 | Ohlsson 1998 | 8:09 | Richter 1975 | 7:39 | Solomon 1952 |
| 9:19 | Serkin 1968 | 8:32 | Jandó 1988 | 8:06 | Arrau 1963 | 7:27 | Leslie 2008 |
| 9:15 | Gilels 1984 | 8:30 | Brendel 1995 | 8:02 | Pollini 1977 | 7:26 | Badura-Skoda 1978 |
| 8:50 | Backhaus 1952 | 8:28 | Goode 1993 | 7:55 | Zechlin 1969 | 7:14 | Gulda 1951 |
| 8:49 | Brendel 1970 | 8:26 | Biret 1985 | 7:54 | Brautigam 2008 | 7:06 | Gulda 1967 |
| 8:47 | Ciccolini 1999 | 8:22 | Brendel 1964 | 7:53 | Nat 1954 | 6:51 | Korstick 2003 |
| 8:41 | Sokolov 1978 | 8:21 | Fischer 1978 | 7:51 | Petri 1951 | 6:44 | Gieseking 1949 |
| | | | | | | 6:38 | Schnabel 1935 |
| | | | | | | | |
| | | | | | | | |

Figure 8 Performance Durations *Hammerklavier Sonata* (with ritardando and fermata measures; without the repeat of the exposition)

8:49 russ./sowjet. 7:57 dt./österr.

The difference is again greater for the *Hammerklavier Sonata* (see Figure 8). Including all measures, it is 4:14 between Artur Schnabel (1935) and Glenn Gould (1970). Excluding these two recordings it is still 4:06 between Walter Gieseking (1949) and Tatjana Nikolajewa (1983).

Taking all of the recordings into consideration, the spectrum of average tempi is greatest for the *Appassionata*. Excluding the fastest and slowest recordings of each sonata, the spectrum is greatest for the *Hammerklavier Sonata* (see chapter 7a for the interpretation of these findings).

b. History of the Average Tempo

Regarding the history of the average tempo, recordings of the *Appassionata* from the 1920s to the 1990s got progressively slower by over 2 minutes, from under 8 minutes in the 1920s to over 10 minutes in the 1990s. In the 2000s, the tempo then speeds up again to that of the 1960s and 1970s, which is of course still slower than the tempo of the previous four decades. The year of the recording is indicated on the x-axis of Figure 9 and the performance duration is given in minutes on its y-axis. The small circles indicate the individual recordings and the small empty circles indicate recordings for which only the decade of the recording is known. The grey line represents the rough development of the performance durations, and R2- and p-values are the statistical values of the correlation. The horizontal dotted lines represent the average values per decade.

In total, the tempo of the Sonata op. 2/3 remained constant from the 1920s into the 2000s (see Figure 10), even if there was a small slowing down between the 1950s and 1980s (just under 30 seconds).

The tempo of the *Hammerklavier Sonata* (see Figure 11) also slows down from the 1950s to the 1980s – by almost exactly 1 minute from 8 minutes to 9 minutes – only to speed up again in the 1990s and 2000s to a tempo even faster than that of the 1950s. (Unlike the *Appassionata*, the regression line also shows an increase of tempo over the entire time span, this is however here insignificant). One cannot make generalizations about the recordings made in the 1930s and



Figure 9 Performance Duration and Year of Recording Appassionata



Figure 10 Performance Duration and Year of Recording Sonata op. 2/3 (without the repeat of the exposition)



Figure 11 Performance Duration and Year of Recording Hammerklavier Sonata (without the repeat of the exposition)

1940s as there is only one recording from each decade. Considering the continuous complaints about the autograph metronome number being too high (see chapter 5), we cannot assume that Schnabel's (1935) and Gieseking's (1949) tempi are representative of their decades (see chapter 7b for the interpretation of these findings).

c. Tempo, Tempo Variations and Tempo Amplitude: Austro-German and Russian/Soviet Pianists

Unexpectedly, there were hardly any findings of note regarding either the spectrum or the history in the categories of tempo variations from measure to measure or tempo amplitude. Instead however, there was a noticeable difference between Austro-German and Russian/Soviet recordings of the *Appassionata* and *Hammerklavier sonatas*. Figures 12–15 show that Russian and/or Soviet pianists tend towards interpretations with a greater tempo amplitude⁵⁹ and greater

⁵⁹ When calculating the tempo amplitude of the *Appassionata*, we excluded the tempo values of measures 13, 16, 150 and 151 as well as measures 235–237 (*Più Allegro*); for the Sonata op. 2/3 we excluded measures 90, 108, 218–232 and 246; for the *Hammerklavier Sonata* measures 4, 8, 32–34, 38, 65–66, 69, 121, 123, 131, 133, 199, 200, 234, 264–266, 268, 297, 298, 301 and 372. Further, in order to avoid lending individual tempo peaks or valleys too much we, we excluded the top and bottom 2% of the tempo values (see chapter 2).

| 2,53 | Richter 1960 | 1,83 | Barenboim 1981 | 1,69 | Feinberg 1930er | 1,54 | Tan 1987 |
|------|------------------|------|------------------|------|-----------------|------|----------------------------|
| 2,29 | Zilberstein 2007 | 1,82 | Gieseking 1939 | 1,68 | Gilels 1975 | 1,51 | Kempff 1951 |
| 2,25 | Richter 1959 | | Perahia 1985 | 1,66 | Pollini 2002 | 1,50 | Ney 1952 |
| 2,11 | Gould 1967 | 1,81 | Sofronitsky 1960 | 1,65 | Kempff 1932 | 1,45 | Kempff 1965 |
| 2,06 | Grinberg 1960 | | Brendel 1970 | | Rubinstein 1963 | | Gulda 1967 |
| | Kerer 1963 | 1,80 | Buchbinder 1982 | | Goode 1993 | 1,41 | Serkin 1963 |
| 2,04 | Barenboim 1967 | | Gilels 1961 | 1,61 | Fischer 1935 | 1,32 | Serkin 1947 |
| | Pletnev 1988 | 1,77 | Aimard 2001 | 1,60 | Horowitz 1959 | 1,31 | Serkin 1936 |
| 2,01 | Gilels 1951 | 1,76 | Lamond 1927 | 1,59 | Brautigam 2007 | | |
| 1,95 | Schnabel 1933 | 1,75 | Medtner 1946 | | Schiff 2006 | | |
| 1,91 | Arrau 1965 | 1,74 | Bauer 1927 | 1,58 | Brendel 1962 | | |
| | Ginzburg 1950er | | Backhaus 1958 | 1,57 | Pires 1975 | | |
| 1,90 | Richter 1992 | | Say 2005 | | Brendel 1995 | 1,96 | russisch/ sowjetisch |
| 1,87 | Solomon 1954 | 1,71 | Gieseking 1951 | 1,56 | Gulda 1958 | 1,6 | deutsch/ österreichisch |

Figure 12 Tempo Amplitude Appassionata

| 2,09 | Gilels 1984 | 1,77 | Barenboim 1984 | 1,64 | Solomon 1952 | 1,51 | Korstick 2003 |
|------|-----------------|------|----------------|------|----------------|------|----------------------------|
| 2,04 | Grinberg 1966 | 1,77 | Backhaus 1952 | 1,63 | Brautigam 2008 | 1,49 | Lortie 1994 |
| 2,01 | Nikolajewa 1983 | 1,76 | Goode 1993 | 1,63 | Kempff 1956 | 1,49 | Leslie 2008 |
| 1,92 | Arrau 1963 | 1,74 | Sokolov 1978 | 1,62 | Gould 1970 | 1,49 | Badura-Skoda 1978 |
| 1,90 | Brendel 1970 | 1,73 | Fischer 1978 | 1,62 | Kempff 1964 | 1,47 | Richter 1975 |
| 1,89 | Uchida 2007 | 1,71 | Backhaus 1956 | 1,61 | Schiff 2006 | 1,46 | Gulda 1951 |
| 1,89 | Judina 1952 | 1,71 | Biret 1985 | 1,60 | Petri 1951 | 1,46 | Jando 1988 |
| 1,88 | Buchbinder 1982 | 1,70 | Serkin 1968 | 1,59 | Pollini 1977 | 1,45 | Nat 1954 |
| 1,84 | Gilels 1982 | 1,69 | Oppitz 2006 | 1,59 | Brendel 1995 | 1,41 | Gulda 1967 |
| 1,83 | Zechlin 1969 | 1,69 | Brendel 1964 | 1,57 | Ciccolini 1999 | | |
| 1,80 | Barenboim 1970 | 1,67 | Ashkenazy 1980 | 1,53 | Gieseking 1949 | 1,84 | russisch/ sowjetisch |
| 1,78 | Ohlsson 1998 | 1,64 | Schnabel 1935 | 1,52 | Leotta 2008 | 1,65 | deutsch/ österreichisch |

Figure 13 Tempo Amplitude Hammerklavier Sonata

Loesch / Brinkmann: Tempo Measurements in Piano Sonatas by Ludwig van Beethoven https://doi.org/10.5281/zenodo.8081731 — version 3.0 (26.6.2023)

| 11,22 | Arrau 1965 | 8,23 | Kempff 1932 | 7,14 | Backhaus 1958 | 6,20 | Gould 1967 |
|-------|------------------|------|-----------------|------|----------------|------|----------------------------|
| 10,91 | Zilberstein 2007 | 8,22 | Pires 1975 | | Tan 1987 | 6,15 | Brendel 1962 |
| 10,71 | Grinberg 1960 | 8,18 | Brautigam 2007 | 7,12 | Richter 1992 | 5,96 | Kempff 1951 |
| 10,21 | Barenboim 1967 | 8,02 | Rubinstein 1963 | 7,07 | Gieseking 1951 | 5,85 | Serkin 1963 |
| 9,90 | Feinberg 1930er | 7,90 | Pletnev 1988 | | Brendel 1970 | 5,77 | Gulda 1958 |
| 9,56 | Barenboim 1981 | 7,88 | Ginzburg 1950er | 6,95 | Goode 1993 | 4,94 | Gulda 1967 |
| 9,30 | Aimard 2001 | | Kerer 1963 | 6,93 | Say 2005 | 4,78 | Serkin 1947 |
| 9,18 | Sofronitsky 1960 | 7,69 | Gilels 1961 | 6,74 | Gieseking 1939 | 4,36 | Serkin 1936 |
| 8,66 | Solomon 1954 | 7,66 | Fischer 1935 | 6,72 | Gilels 1975 | | |
| 8,57 | Bauer 1927 | 7,61 | Richter 1959 | 6,68 | Pollini 2002 | | |
| 8,52 | Lamond 1927 | | Richter 1960 | 6,63 | Ney 1952 | | |
| 8,48 | Schnabel 1933 | 7,47 | Schiff 2006 | 6,29 | Kempff 1965 | | |
| 8,47 | Gilels 1951 | 7,23 | Buchbinder 1982 | | Brendel 1995 | 8,27 | russisch/ sowjetisch |
| 8,26 | Medtner 1946 | 7,16 | Perahia 1985 | 6,27 | Horowitz 1959 | 6,48 | deutsch/ österreichisch |

Figure 14 Average Tempo Variation from Measure to Measure in Percent Appassionata

| | | | | | | | |
|------|-----------------|-----|-----------------|------|-------------------|-----|----------------------------|
| 12,3 | Uchida 2007 | 8,4 | Brautigam 2008 | 7,4 | Brendel 1995 | 6,2 | Ciccolini 1999 |
| 10,7 | Arrau 1963 | 8,3 | Schiff 2006 | 7,4 | Pollini 1977 | 6,2 | Gulda 1967 |
| 10,0 | Judina 1952 | 8,3 | Ohlsson 1998 | 7,3 | Gilels 1984 | 6,1 | Kempff 1964 |
| 9,8 | Grinberg 1966 | 8,3 | Oppitz 2006 | 7,3 | Korstick 2003 | 6,0 | Jando 1988 |
| 9,7 | Goode 1993 | 8,1 | Sokolov 1978 | 7,1 | Leotta 2008 | 5,8 | Lortie 1994 |
| 9,1 | Nikolajewa 1983 | 8,0 | Buchbinder 1982 | 7,1 | Biret 1985 | 5,8 | Gould 1970 |
| 8,8 | Schnabel 1935 | 7,9 | Gilels 1982 | 7,0 | Brendel 1964 | 5,5 | Nat 1954 |
| 8,8 | Barenboim 1970 | 7,9 | Solomon 1952 | 7,0 | Backhaus 1952 | 5,4 | Richter 1975 |
| 8,5 | Barenboim 1984 | 7,7 | Leslie 2008 | 6,8 | Badura-Skoda 1978 | 5,1 | Gulda 1951 |
| 8,5 | Petri 1951 | 7,7 | Ashkenazy 1980 | 6,7 | Zechlin 1969 | | |
| 8,5 | Serkin 1968 | 7,5 | Backhaus 1956 | 6,7 | Gieseking 1949 | 8,2 | russisch/ sowjetisch |
| 8,4 | Fischer 1978 | 7,5 | Brendel 1970 | 6,5 | Kempff 1956 | 7,2 | deutsch/ österreichisch |

Figure 15 Average Tempo Variation from

Measure to Measure in Percent Hammerklavier Sonata

tempo variation than pianists from Austria and Germany. On all of the charts, the Russian/Soviet pianists (whose names are highlighted light grey) are towards the top, and the German and Austrian pianists (whose names are highlighted dark grey) towards the bottom.

If we consider all of the analyzed recordings of each sonata, we can see that recordings of the *Appassionata* by Russian/Soviet pianists demonstrate an average tempo amplitude of 1.96, and that that of the Austro-German pianists is 1.6. With the *Hammerklavier* the recordings by Russian/Soviet pianists give a tempo amplitude of 1.84, and those of the Austro-German 1.65. The tempo variations of the Russian/Soviet pianists' *Appassionata* have an average of 8.27, and that of the Austro-German 6.84%. Excluding the ritardando and fermata measures, the variation for Russian/Soviet pianists in the *Hammerklavier Sonata* is 8.2%, the Austro-German 7.2%.⁶⁰

After recognizing a significant difference of tempo amplitude and tempo variation between Russian/Soviet and Austro-German interpreters, we posed the question regarding performance duration or average tempo accordingly. Here we find that the Russian/Soviet pianists on average are somewhat slower than the Austro-Germans. They perform the *Appassionata* at an average tempo of \downarrow . = 105.0 and the Austro-Germans 115.9; the *Hammerklavier* at an average of \downarrow = 92.4 and the Austro-Germans 102.7. Figures 16 and 17 show the averaged tempo curves of the Austro-German and Russian/Soviet recordings of the *Appassionata* and *Hammerklavier* sonatas respectively.

There are no such differences for recordings of the Sonata op. 2/3. The Russian/Soviet pianists are only slightly slower, playing at an average tempo of 136.1, as opposed to 139.3. There are no differences at all for tempo variation and tempo amplitude. Figure 18 shows the averaged tempo curves of op. 2/3.

7. Tempo Interpretations

a. Spectrum of Average Tempi

The cause for the different tempo spectra of the three sonatas is of course a highly complex and not easily answered question. We shall only make a very brief and very preliminary attempt to address this here.

The extreme spectrum of the choice of tempo of the *Appassionata* (see Figure 6) is likely the result of a critical or even Dadaistic provocation. The fastest and slowest recordings were both made in 1967. Friedrich Gulda would turn down the Beethoven Ring of the Wiener Musikakademie two years later, on the grounds that such a conservative institution doesn't have the right to award a prize that carries the name of the great musical revolutionary.⁶¹ The other way around, in the liner notes to his *Appassionata* recording, Glenn Gould writes that

⁶⁰ For a more detailed discussion of the dramatic ritardandi of the Russian/Soviet *Appassionata* Recordings see our text: Das Tempo in Beethovens *Appassionata* (as fn. 1).

⁶¹ Friedrich Gulda: Rede anläßlich der Verleihung des Beethovenringes durch die Wiener Musikakademie, in: Worte zur Musik, Munich 1971, pp. 95–9.



Figure 16 Average Tempo Curves of Russian/Soviet and Austro-German Pianists Appassionata



Figure 17 Average Tempo Curves of Russian/Soviet and Austro-German Pianists Hammerklavier Sonata



Figure 18 Average Tempo Curves of Russian/Soviet and Austro-German Pianists Sonata op. 2/3

this piece, which is so highly regarded by audiences, musicians and musicologists alike, is unsuccessful: The tone is as exaggerated as the substance is lacking.⁶² The extreme durations of both interpreters appear to be an expression of a kind of *Appassionata* crisis, in the context of the ideology-critical tendencies of the late 1960s. Gould's recording through the >time magnifier< aims at a polemic against the >heroic style< – although it remains unclear if the slow tempo is supposed to conceal or draw out the supposed lack of substance. Gulda's recording, which is a full minute faster than his recording from 1958, hypostatizes the revolutionary of all revolutionaries.

⁶² Glenn Gould: Beethoven's *Pathétique*, »Moonlight,« and »Appassionata« Sonatas, in: The Glenn Gould Reader, ed. Tim Page, New York 1989, pp. 51–3. **63** Kenneth Drake: The Sonatas of Beethoven as He Played and Taught Them, Cincinatti/OH 1972, pp. 36–41. **64** Mysli o Bethovene. Rossijskie pianisty ob ispolnenii [...] Bethovena, ed. Boris Borodin and Arkadij Luk'janov, Moscow 2010, p. 104.

The comparatively narrow spectrum of tempi for the Sonata op. 2/3 (see Figure 7) may then conversely have to do with the fact the piece is not as challengingly prominent, and that its virtuosic but classical gestures suggest a specific tempo, which should certainly be fast, but then again not too fast.

The spectrum of tempi for the *Hammerklavier* (see Figure 8), which is broader than that of the *Appassionata* (excluding the provocative extremes of Gould and Gulda), is unquestionably related to the difference between the orchestral piano setting and the exorbitant technical difficulties attached to Beethoven's quick metronome marking. The musical character of the former has been repeatedly described as »ponderous« (Hans von Bülow), »grand« (Samuil Feinberg), and »majestic« (Claudio Arrau) (see chapter 5), while for the latter ultimately an alternative aesthetic attribution was found: a largely rhythmically defined »explosion of energy« (Charles Rosen).

b. History of the Average Tempo

There is something that connects the tempo histories of these three sonatas: a slowing down of the tempo between the 1950s and 1980s (or 1990s), and then a speeding up in the decades that follow. Since this finding was also true of Schubert's B Major Sonata D. 960, whose tempo one of our students examined using 50 recordings⁶⁵, it would seem at the moment that this may be a more general tendency.⁶⁶

This data seems notable in the context of the repeatedly discussed question as to whether or not tempo had increased, decreased or remained the same over the course of longer periods of time. The first is the position held by Adolf Bernhard Marx,⁶⁷ Theodor W. Adorno,⁶⁸ and Grete Wehmeyer.⁶⁹ Robert Philip diagnosed a general slowing down of tempo in the 20th century⁷⁰ and Nicholas Temperly and José Bowen assumed that all in all, tempo had not changed.⁷¹ Our tempo measurements differentiate the picture and show that for all three of the works that we examined, since 1950 there is a similar tendency: a slowing down through the 80s (or 90s) followed by a speeding up. The data for the preceding decades diverges: recordings of the *Appassionata* from the 1920s and 1930s are faster than those of the 1950s, in the case of op. 2/3 they are slower.

⁶⁵ Sven Werner will submit his musicology master thesis in 2013 at the Humboldt-Universität Berlin. 66 On the other hand, our study of the first movement of Beethoven's String Quartet op. 95 produced different results. Here the tempo has continuously increased since the 1970s. Beethoven himself gave this movement a very fast metronome marking. Heinz von Loesch and Fabian Brinkmann: Tempogestaltung im Kopfsatz von op. 95: Eine exemplarische Studie zur Interpretationsgeschichte von Beethovens Streichquartetten, in: Beethovens Kammermusik. Das Handbuch, ed. Friedrich Geiger and Martina Sichardt, Laaber 2014 (Das Beethoven-Handbuch 3), pp. 445–67. 67 Adolf Bernhard Marx: Anleitung zum Vortrag Beethovenscher Klavierwerke, Berlin 1863, p. 105, Berlin 1875, p. 62. 68 Theodor W. Adorno: Neue Tempi (1928), in: Moments musicaux, Frankfurt/M. 1964, pp. 74–83. 69 Grete Wehmeyer: Prestißißimo. Die Wiederentdeckung der Langsamkeit in der Musik, Hamburg 1989. 70 Robert Philip: Early Recordings and Musical Style: Changing Tastes in Instrumental Performance 1900–1950, Cambridge 1992, pp. 35–6. 71 Nicholas Temperly: Tempo and Repeats in Early Nineteenth Century, in: Music & Letters 67 (1966), p. 323; Bowen: Tempo, Duration, and Flexibility (as fn. 11), p. 114.

Robert Philip offers the LP era and the demand for technical perfection on recordings as an explanation for a tendency towards slower tempi after the Second World War. From our perspective there are three further factors to consider. We will only briefly make preliminary mention of these here – a larger study on the subject is planned.

First we would point out an increasing focus on the importance of the compositional or work aesthetic, which expects a kind of subordination or >servitude< on the part of the interpreter and which is tied to a specific anti-virtuoso attitude.

The second factor is the increasing importance of a structural aesthetic, which not only captured the music of the avant-garde and musical analysis, but also musical interpretation. In contrast to the expressive aesthetic, an emphasis is placed on clarity of performance. The pathos of the structural aesthetic even captured a pianist like Claudio Arrau, who spoke of measures 14 and 15 of the *Appassionata*, which had always been considered emotional outbursts, as something »fully rhythmic.«⁷² Arrau's *Appassionata* recordings from 1965 and 1984 each set a new slowness record in the *Appassionata* discourse of the 1960s–1980s (see below) – excluding Glenn Gould's of course.

Third, it seems that something like a cult of the slow developed in the 1980s in the course of the eco and peace movements under the catchword >deceleration.< Not only were the 1980s the decade in which Sten Nadolny's novel *The Discovery of Slowness* appeared and became a bestseller (1983); in the 80s there were discussions about the possibility of halving the tempi in the fast movements of Beethoven's works: 1980 Willem Retze Talsmas *Wiedergeburt der Klassiker*, Volume 1: *Anleitung zur Entmechanisierung der Musik*,⁷³ then in 1989 the abovementioned book by Grete Wehmeyer *Prestißißimo. Die Wiederentdeckung der Langsamkeit in der Musik*.⁷⁴

Since the 1990s then in contrast a new turn towards expressivity and virtuosity becomes apparent, motivated not least by historical performance practice, which far from increased attention to original metronome markings, operated under the assumption that composers of the Classical era were far more influenced by the aesthetics of *Empfindsamkeit* and *Sturm und Drang*, as well as the phenomenon of virtuosity than had previously been believed.

The specific and continuous slowing down of the *Appassionata* (see Figure 9) is likely a function of the long history of interpretations of the Classical hit, which initially assumed faster tempi. The quick tempi are not only documented by the recordings of the 1920s and 1930s, but also by performance editions since the 1870s (Hans von Bülow, and Frederic Lamond recommend \checkmark = 126, Eugen d'Albert and Schnabel 120). Since the 1950s, a performance with an original choice of tempo had to be at a slower tempo. It almost seems as if a competition for the slowest *Appassionata* began in the 1960s: Svjatoslav Richter (1959) M. M. 103.9 or 10:00 Min., Richter (1960) M. M. 98.9 or 10:31, Claudio Arrau (1965) M. M. 95.5 or 10:53, [Glenn Gould (1967) M. M. 71.1 or 14:38,] Emil Gilels (1975)

⁷² Arrau: Leben mit der Musik (as fn. 40), p. 246.**73** Willem Retze Talsma: Wiedergeburtder Klassiker, vol. 1: Anleitung zur Entmechanisierung der Musik, Innsbruck 1980.

⁷⁴ Wehmeyer: Prestißißimo (as fn. 69).

| | Richter | Richter | Arrau | Gilels | Arrau | Richter | Nikolajewa |
|---------------------|---------|---------|-------|--------|-------|---------|------------|
| | 1959 | 1960 | 1965 | 1975 | 1984 | 1992 | 1993 |
| BPM / M. M. | 103,9 | 98,9 | 95,5 | 95,9 | 92,9 | 90,7 | 93,1 |
| Duration in Minutes | 10:00 | 10:31 | 10:53 | 10:50 | 11:13 | 11:28 | 11:10 |

M. M. 95.9 or 10:50, Claudio Arrau (1984) M. M. 92.9 or 11:13, Richter (1992) M. M. 90.7 or 11:28, Tatjana Nikolajewa (1993) M. M. 93.1 or 11:10.

The reasons for the extreme increase of tempo of the *Hammerklavier* (see Figure 11) in the 1990s and 2000s, other than the above-mentioned >Zeitgeistphenomenon, are equally difficult to identify.

1. Even if interpretations by representatives of historically informed performance practice are by no means the fastest – those that we analyzed were at 115.9 (Badura-Skoda 1978) and 108.7 (Brautigam 2008) – we can assume a general influence of historically informed performance practice, as it brought Beethoven's metronome numbers back into view and with their realizations attempted, as had previous >Urtext< movements before, to cite the autograph metronome marking of the *Hammerklavier* as the strongest evidence that tempi were once so quick.

2. Since it was rarely if at all satisfactorily met, the challenge of playing the *Hammerklavier* convincingly at the fastest possible tempo never lost currency. Originality or even exceptionality could still come to be in a shining performance of the work at the autograph tempo. And one can certainly assume that even Brendel's repeated assertions, which everyone know and have read, that there is »no human being on earth who can play the first movement of the >Hammerklavier< sonata acceptably, following Beethoven's metronome marking (crotchet = 138)«⁷⁵ proved a special kind provocation to young and ambitious pianists.

3. In contrast, one cannot say with any certainty to what extent the new tendencies beginning around 1970 sketched in chapter 5 above, especially as expressed in the texts by Charles Rosen and Joachim Kaiser, had any influence on the history of the work's tempo. These new tendencies were also inherent in the culturally critical spirit of 1968 - an iconoclastic moment. We see this when Rosen refutes the »majestic« character of the first movement and emphasizes its »harshness,« qualifies the »reputation for greatness« and trivializes the listener's difficulties in comprehension; with Kaiser when he mocks the »homagecantata tempo« and identifies the technical difficulties as an integral aspect of the work. The ideology-critical moments of both Rosen's and Kaiser's arguments interlace with ideas of the avant-garde discussions of the day. It must be stated, that the influence of these new tendencies from around 1970 did not catch on right away. The tempo of the work continued to slow down. One must also assume however, that in the long run they did not miss their mark: Both Rosen's and Kaiser's publications are among the books most often read by practicing musicians and traces of their arguments are found in numerous more recent texts.

⁷⁵ See fn. 48.

c. Tempo, Tempo Variations and Tempo Amplitude: Austro-German and Russian/Soviet Pianists

Musical feuilletons have always postulated a difference between Austro-German and Russian/Soviet approaches. There has constantly been the discussion about the >German Beethoven performer< on the one hand and the >Russian claw< or >soul< on the other. As far as tempo is concerned, José Bowen actually did not confirm any difference between Russian/Soviet and other interpreters.⁷⁶ Our tempo measurements however, confirm this assumption for both the *Appassionata* and *Hammerklavier* (and also for Schubert's B Major Sonata D. 960),⁷⁷ but not for the Sonata op. 2/3 (see Figures 16–18).

Even if one wished to postulate that the specific classical virtuoso manner of op. 2/3, which hardly leaves any room for tempo variation, presents an exception to the rule, our own source material would seem to be too limited to risk wanting to offer any kind of general thesis; above all for lack of cause. Should further tempo measurements confirm these results, an attempt at establishing an objective foundation – far removed from topos such as >German obedience< and >Russian spirit< – would be one of the most distinguished challenges of a cultural history of interpretation.

8. Everyone Does it That Way (So machen's alle)

Concerning large-scale form, there are tempo decisions in all three of the movements that we analyzed on which a surprising number of pianists come to a consensus. We would like to evoke this using the averaged tempo curves of all of the recordings, even if these sometimes do not show what all pianists do, but rather simply the result of what happens when all the differences are averaged out. In order to know what each individual pianist has done, one has to – and this we have done – observe every tempo curve and its tempo values individually and compare these. We are solely using the averaged tempo curves to present the results of our analysis.

The *Appassionata* is the sonata about which there is the most consensus (see Figure 19). There is a tempo plan that is characteristic of all of the recordings: A fast transition followed by a slowed down second subject within the exposition and one or two accelerando passages in the development section (at measure 79 and at measure 113) and coda (at measure 210), before the *Più Allegro* again gets faster as Beethoven's score stipulates. All of the pianists without exception follow this tempo plan. In addition, the majority of the pianists play the concluding group faster than the second subject and take the beginning of

⁷⁶ Bowen: Tempo, Duration, and Flexibility (as fn. 11), pp. 137 and 144. 77 See fn. 65.



Figure 19 Average Tempo Curve of all 50 Recordings of the Appassionata

the recapitulation faster than the beginning of the exposition. As far as the relationship between first and second theme groups is concerned, most pianists play the second as fast or faster than the first.⁷⁸

Other than the tempo relationships between the first and second theme groups and the beginnings of the exposition and recapitulation, all of the details of this plan follow the recommendations of the performance editions (Bülow, d'Albert, Lamond and Schnabel). The performance editions on the other hand recommend the same tempo for the beginning of the recapitulation as that of the beginning of the exposition and they recommend a slower tempo for the second theme group than that of the first. See chapter 10 for a discussion of the discrepancy between actual performance and the recommendations of the performance editions concerning choice of tempo for the first and second theme groups and the beginnings of the exposition and recapitulation.

There is also a tempo plan followed by all pianists that can be reconstructed for op. 2/3 (see Figure 20). In the exposition it is a regularly repeated change of tempo between the thematically bound, or cantabile sections and the thematically unconnected, or virtuoso sections. Without exception – or sometimes

⁷⁸ Which measures should be decisive for the tempi of the first theme group, transition, second theme group and concluding group is of course a difficult question. Equally difficult is the question of which measures the metronome markings in the editions refer to. After much discussion, we decided on the following measures for the average tempi of the four main sections of the exposition: First theme group mm. 1–2 (the widespread reduction of tempo in mm. 3–4 seemed to us already out of tempo), for the transition mm. 24–27, for the second theme group mm. 36–39 and for the concluding group mm. 51–54.



Figure 20 Average Tempo Curve of all 45 Recordings of the Sonata op. 2/3

with minimal differences – all of the pianists play the main themes of the first theme group, the transition, second theme group and concluding group slower than the passage groups that follow them (at measure 13, at measure 61, at measure 85), also the >animated, energetic< episode at measure 39. And without exception all of the pianists development sections are marked by two larger sections of increased tempo (at measures 97 and 113) and by two larger sections of increased tempo in the coda (at measures 237 and 252) with a pronounced ritar-dando between these. For most of the pianists, the beginning of the concluding group within the exposition is the slowest section and following passage group the fastest. Most of the pianists play the second theme group as fast or faster than the first theme group.⁷⁹

A comparison with the indications given in performance editions is less informative in the case of op. 2/3 than that of the *Appassionata* because the indications are far more sparse. This has to do with the then common assumption that early Beethoven should be played much more strictly in time. In the Cotta edition, of which Bülow edited the sonatas starting with op. 53, Sigmund Lebert does not give a single tempo indication for op. 2/3 other than the tempo recommendation at the beginning of the movement. In Lamond's, Schnabel's and d'Albert's editions, we find only the occasional note on general tempo indications;

⁷⁹ We consider the following measures decisive for our tempo calculations: First theme group mm. 1–8, first passage group mm. 13–16, transition mm. 27–30, >lively< episode mm. 39–42, second theme group mm. 47–50, second passage group mm. 61–64, concluding group mm. 78–81, concluding passage mm. 85–88.



Figure 21 Average Tempo Curve of all 45 Recordings of the Hammerklavier Sonata

and nothing on tempo in the development or coda. It would seem that the performance editions assume an alternation of tempo between thematically bound passages and virtuoso passages (and also the episode at measure 39). D'Albert marks the episode »animato,« the passage group after the second theme group (at measure 61) »brillante.« Lamond recommends a tempo of 132 for the first and second theme groups, 152 for the passage groups that follow (at measures 13 and 61). Schnabel recommends a general tempo of 152, but 160 for the episode at measure 39. (For more on the specific differences between Lamond and Schnabel see chapter 10.) Concerning the tempo relationships between first and second theme groups, for all of the differences in the details, they share one thing in common: The second theme group should not be played slower than the first. Lamond suggests the same tempo for both. D'Albert writes in a footnote to the second theme group: »Keep up the tempo.«⁸⁰ Schnabel even retains the faster tempo of the episode at measure 39 for the second theme group.

Starting with the recordings, it is considerably more difficult to reconstruct a common tempo plan for the *Hammerklavier Sonata* than for the other two sonatas (see Figure 21). The only thing that almost all pianists seem to agree on is a slower tempo for the concluding group than for the second theme group. Regarding all other decisions, we find otherwise solely >majority decisions.< For example, a tendency to play the second theme group faster than the transition and first theme group, or to play the second section of the second theme group

⁸⁰ Leipzig: Otto Forberg.

(at measure 75) slower than the first (at measure 47). A majority of interpreters, as in the Appassionata, play the beginning of the recapitulation faster than the beginning of the exposition. Finally, a slight majority regarding the question of taking the same tempo for the transition as for the first theme group - given that Beethoven himself indicates »a tempo,« a majority that would appear rather slight indeed.⁸¹ There is definite dissent regarding the question of the tempo of the conclusion. If we compare the tempo of the conclusion (measures 386–397) with that of the fugato in the development section (138-146), as a reliable tempo axis for the movement, just as many pianists play these at the same tempo as those who take it faster. A comparison between tempo decisions in practice and the tempo recommendations of the performance editions is again not a particularly fruitful endeavor, since the editions either ignore too many questions or contradict each other (which is of course also a statement). What is remarkable is that there is a consensus among editors (d'Albert and Schnabel; Bülow and Lamond don't comment on the passages of interest to us) about the only thing that there is also a consensus about among performers: that the concluding group should be played slower than the second theme group.

Where there are >majority conclusions< among performers, d'Albert and Schnabel disagree or even draw completely different conclusions. D'Albert thinks the second section of the second theme group (at measure 75) should be played at the same tempo as the first (at measure 47), Schnabel would prefer it played slower. Schnabel calls for a tempo of d = 138 at the beginning of recapitulation, d'Albert, in contrast, suggests a slower tempo: he designates »Maestoso« at the beginning of the recapitulation and the indication »Tempo I« first appears four measures later. D'Albert calls for a somewhat faster tempo then for the conclusion (at measure 386), he writes »animando.« Schnabel on the other hand would have the passage at tempo and in his edition we find »non pressare.«

The consensus among pianists and editors concerning large-scale, formal tempo decisions in the *Appassionata* and op. 2/3 may initially seem puzzling. After closer examination however, it demonstrates the clarity of the tendencies of the musical material and its forms of movement. Given the number of highly original interpreters and number of interpreters aiming at originality, one could hardly attribute this solely to traditions and lack of imagination. It is rather the other way around: However individually and uniquely one would like to play, the music demands certain decisions about tempo.

The situation regarding the *Hammerklavier Sonata* is obviously a different one. Here the thematic figures and forms of musical motion are far less clearly demanding of specific tempo decisions. It is likely that as with the choice of the basic tempo, those decisions about tempo disposition concerning individual, musical questions and technical questions are connected (see chapter 10).

⁸¹ We consider the following measures decisive for our tempo calculations: First theme group mm. 1–3, transition mm. 35–37, second theme group mm. 47–50 (first section) and 75–80 (second section), concluding group mm. 100–105.

9. Multiple Recordings

Rather than focusing solely on questions of comparison of all available recordings, we also looked more closely at individual interpreters and individual interpretations. In so doing we also compared multiple recordings of a single work by a single pianist.

From the extensive amount of available materials, we will focus here solely on three recordings of a single work made by a single pianist. As an object of study they seemed of greater interest than double recordings. What remains constant and what varies as regards tempo when an artist re-records a work at a distance of years or even decades not twice but three times? Since the *Appassionata* offers the most available material for addressing this question, it will serve as the focus for this line of inquiry. There were three recordings available by the following pianists: Alfred Brendel, Emil Gilels, Wilhelm Kempff, Svjatoslav Richter and Rudolf Serkin.

The development is most clearly evident on the recordings of Emil Gilels (see Figure 22; for total duration, tempo amplitude and tempo variation in comparison see also Figures 6, 12 and 14). Looking at the three recordings, from the



Figure 22 Tempo Curves Appassionata Emil Gilels 1951, 1961 and 1975

years 1951, 1961 and 1975, there is a progressive slowing down from recording to recording, particularly from the second recording to the third. The recording from 1951 lasts 9:03 min., 1961 - 9:22 and 1975 - 10:50. And he plays increasingly stricter in tempo. The tempo amplitude gets smaller and smaller. If we consider the tempo amplitude without the *Più Allegro* (which we will do from here on), it sinks from 2.01 to 1.80 to 1.68. The average tempo variations from measure to measure also fall: from 8.47 to 7.69 to 6.72 %. A detailed look at the development of the curves demonstrates that the tempo reduction of the 1961 recording takes place mostly in the build up passage of the coda - presumably in order to give the *Più Allegro* more impact. The tempo reduction of 1975 takes place mostly at the beginning, at the theme of the second theme group, at the chordal continuation of the first theme group in the recapitulation (at measure 155), at the Più Allegro and at all sections with smaller note values (all three transition passages, both concluding groups, the development of the first theme group against sixteenth note quintuplets (at measure 79), the build up section at the end of the development, including >liquidation < of the >destiny motive < and the build up passage of the coda).

Gilels' development mirrors an exemplary of a getting calmer and wiser with age. Even though there are a number of other notable examples of slowing down in repeat recordings – Walter Gieseking's second recording of the *Appassionata* from 1951 compared to the first from 1939 (8:05/8:45) or Richter's (more on this below), or recordings of op. 2/3 by Gilels (1952 - 6:46/1981 - 7:31) and Richter (1950 - 7:12/1975 - 7:39) as well as Claudio Arrau (1938 - 7:43/1986 - 8:45) and Arturo Benedetti Michelangeli (1941 - 7:37/1949 - 7:29/1975 - 8:05) – still, this development is by no means the rule, and certainly not a rule when considering also tempo amplitude and tempo variation.

The closest development to Gilels' is Richter's (see Figure 23), whose Appassionata also gets progressively slower from recording to recording. Even the second recording from 1960 is already, only one year later, notably slower than the first (10:31 instead of 10:00). The tempo amplitude has increased however (2.53 instead of 2.25), while the average tempo variations remain constant (7.61%). The third recording from 1992 is then considerably slower (11:28) and with it the tempo amplitude (1.9) and tempo variations (7.12%) significantly reduced. If we again look at the curve progressions in detail, we find that the reduction in tempo in 1960 takes place primarily at the beginning, the beginning of the development, the development of the second theme group and the *Più Allegro*. The tempo reduction in 1992 takes place directly in all passages with smaller note values (the three transition passages, both concluding groups, the development of the first theme group against sixteenth note quintuplets at measure 79, the virtuosic build up at the end of the development section and even more so in that of the coda, the Più Allegro and also the beginning of the recapitulation over continuous eighth note triplets). On the other hand, the beginning and beginning of the recapitulation are not quite as slow as they are on the recording from 1960.

Where the transition in the exposition of the recording from 1992 is not much faster than the first theme group, it is not at all faster in the recapitulation. It would seem that Richter now heeded his own earlier scornful remarks. As mentioned in chapter 1, in a 1970 interview on the *Appassionata* in the *Sovetskaja muzyka*, he accused those who did not maintain the tempo in the transition



Figure 23 Tempo Curves Appassionata Svjatoslav Richter 1959, 1960 and 1992

of idleness, lack of discipline and a »washcloth mentality.«⁸² This without one word on the fact that his own earlier recordings were guilty of the same, leaving open the question as to whether or not he had changed his mind, or whether he was even aware of this discrepancy with his own actions. We have discussed this question at length in our own contribution to the subject of tempo in Beethoven's *Appassionata*.⁸³ In any case, on his 1992 recording, Richter plays by and large in a manner that he had demanded of others in 1970.

If we compare Gilels' and Richter's recordings, we find even in the details a reciprocal influence apart from any >contest < for the slowest *Appassionata*. Just as Gilels takes the slow tempo and warning about playing the transition too quickly from Richter (1975), Richter follows Gilels (1992) in slowing down the tempo of the concluding group and in all of the virtuosic build up passages. For all the competitiveness, in the end, both pianists were in agreement about the most significant principles regarding tempo.

Wilhelm Kempff's three *Appassionata* recordings, which differ from one another far less than the various recordings by Gilels and Richter, tell quite a different story (see Figure 24). Kempff's first recording from 1932 is the slowest (1932 – 9:48 / 1951 – 9:26 / 1964 – 9:37) but has the highest tempo amplitude (1.65 / 1.51 / 1.45) and the greatest tempo variations (8.23 / 5.96 / 6.29%). He plays the *Più*

⁸² Appassionata. Mysli masterov (as fn. 10).

⁸³ Loesch and Brinkmann: Das Tempo in Beethovens Appassionata (as fn. 1).



Figure 24 Tempo Curves Appassionata Wilhelm Kempff 1932, 1951 and 1964

Allegro the fastest here but at the same time takes the most dramatic or form-shaping ritardandi, which he leaves out on both of the later recordings: in each case before the second theme group in the exposition and recapitulation (at measures $_{34}$ and $_{173}$), at the Neapolitan 6th in measures $_{42}$ and $_{181}$, before the development section, before the development of the first theme group against the sixteenth note quintuplets (at measure $_{79}$) and before the concluding group in the recapitulation (measure $_{189}$). (The dramatic interruption before the transition in the exposition is exceeded by an even stronger interruption in the recapitulation on the $_{1951}$ recording.) With the exception of two caesuras indicated by Beethoven himself, on the $_{1964}$ recording Kempff leaves out all of the stronger caesuras altogether. In addition, in comparison with the two earlier recordings, he reduces the tempo in passages in which Gilels and Richter would also later reduce the tempo: in the concluding group, the development quintuplets at measure $_{79}$ and after the beginning of the recapitulation (measures $_{142-147}$).

In Rudolf Serkin's case (see Figure 25), the first recording (1936) is also the slowest (9:09). In contrast to the aforementioned pianists however, the first recording has the smallest tempo amplitude (1.31) and least tempo variations (4.36%). The 1947 recording is considerably faster (8:21). The tempo amplitude has hardly changed (1.32) and the tempo variations only minimally increased (4.78%), so that tempo reductions are reduced to an absolute minimum – see pars pro toto the Neapolitan 6th in measure 42, which goes almost completely unnoticed in tempo. The 1963 recording returns to the slower, pre-war tempo



Figure 25 Tempo Curves Appassionata Rudolf Serkin 1936, 1947 and 1963

(9:05) but is somewhat freer in its approach to tempo, both regarding tempo amplitude (1.41) and tempo variations (5.85%). Concerning tempo amplitude, Serkin is still at the very bottom of the spectrum as compared to the other pianists (see Figure 12). What is absolutely clear though, is that Serkin's tempo reductions here – both those written in the score and otherwise – are more extreme than on his previous two recordings.

Alfred Brendel's recordings (see Figure 26) differ in their average tempi from one another even less than those of Wilhelm Kempff, and the third recording is by a small margin the slowest (1962 - 9:28 / 1970 - 9:34 / 1995 - 9:43). Where the first and third recordings hardly diverge in tempo amplitude and tempo variations, the second has the highest values in both categories, meaning simply it is the most free with regards to tempo (tempo amplitudes: 1.57 / 1.81 / 1.58; tempo variations: 6.15 / 7.07 / 6.29%). In most cases, the 1970 recording has the most extreme tempo peaks and valleys, the most extreme accelerations and decelerations – the figure shows this clearly so we needn't go into this any further. Even if one should get the feeling that Brendel's third recording returns to the tempo conception of the first, there are still a few passages where the tempo of smaller note values is reduced: the first concluding group, the third transition with all of the preceding chord passages and the *Più Allegro*.

Our multiple recordings give no evidence of a common conception. With the two Soviet pianists the differences between the recordings are more pronounced, with the Austro-German pianists less so. Gilels' and Richter's gradual tempo reduction is dialectically tied to the tempo history of the *Appassionata* in



Figure 26 Tempo Curves Appassionata Alfred Brendel 1962, 1970 and 1995

the 20th century: As conditioned by this history as it conditioned it. The increasing constancy of tempo on the recordings by Gilels, Richter and partially by Kempff is representative of a repeatedly postulated historical tendency of the 20th century,⁸⁴ which our tempo measurements however could not comprehensively confirm. And with Serkin and Brendel we had two counter examples. The question remains whether or not Gilels', Richter's Kempff's and Brendel's equally formative tempo reductions in sections with smaller note values are an expression of an anti-virtuoso aesthetic or evidence of the dwindling physical capacities of the aging pianists. It remains equally unclear whether or not the differences between Brendel's second recording - in the year of Beethoven's 200th birthday in 1970 - and first and third recordings of the Appassionata, have to do with a desire to try something different one time, or if here - even if not in the same manner as Gulda or Gould - we also see the influence of the late 1960s. In contrast, it should be apparent that after Rudolf Serkin's measured first recording of 1936, his following two recordings attempt, each in it's own way, to revitalize his Appassionata interpretation: by way of tempo in 1947 and tempo flexibility in 1963.

⁸⁴ Cf. Philip: Early Recordings and Musical Style (as fn. 70); Bowen: Tempo, Duration, and Flexibility (as fn. 11).

10. Artur Schnabel Against Himself

Not only did Artur Schnabel record all of Beethoven's piano sonatas, he also prepared annotated editions of them, complete with tempo and metronome indications. In this chapter, we would like to compare the tempo curves of his recordings with tempo recommendations of his edition - to see how they compare and discuss any discrepancies. The recordings of our three sonatas were made in 1933 (op. 57), 1934 (op. 2/3) and 1935 (op. 106). The edition of the sonatas is from the years 1924-1927. He made revisions for a reprint by Simon and Schuster in New York in 1935, which however were not actually adopted for print until a later edition by Curci in 1949. The tempo indications of our three sonatas were not changed, so that we can assume that the tempi of the 1924–1927 edition continue to reflect his conception of the tempi at the time of the recordings. We shall not compare Frederic Lamond's Appassionata recording with his edition, because the tempo indications offer solely a torso, which would seem to be more editorially than artistically motivated. In order to distinguish between the editor's contributions and Beethoven's own text indications, Lamond only adopts the (few) metronome markings from Hans von Bülow and does not include the (many) written tempo indications.

Schnabel's metronomization of the Appassionata in his edition is highly differentiated and his recording largely reflects these tempo indications. Figure 27 shows the tempo curve of the recording alongside the tempo indications of the edition. The differences consist mostly of increases of tempo at the high points (at measures 25, 81, 112 and 227) and decreases at the slowest points (beginning of the exposition and development). So that an already dramatic conception of tempo is made even more so on the recording. There are two passages that deserve particular attention: The higher tempo at measure 227 and the slower tempo at the beginning of the movement. The faster tempo at 227 is especially remarkable as the resulting accelerando occurs at a point where the edition actually calls for a reduction in tempo. And on the recording this increase in tempo is accompanied by a flood of wrong notes. Schnabel left the recording this way and allowed for its release; he seems to have believed that result was successful in its way and from our perspective rightly so. It certainly delivers something highly dramatic, even ecstatic.⁸⁵ The difference between the recommendations of the edition and performance practice could be characterized as the difference between the calm, reflected calculations at home - calculations that also bear the technical difficulties in mind - and the heated zeal of engagement in the concert hall or recording studio. The performance situation requires a very

⁸⁵ Loesch and Brinkmann: Die Tempogestaltung in Artur Schnabels *Appassionata*-Einspielung (as fn. 1); Heinz von Loesch: »In the very struggle with external difficulties, a sweeping excitement of the mind makes its presence felt« – On the Semantics of Virtuosity, in: Dzieło muzyczne jako znak (8) [The Musical Work as a Sign. 8th International Symposium], ed. Anna Nowak, Bydgoszcz 2012, pp. 41–50.



Figure 27 Tempo Curve Appassionata Artur Schnabel (1933) Compared with the Indications of his Edition (1924–1927/1949)

specific mix of concentration and stress, in which one makes decisions that one may not have chosen with distance of reflection, decisions that come at a price but that are convincing in the end. Compared to the recordings of other pianists, Schnabel's tempo decisions in this passage are unique. Of all the recordings whose tempi we examined, there is only one other recording on which an already fast tempo at this point is increased. It is the Walter Gieseking's recording from 1939, and it contains no fewer wrong notes than Schnabel's.

The second passage deserving of particular attention is the beginning of the movement. Schnabel's edition gives a tempo that he does take at the beginning of the recapitulation, but which is not even close to that which he takes at the beginning of the exposition. The artistic result of a comparatively slow beginning of the movement can also be considered successful. Schnabel was the first in the history of recordings of the *Appassionata* to take such an approach to tempo, and many interpreters would later follow his example. Before Schnabel, the tempo curves were more even, whether at a faster tempo – Frederic Lamond, Harold Bauer (both 1927) – or at a slower one – Wilhelm Kempff (1932). The most famous *Appassionata* recording after Schnabel's with a notably slow beginning is that of Svjatoslav Richter (1960).

From our perspective there are three possible explanations for such a discrepancy between the metronome markings and performance practice. First, one could perceive it as a simple misperception: Schnabel conceives of the tempo with the continuous eighth notes of the beginning of the recapitulation and plays it without the eighth notes simply slower with a rhapsodic-dreamy character. Second, this approach causes a particularly expressive performance situation in context, which tends to make an already dramatic formal arch even more dramatic. Third, it is also possible that Schnabel was bound by a regulating idea, which simply forbid him to set different metronome markings for the exposition and recapitulation: The idea of form as >architectural form.<⁸⁶ Of the 32 sonatas there is not one for which Schnabel gives different metronome markings for the beginning of the exposition and beginning of the recapitulation, not even the smallest discrepancies that, given the minute differences of indications that are otherwise so frequently found in his edition, is actually quite surprising (we will return to this question at the end of the chapter). The especially slow beginning also has the secondary consequence of distorting the tempo relationship between the first and second theme groups: Schnabel's recording does the exact opposite of his suggestion in the edition that the second theme group should be played slower than the first. In the recapitulation however, he follows his recommendations exactly and the second theme group is indeed slower than the first.

The indications in the edition of the Sonata op. 2/3 (see Figure 28) are far less differentiated as those of the *Appassionata*, and Schnabel's recording differs from these to a greater extent. For starters, he does not take the quick tempo at the beginning of the exposition and recapitulation, but rather takes these and all other thematically and melodically bound sections considerably slower and



Figure 28 Tempo Curve op. 2/3 Artur Schnabel (1934) Compared with the Indications of his Edition (1924-1927/1949)

⁸⁶ The term >architectural form< as used by Jacques Handschin: Musikgeschichte im Überblick, Lucerne 1948.

only the virtuoso sections and the >energetically lively< episode at measure 39 follow his tempo indications. In other words: He does not draw any distinctions between thematic and virtuoso passages in the first and second theme groups and concluding group, and at the beginning of the development section. He only realizes the leap of tempo within the transition.

The fact that Schnabel gives so few tempo modifications, is likely on account of the then common belief that early Beethoven should generally be performed at a single tempo. The tempo modifications that Schnabel does give however, are then only fully understandable when one takes Frederic Lamond's edition into consideration, from which Schnabel critically distances himself. Lamond recommends in his edition that one make tempo changes between thematic and virtuoso passages in the first and second theme groups and not in the transition to the episode at measure 39. Schnabel does just the opposite – even though he plays those passages, so indicated by Lamond, at a faster tempo too. The fact that Schnabel decided against a faster tempo at measures 13 and 61 has to do with the fact that here he had more gradual tempo transitions in mind, as opposed to measure 39. The reasons for this are probably no less than a principally different conception of the piece. At the very latest beginning with Wilhelm von Lenz (1860), the sonata has repeatedly been accused of being simply a virtuoso piece and not a self-contained whole. Lenz writes:

»With the exception of the wonderful Adagio in E Major 2/4, the third sonata in op. 2 is far beneath the other two. The always proper, first movement (Allegro con brio 4/4) is a fusion of the keyboard styles of Haydn and Mozart, and a harpsichordist piece without any musical significance, having nothing to do with a basic, poetic concept. [...] We stand here before the only of Beethoven's piano movements in which one finds purely pianistic passages (13 and the following measures).«⁸⁷

Eugen d'Albert (1902) sums up this idea once more in a footnote to his edition: »This sonata is intended to be nothing more or less than a virtuoso's showpiece; and it is, therefore, useless to try and conjure mysteries or depth of thought into its interpretation.«⁸⁸

The idea that the piece is a virtuoso work is in accord with Lamond's metronome markings, which give the passages at measures 13 and 61 extremely fast tempi, tempi that are nowhere as high, and which ostentatiously identify these as virtuoso passages. In Schnabel's case the virtuoso passages are integrated into a comprehensive, unified tempo process. These do not receive their own tempo indications and are also not accorded a role as tempo climax of the movement. However, an abrupt change of tempo does bring out a characteristic thematic figure such as that at measure 39. That Schnabel then on the other hand decides on an even faster tempo at measure 69 – the tempo climax of the movement – which he himself does not take in his own recording, is still indicative of the ideal of a tempo process at a higher level, in which all figures are integrated, whether thematic, melodic or virtuosic.

⁸⁷ Wilhelm von Lenz: Beethoven. Eine Kunst-Studie, Dritter Theil, Erste Abtheilung:
Kritischer Katalog sämmtlicher Werke Beethovens mit Analysen derselben, Erster Theil: I.
Periode op. 1 bis op. 20, Hamburg ²1860, p. 43.
88 Leipzig: Otto Forberg.

Finally, the decision to set the tempo of the movement based on the passage groups and not the primary theme group, is not only pragmatic – given that continuous smaller note values make it easier to conceive of the tempo – but rather again the result of Schnabel's anti-virtuoso concept: The passage groups are not >brilliant< exaggerations of the tempo, they mark the actual flow of the tempo; comparatively the thematic passages offer residues of more tension-filled concentration – and with these a reduction of tempo as well.

Lamond's tempo model, unfortunately Lamond never recorded the sonata himself, is the closest Wilhelm Backhaus' recording from 1952. Backhaus, like Lamond, was a pianist educated in the Liszt tradition. Backhaus makes considerable leaps in tempo at the virtuoso passages, which mark the absolute tempo climaxes of the movement and these leaps are even greater than those suggested by Lamond. It would almost seem as if the 68 year old Backhaus' interpretation was advocating by example the assertion made by the admired teacher of his youth, Eugen d'Albert, that the Sonata op. 2/3 was »purely a virtuoso sonata.« Figure 29 shows the tempo curve of Backhaus' recording in combination with Lamond's tempo plan.

Schnabel's tempo indications for the *Hammerklavier Sonata* are also highly differentiated (see Figure 30) and again here his recording largely follows his own interpretation recommendations, perhaps even more so in this case than with the *Appassionata*. In contrast to the *Appassionata* and op. 2/3, he takes in particular the beginning at the very fast given tempo, which of course also has to do with the fact that, in context of the discussions about the autograph tempo,



Figure 29 Tempo Curve op. 2/3 Wilhelm Backhaus (1952) Compared with the Indications of Frederic Lamond's Edition (1923)



Figure 30Tempo Curve Hammerklavier Sonata Artur Schnabel (1935)Compared with the Indications of his Edition (1924–1927/1949)

the beginning represents the *point de la perfection* (see chapter 5). The extreme reductions in tempo seen on the tempo curve – excepting tempo and dynamic before the concluding group material at measures 99, 331 and 361 and a reduction of tempo at the beginning of the concluding build up before the recapitulation at measure 221 – represent Beethoven's ritardandi and fermatas, which Schnabel did not give metronome markings in his edition. The only extended period where Schnabel deviates from his recommended tempo is in the second theme group, where he plays both relevant sections (at measures 47 and 75) faster than his edition suggests.

It is difficult to say why it is that Schnabel plays the second theme group so much faster than his suggestions in the edition. Looking more exactly, this poses two questions. First: Why are the metronome markings for the second theme group in the edition even slower than those of the first – a suggestion that not only he himself does not follow, but hardly anyone else either. It is conceivable that this has to do with the generally fast metronome markings of the movement, and a desire for lyrical gesture before the concluding group. However, this may also have to do with the 19th-century tradition of a slower second theme group. The second question then is: Why does Schnabel actually play the second theme group even faster than the first? It seems to us that given the fiendishly difficult technical challenges of the *Hammerklavier Sonata* and the enormous pressure that Beethoven's autograph metronome markings put on the performer, the second theme group, which is comparatively so easy to play, tends simply to >run off< in the heat of the moment. The fact that he allows this though is traceable to his compositional commitment. Pushing the tempo in no way compromises the unclear position between lyrical turn and passage.

Finally though, it seems to us that Schnabel settled in general on a tempo model that tends towards >development<. Schnabel carries the >organism model< of composition – the idea that a comprehensive, complex composition grows out of a single motive as a tree from a single seed – over to the tempo level. Rather than simply progressing linearly, the tempo must also develop an arch form. It is this that leads to Schnabel beginning the *Appassionata* and op. 2/3 so slow-ly. This is not possible for the *Hammerklavier Sonata* on account of the fast metronome markings and the exceptional significance of the tempo of the first theme group, and so the second theme group ends up being so fast.

11. From Beat to Beat

We would like to conclude with a brief look at the measurements of individual beats. In the first and second theme groups of the Appassionata, we measured the tempo at the level of the four principal beats. There was a significant connection between tempo variations at the measure and beat levels. Those whose tempi greatly varied from beat to beat, as a rule also varied tempi from measure to measure and vice versa. Looking at the second theme group (see Figure 31): We find a high amount of tempo variation at both measure and beat levels on Frederic Lamond's recording (1927), and a small amount of variation at both levels on Rudolf Serkin's earliest recording (1936). The result reflects the comparison of the tempo variations at the various measure levels (measure to measure, two-measure group to two-measure group, etc.) of op. 2/3 (see chapter 2, »On the Methodology of the Tempo Measurements«). Still there are counter examples. Serkin's last Appassionata recording (1963) demonstrates comparatively small variations of tempo at the measure level and high at the beat level. Maria João Pires' (1975) recording demonstrates high tempo variations at the measure level and low at the beat level.

| | Measure to Measure | Beat to Beat |
|-------------------------|--------------------|--------------|
| Frederic Lamond (1927) | 12.54 | 16.26 |
| Rudolf Serkin (1936) | 1.30 | 4.72 |
| Rudolf Serkin (1963) | 4.00 | 12.64 |
| Maria João Pires (1975) | 8.81 | 4.80 |

Figure 31 Average Tempo Variations from Measure to Measure and from Beat to Beat in Percent *Appassionata*, Measures 36–41

Concerning the concrete shaping of the tempo of the second theme group, we made a further interesting discovery. There are pianists who rhetorically stretch the >dotted < figure \downarrow , and players who notoriously push it. Frederic Lamond is among the first and Artur Schnabel (1933) the second. Figure 32 shows

that Schnabel, in contrast to Lamond, plays the first three measures remarkably strictly in tempo. And it shows that he even slightly speeds up the dotted figure, which Lamond plays cantabile: minimally in measure 35/beat 4 and measure 36/beats 2 and 4, stronger in measure 38/beats 2 and 4, and very strikingly in measure 39/beat 4 and measure 40/beat 2. Once, in measure 40/beat 4 he actually stretches the figure as well, in the context of the *crescendo* before the *piano*. However, the agogic has a reciprocal relationship to the dynamic: Schnabel plays the theme remarkably quietly – much more so than Lamond. In total we could say, that on account of the agogic and dynamics, Schnabel's second theme group flows extremely well and seems especially simple and in no way lofty. This is in accordance with his edition where he marks the left hand *egualmente, tran-q[uillo]* and the right *dolce, non espressivo*. The plain, simple gesture provides an effective space for the grand dynamic and agogic events, which should not however befall the theme – measures 39 and 40 give a sudden first taste.

It would be desirable to conduct these kinds of studies over the length of entire movements. First it would allow an evaluation of the connection between tempo variations at the beat and measure levels overall, rather than just at the central, formal points of attraction, which may not be representative. It would also expand the possibilities of a differentiated tempo report overall. Given the extensive amounts of work that this would require, shorter movements would indeed be recommended for study.

12. Conclusion and Outlook

For the current study, we measured the tempi of recordings of three of Beethoven's piano sonatas from the 1920s through the 2000s, and this using computer assisted methods of listening as well as by hand (see chapter 2). It is unlikely that the means of measurement will change in the near future – that a computer alone would be capable of making such measurements.⁸⁹

It is currently also an unlikely prospect, that other parameters than the shaping of time could be examined. With dynamics for example, it is virtually impossible to separate the contributions of the interpreter from those of the engineer, producer or from every level that Hans-Joachim Maempel has referred to as »secondary interpretation« in any kind of reliable way.⁹⁰

One can however attempt to approach the shaping of time at other levels than that of the measure: at the individual beats or the various levels above the individual measure (two-measure groups, four-measure groups, etc.); we have already begun to do this in a few instances (chapters 2 and 11).

⁸⁹ Alexander Lerch: Software-Based Extraction of Objective Parameters from Music Performances, Munich 2009; Meinard Müller and Verena Konz: Automatisierte Methoden zur Unterstützung der Interpretationsforschung, in: Gemessene Interpretation, ed. Loesch and Weinzierl (as fn. 1), pp. 193–204.
90 Hans-Joachim Maempel: Musikaufnahmen als Datenquellen der Interpretationsanalyse, in: Gemessene Interpretation, ed. Loesch and Weinzierl (as fn. 1), pp. 157–72.

In any case, an expansion of the repertoire of pieces to examine seems indispensible; both to works by other composers as well as genres beyond the solo sonata (chamber music and symphonies). Did the tempo also slow down there between the 1950s and 1980s? And do Russian/Soviet interpreters also play slower and freer in tempo there than Austro-German interpreters? Or are there here perhaps completely different historical tendencies and/or national or culturally specific differences?

With a sufficient number of pieces examined, it may be possible to answer more comprehensive style questions, such as whether or not Mozart is actually performed with fewer tempo variations than Brahms, early Beethoven with fewer than late Beethoven. And genre-oriented questions could be answered, such as whether the tempo shaping is fundamentally dependant on factors such as whether one musician, who also makes the artistic decisions, is playing, or two, three or four musicians – ideally with equal say in artistic decisions –, or a whole orchestra is playing, in front of which a conductor is standing and dictating how the tempi should be taken. According to the early 19th-century idea, which was strongly influenced by a musical practice that in spite of constant new repertoire expected a situation in which there was little rehearsal, a flexible approach to tempo was only conceivable for solo music and small chamber groups. How does this compare then with the repertoire and rehearsal situations of the 20th and 21st centuries?

It is also of course imaginable that with an increased number of works, it could become clear that all historical, national and genre-specific differences disappear and that tempo overall *summa summarum* remained and remains the same. Still however, there is no doubt that there will again and again be individual characteristic tempo histories – as with the *Appassionata* and *Hammerklavier* for example, and also Franz Schubert's B Major Sonata⁹¹ – which have something significant to say about the reception of the works and thereby about the works themselves.

91 See fn. 65.