Integral Interpretation: Introductory Notes to Beethoven, Kolisch and the Question of the Metronome

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> Since guessing a tempo is not one of the easiest things in music, it is therefore all the more necessary to establish a certain number of rules. Anyone who knows how much is at stake in observing the proper tempo called for by any piece of music, and what great errors can arise in the process, will not doubt this imperative. If one had specific rules for this, and if one were to obey them dutifully, then many a piece which is often distorted by an improper tempo would have a much better effect, and would accord its composer more honor than is often the case.
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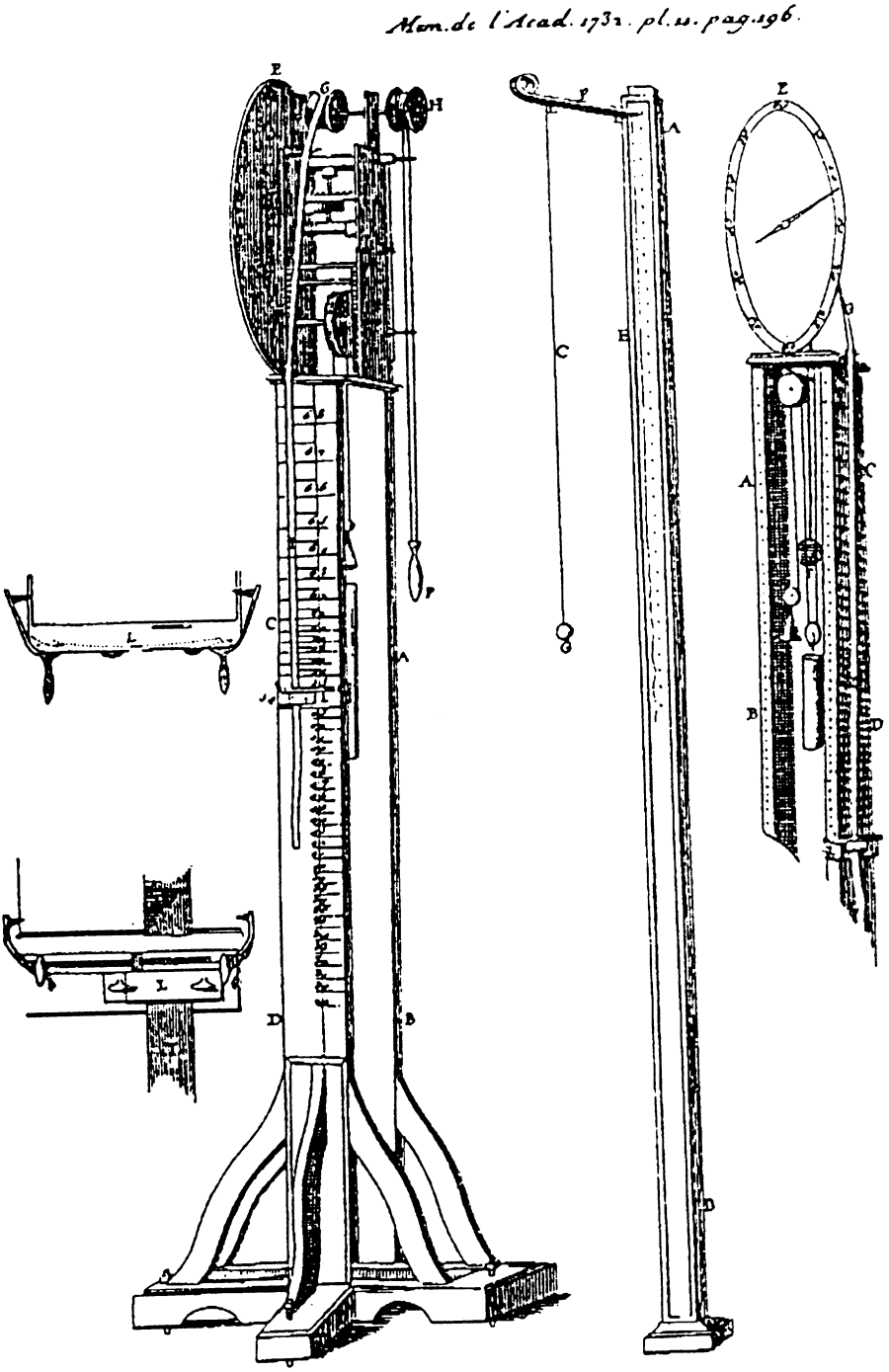
> *Johann Joachim Quantz,* Versuch einer Anweisung die Flöte traversiere zu spielen *(Berlin: 1752; facsimile repr. Munich: Deutscher Taschenbuch Verlag, 1992), 260*

The invention of the metronome in the early 19th century was only the last in a long series of attempts to respond to the need for an accurate means of measuring and thereby differentiating and notating musical time. As early as 1600, the advent of the new instrumental music with its wide range of different tempo categories gave rise to the use of terms such as "allegro," "adagio," "andante," and "presto." Yet such designations were ultimately rather vague, referring as they did both to the speed as well to the character of the music. What was needed was a standardized unit of temporal measurement that would allow both composers and performers to establish in an accurate manner whatever tempo was to be played. The numerous proposed solutions to this problem fall into three methodological camps: they were either based on the human pulse (as in Lodovico Zacconi's *Prattica di Musica,* Venice: 1592) or on a fixed time frame for a specific number of beats established by means of a clock (as suggested by Henry Purcell in his *Choice Collection of Lessons for the Harpsichord or Spinnet,* London: 1696), or on a timing device constructed by means of a swinging



Métromètre by D'Ons-en-Bray. 1732.

pendulum, as had been first proposed by Galileo. Following the lead of Thomas Mace (*Musick's Monument*, London: 1676), the latter is the strategy adopted for the invention of what was perhaps the single most important proto-metronomic device, Etienne Loulié's "chronomètre," described in his *Eléments ou principes de musique, mis dans un nouvel ordre* (Paris: 1696; facsimile repr. Geneva: Minkoff Reprints, 1971) and developed further by Count D'Ons-en-Bray, Louis-Léon Pajot (whose "métromètre" is discussed in the *Histoire de l'Académie Royale des Sciences, Année 1732*), and by the Englishman William Tans'ur who devotes an entire chapter of his *New Musical Grammar* (London: 1746) to "The Doctrine of Pendulums applied to Musick." Although neither the pulse, the clock nor the simple pendulum as such ultimately proved to be practical or reliable as methods for measuring tempo, all three approaches nevertheless survived well into the 19th century, largely because there was no viable alternative.

What distinguished the metronome patented by master mechanic and inventor Johann Nepomuk Mälzel in 1815 from the chronometers that had preceded it was that, unlike these, it employed not a simple but a compound pendulum. Here the pendulum no longer swings from a fixed point at the upper extremity, but instead pivots around its center point with weights at each end, the top one being adjustable such that a wide range of tempi can easily and accurately be reproduced at will. While touring with an early pendulum chronometer that he had designed, Mälzel discovered this crucial modification in a chronometer built by the Dutch mechanic Dietrich Nikolaus Winkel in Amsterdam. Frustrated by Winkel's refusal to sell him the rights to his idea, the industrious and talented Mälzel simply copied it and, adding only a graduated scale, went on to patent it under his own name in London, Paris and Vienna. By the time Winkel filed a complaint with the Academy of Sciences—a suit which he ultimately won—it was simply too late: by virtue of extensive sales Mälzel's name had become so intimately associated with the metronome he had stolen that there was no more dissociating them. Indeed, the vast majority of musical works with metronome markings bear the initials "MM": Mälzel's Metronome.[1]

Beethoven's scores were no exception. An enthusiastic supporter of Mälzel's new invention, Beethoven immediately set about "metronomizing" as many of his pieces as he could, imploring publishers to await revised manuscripts containing the tempo indications for new works and compiling lists with metronome markings for works already in print. This treasure trove of tempo information has, however, been almost systematically ignored. Invoking any one of a seemingly endless

number of equally fallacious arguments—the metronome markings are not from Beethoven's own hand (they are); Beethoven was deaf when he added them and thus could not hear it (but he could see it); his metronome was not working properly, i.e. was out of adjustment (the metronome Beethoven used still exists and its accuracy has been verified),[2] etc.—generations of Beethoven interpreters have effectively canonized the resistance to these tempo markings, some of which are admittedly extreme. What are we to make of this repression? What are we to make of the metronome markings themselves? What, in the end, are we to make of the metronome?

These are the questions that drive Rudolf Kolisch's magisterial investigation "Tempo and Character in Beethoven's Music," a lecture given to the Greater New York Chapter of the American Musicological Society on December 29, 1942, and first published exactly 50 years ago in the *Musical Quarterly*.[3] They are questions whose continued pertinence motivated the present posthumous republication, in a significantly revised, expanded and retranslated form, of this study of the transformation of compositional practice by the advent of a mechanical means for measuring tempo and a mathematical idiom for expressing it.[4] Defending Beethoven against his devotees, as it were, Kolisch lays to rest once and for all the philological debates as to whether Beethoven's metronome markings are authentic and accurate,[5] undertaking instead the much more difficult task of *reading* these markings in relation to the works themselves in order to propose, based on an interpretation of their aesthetic significance, a systematic means of extrapolating metronomic tempi for those of Beethoven's works that lack them. This admirable, difficult, and certainly not uncontroversial proposal itself raises a host of further issues which are at once practical and philosophical, which is to say, they are questions of interpretation.

Philosophically, the metronome touches off a series of debates around central questions in musical aesthetics. For example, does tempo, as some would argue, fall outside the domain of compositional intention and thus remain subject to the caprice of interpretative license? Or does the invention of the metronome mark the moment when tempo has become an integral and non-negotiable component of musical conceptualization on a par with pitch? The latter would seem to be the position not only of Beethoven but also of Arnold Schoenberg who writes, in a polemical 1926 text about metronome markings: "Doesn't the author have at least the right to indicate, in the copies of the work *he himself* publishes, how he imagines his ideas should be realized?"[6] Does this, in turn, eliminate the creative freedom of the

interpreter? Hardly, since the function of metronome markings is by no means to control and permanently fix the entire performance of a piece. Rather, it serves to provide a temporal framework within which music lives: its breathing, its phrasing, the endlessly complex and subtle structuring of time within this constitutive constraint remains, as always, the responsibility of the performer.

What then, one could ask, is the significance of the appearance of the metronome? Does the shift in the notation of tempo away from the natural language terminology of the *tempi ordinarii* ("adagio," "allegro," etc.) and towards a mathematical language (♩ = 66), from a lived experience of time (such as performance tradition) to an objective marking of time by means of an external apparatus, mark the sociological shift in the status of the composer who, no longer a servant of the church or the court, has suddenly gained the status of the socio-economically autonomous artist? Is it perhaps also the sign of an epistemic shift in musical practice, the birth of a new regime of temporal practices for which the older means of tempo notation was simply inadequate? What is the relation of this temporal shift to the socio-political, scientific, economic and technical transformations being brought about in the wake of the French and the Industrial revolutions, by the metamorphosis of perception provoked by mechanized modes of transportation, rampant urbanization—in short, by a world whose heightened pace required a new capacity to assimilate and process information at previously unheard of rates? Just as the cinema, that school of new perception, transforms still images into movement through acceleration, so too, one could argue, a new musical idiom introduces a new acoustic paradigm by means of a heightened tempo. And just as film must be projected at a certain minimum number of frames per second in order for the illusion of movement not to degenerate into isolated photograms, so too the pace of increased tempo in musical composition may well be governed by a similar structural imperative: far from simply a question of interpretation, below a certain temporal threshold a piece of music may well lose its essential qualities, its movement, its *Gestalt* disintegrating into a mass of meaningless details.[7] In this light it is thus hardly surprising that, as Schindler once reported: "when one of his pieces was performed, Beethoven's first question was always: 'How were the tempi?' Everything else seemed of secondary importance to him."[8]

The resistance to what is often referred to as Beethoven's "revolutionary élan"—extreme contrasts, furious tempi, the flood of short motifs, pauses, accents, modulations, abrupt dynamic shifts—began, of course, already in Beethoven's own time. Audiences accustomed to

the moderate pacing of a Haydn or Mozart idiom felt that they were confronting nothing short of cacophony. Curiously, however, this response has since developed into a tradition, especially if one recalls the etymological root of the term, which stems from the Latin "traditio," to betray. Indeed, the history of Beethoven interpretation could be polemically described as traditional in just this sense of a betrayal, a disloyalty manifest not so much in the persistent refusal to ignore the metronome markings, but in the failure to recognize the structural logic in Beethoven's works that in turn would reveal the integral relation of these tempi to the compositional whole. One of the exceptions to such "traditio" is Rudolf Kolisch.

Kolisch (1896–1978) is perhaps best known as the first violinist of the Kolisch Quartet, the ensemble that premiered and tirelessly promoted important chamber works such as Schoenberg's 3rd and 4th Quartets, the Serenade op.24, and the Chamber Suite op.29, Berg's Lyric Suite, Webern's String Quartet op.28 and Bartók's 5th and 6th quartets. Initially formed in 1921 to fulfill Schoenberg's wish for a permanent string quartet in the *Verein für musikalische Privataufführungen*, the Wiener Streich-Quartett (as it was then called) was composed of Rudolf Kolisch and Fritz Rothschild (who alternated playing first and second violin); Marcel Dick (viola) and Joachim Stutschewsky (cello). Unfortunately born the very year that the Verein was dissolved, the ensemble later became known by the name of its first violinist Kolisch (with Felix Khuner, violin; Jenö Lehner, viola; and Benar Heifetz, cello) and was famous for its capacity to play all its repertoire of works from the classical, romantic and contemporary quartet literature—including the complete Beethoven quartets—by memory.[9] Choosing to immigrate to the US in the mid-1930's in light of the rise of Fascism, the composition of the Kolisch Quartet began to change until it was finally dissolved at the outbreak of WWII. In the 1940's, Kolisch joined a new ensemble at the University of Wisconsin at Madison: the Pro Arte Quartet.

Kolisch's teaching in the US began with a seminar on "Musical Performance: The Realization of Musical Meaning" at the New School for Social Research. This topic, which involved careful study and analysis of specific works, most of them chosen from a repertoire of Beethoven and the New Vienna School, was Kolisch's primary pedagogical concern and the focus of his courses at the University of Wisconsin, Madison from 1944 to 1967, at the International Summer Courses for New Music in Darmstadt in 1953–58, and at the New England Conservatory from 1967 until his death. Indeed, the question

of interpretation and performance also dominated Kolisch's public lectures, occasional publications and his unpublished notes for a "Theory of Performance."[10]

Despite Kolisch's commitment to contemporary music, it would nevertheless be mistaken to cast him simply as a promoter of the avant-garde (of the sort motivated by that problematic ideal of a modernity for its own sake). Kolisch's achievement lies instead in his realization of a very specific conception of musical *interpretation*, a model that has surely long governed the most rigorous compositional activity but which he was the first to formulate and develop to its full extent. Kolisch effectively translated the notion of integral composing—the stipulation that every note be thematically accounted for within the context of the musical totality—into a practice of musical presentation. Such "integral interpretation," as his friend Adorno once called it in a laudatio for Kolisch's sixtieth birthday,

> sets itself the task not merely to replicate the work in terms of its simple melodiousness and smooth progression, but to realize its structure completely through its sensuous appearance, to offer the "X-ray of the work."[11]

This is a model of musical interpretation that takes as its point of departure not the acoustic surface but a precise analysis of the often latent musical events that make up its subcutaneous structure. Symptomatic of this understanding of music as a conceptual architecture is the practice, for which the Kolisch Quartet was well known, of playing not from parts but from scores (when not from memory), an insistence on the piece as a totality rather than as a sum of individual parts. Philological in its rigorous attention to the manuscript (and in its justified suspicion of the so often scandalously unreliable published editions); anti-subjective in its bracketing of a so-often indulgent interpretative emotionalism; structural in its consideration of compositional architectonics in both section and plan, Kolisch's practice of integral interpretation was still never slavishly mechanical or unfeelingly intellectual. Transcending the chimera of a musical objectivity, Kolisch read the structural moments not as ends in themselves, but as bearers of (more or less sublimated) musical content.

While this interpretive practice has an affinity with the compositional idiom of the New Vienna School (in particular with the work of Kolisch's teacher and later brother-in-law Arnold Schoenberg), as a model of musical thinking it is equally applicable to traditional repertoire, given that its focus on musical structure suspends the very

distinction between traditional and modern musical style. Informed by the insights of contemporary composition, works by Beethoven, Schubert and Brahms are subjected to rereadings that foreground their radicality and thereby rescue them from a trivializing tradition of mellifluous euphony. Kolisch's study of Beethoven and the metronome thus leads far beyond the specific question of how to play Beethoven: rather, provoked by a reflection on the theory and practice of tempo, this text ultimately represents nothing less than a new model of musical interpretation as close reading.

Notes

1. For an overview of the pre-history of the metronome, including many facsimile documents and illustrations, see the first section of Rosamond E. M. Harding's *Origins of Musical Time and Expression* (London/New York: Oxford University Press, 1938); rpt. as *The Metronome and it's [sic] Precursors* (Henley-on-Thames: Gresham Books, 1983). On Mälzel, see Henrike Leonhardt, *Der Taktmesser. Johann Nepomuk Mälzel—Ein lückenhafter Lebenslauf* (Hamburg: Kellner Verlag, 1990), esp. 130–163. On Winkel and Mälzel's theft of his invention, see Philippe John Van Tiggelen, *Componium. The Mechanical Musical Improvisor* (Louvain-la-Neuve: Collège Érasme, 1987), esp. 52–64 and 139–156.

2. Peter Stadlen, "Beethoven und das Metronom," in *Beethoven: Das Problem der Interpretation, Musik-Konzepte* 8 (April 1979): 18ff; compare Peter Stadlen, "Beethoven and the Metronome" *Music and Letters* 48 (1967): 330–349. See also L. Talbot, "A Note on Beethoven's Metronome." *Journal of Sound and Vibration* 17: 3 (1971): 323–329.

3. "Tempo and Character in Beethoven's Music," trans. Arthur Mendel, *Musical Quarterly* 29: 2 (April 1943): 169–187 (part 1); 29: 3 (July 1943): 291–311 (part 2).

4. The German original of Kolisch's text, revised both in conjunction with the author and posthumously by David Satz and Regina Busch, was recently published in a special double issue of *Musik-Konzepte* #76/77 (July 1992) entitled *Rudolf Kolisch, Tempo und Charakter in Beethovens Musik.* This issue also contains an extensive editorial apparatus as well as relevant correspondence with Schoenberg, Leibowitz and others.

5. Despite a significant amount of new scholarship that would seem to establish this definitively—see, for example, the extensive documentation of Beethoven's relation to the metronome edited by Rainer Riehn in *Musik-Konzepte* 8: 70–84—one constantly comes upon new and astonishing instances of the old resistance. So for example, in E. G. Richardson's article on the metronome in both *The New Grove* (New York: Macmillan, 1980) 12: 223, and the *Harvard Dictionary of Music* (Cambridge, MA: Harvard University Press, 1986); 489–490, one finds the following, rather foolish concluding lines:

> Beethoven was the first important composer to use Maelzel's metronome, but his markings are not reliable tempo indications as he frequently changed his mind about them and his publishers often misprinted or altered his instructions.

6. Arnold Schoenberg, "About Metronome Markings" (1926), in: Leonard Stein, ed., *Style and Idea. Selected Writings of Arnold Schoenberg* (Berkeley/Los Angeles: University of California Press, 1975): 342–343; see also the final section of this text which is included in the German version "Über Metronomisierung" in *Musik-Konzepte* 8: 9–11.

7. See Ulrich Schmitt, *Revolution im Konzertsaal. Zur Beethoven-Rezeption im 19. Jahrhundert* (Mainz/London/New York: Schott, 1990), esp. 79–88.

8. Anton Schindler, *Biographie von Ludwig van Beethoven.* Reprint of the 1860 Edition edited by Eberhardt Klemm (Leipzig: Reclam, 1977); 632, note 185.

9. The limited discography of available recordings by the Kolisch Quartet includes a 1986 re-release on CD of two Mozart Quartets (C-major, KV 465 and B-major KV 589) recorded in 1941 and 1938 respectively (Schwann MM 4003), and a CD of the Schoenberg quartets nos. 1–4 recorded in 1936/37 and including Schoenberg's spoken commentaries (Archiphon ARC 103/4).

10. For a bibliography of Kolisch's published articles and unpublished manuscripts, see Rudolf Kolisch, *Zur Theorie der Aufführung. Ein Gespräch mit Berthold Türcke, Musik-Konzepte* 29/30 (January 1983): 128–129.

11. Theodor W. Adorno, "Kolisch und die neue Interpretation" (1956), *Gesammelte Schriften* vol. 19 (Frankfurt/M.: Suhrkamp Verlag, 1984), 460–461. Adorno and Kolisch, who were friends, had planned to co-author a *Theorie der Musikalischen Reproduktion,* a project which Kolisch spoke of during his interpretation course in Mödling in 1977, but which was never realized.

Rudolf Kolisch, USA circa 1950.