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## Piano Pedaling

### Pedaling the Piano: a Brief Survey from the Eighteenth Century to the Present\*

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Sandra P. Rosenblum

Anton Rubinstein once characterized the damper pedal as "the soul of the piano."<sup>1</sup> Nonetheless, its historical use (along with that of the other piano pedals) has remained relatively unexplored. A major obstacle has lain in the incompleteness of the markings that have come down to us. Until relatively recently the majority of composers have been reticent about notating pedal indications, perhaps due in part to the difficulties encountered by themselves and also by engravers in spacing the bulky signs precisely; but perhaps due even more, from the composer's vantage point, to the inevitability that each performer would have to adjust the pedaling to take into account his or her sense of tempo, dynamics, and textural balance, as well as the particular instrument played, and the setting or milieu in which any performance were to take place.

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<sup>1</sup>A. Eaglefield Hull, "Pianoforte Pedalling," *Monthly Musical Record* 43, no. 506 (Feb. 1, 1913), 32. This widely quoted statement of Rubinstein's came to Catherine Drinker Bowen via Sergei Rachmaninoff (in Bowen, *"Free Artist": the Story of Anton and Nicolas Rubinstein* [New York: Random House, 1939], 291-2).

Twentieth-century grand pianos are equipped with damper, *una corda*, and (on some makes) sostenuto pedals that provide changes in the amount and timbre of the tone; however, in the past the mechanisms for creating tonal change and the manner in which these mechanisms were employed varied with the development of the instrument as well as with the changing styles of the music.

## Background

"Mutations" (*Veränderungen*) or changes of tone color, also called stops, had been an integral part of the organ and harpsichord, and were provided for the early piano as a matter of course. Gottfried Silbermann adopted the hand stop to raise and lower the dampers by the 1740s<sup>2</sup> and Bartolomeo Cristofori installed a shift stop (*Verschiebung*) in 1722.<sup>3</sup> As long as they were activated by hand, these "registers" were used in wide swaths as they had been on the earlier instruments—for example, to color a trio differently from its minuet. Emanuel Bach's reference to the "undamped register of the fortepiano"<sup>4</sup> reminds us that the damper-raising mechanism was originally conceived not as an aid for legato playing—the responsibility of the fingers in 18th-century keyboard music—but as a way of altering the sound. When the dampers are raised, the notes played are sustained and all the strings in the overtone series of those notes vibrate sympathetically, creating a richer sound. Later, knee levers mounted in the piano case beneath the keyboard, and then the more convenient pedals, introduced in England in the 1770s and patented by John Broadwood in 1783,<sup>5</sup> made it possible to apply changes of tone even in short dabs.

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<sup>2</sup>Edwin M. Ripin, "Pianoforte," *New Grove Dictionary of Music and Musicians*, 6th ed., ed. Stanley J. Sadie (London: Macmillan, 1980), vol. 14, 686.

<sup>3</sup>Stewart Pollens, "The Pianos of Bartolomeo Cristofori," *Journal of the American Musical Instrument Society* 10 (1984) 45, 47; also through private communication from the author.

<sup>4</sup>Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Clavier zu spielen*, vol. 2 (Berlin: In Verlegung des Auctoris, 1762), 327.

<sup>5</sup>Edwin M. Good, *Giraffes, Black Dragons, and Other Pianos: a Technological History from Cristofori to the Modern Concert Grand* (Stanford: Stanford University Press, 1982), 62.

## The Classic Era

Any use of the damper-raising mechanism was considered a special effect through the 1820s. Haydn provided only two such indications, both signified by "open Pedal," and found in the first edition of a late sonata (Hob XVI: 50/i). They presumably were intended to bring out places of importance in the form by mixing discordant harmonies. Mozart left no indications for any damper-raising mechanism, although his description (letter of 17 October 1777 from Augsburg) of how well the knee levers worked on Stein's instruments reveals that he was familiar with and interested in the device.<sup>6</sup> He must have employed it unobtrusively, for it is scarcely noted in the countless reports of his playing. On the other hand, if Czerny's report of 1846 is not tainted by the intervening years, Beethoven used "much more [pedal] than is indicated in his works."<sup>7</sup>

When designing their pedaling for this repertoire, pianists today may wish to keep in mind those uses suggested by contemporary writers. Tutors of the time instruct that dampers were best raised for sustaining long melody notes, for collecting, enriching, and prolonging the sound of a group of consonant notes (preferably in a homophonic texture), for holding a single bass note for several measures under the same harmony, or for enhancing accentuation.<sup>8</sup> Louis Adam, who wrote the best early discussion, specified a slow-moving melody with "consonant" chords. A change in harmony made it "necessary to *damp* the preceding chord" and to take a new pedal on the following chord,<sup>9</sup> as Beethoven indicated in his Piano Sonata op. 53 (see

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<sup>6</sup>Emily Anderson, trans. and ed., *The Letters of Mozart and His Family*, 2d ed., ed. A. Hyatt King and Monica Carolan, 2 vols. (London: Macmillan, 1966), 328-9.

<sup>7</sup>Carl Czerny, *Die Kunst des Vortrags der älteren und neueren Klavierkompositionen*, vol. 4 of *Vollständige . . . Pianoforte-Schule*, op. 500 (Vienna: Diabelli, 1846), 4.

<sup>8</sup>Johann Peter Milchmeyer, *Die wahre Art das Pianoforte zu Spielen* (Dresden: Meinhold, 1797), 59-65; Louis Adam, *Méthode de piano du Conservatoire* (Paris: Magasin de Musique du Conservatoire Royal, [1804]), 218-221; Francesco Pollini, *Metodo per Clavicembalo* (Milan: Ricordi, [1812]), 61-63; Friedrich Starke, *Wiener Pianoforte-Schule*, vol. 1 (Vienna: Bey dem Verfasser, 1819), 16-17; Johann Nepomuk Hummel, *A Complete Theoretical and Practical Course of Instructions on the Art of Playing the Piano Forte* (1828), trans., anon. (London: Boosey, 1829), vol. 3, 62-63. Hummel's attitude toward use of the pedals is the most conservative.

<sup>9</sup>Adam, *Méthode*, 219.



**Figure 1.** Beethoven, Sonata op. 53, Rondo (autograph facs.),  
mm. 282-4. Courtesy of Beethoven-Haus Bonn,  
Sammlung H. C. Bodmer.

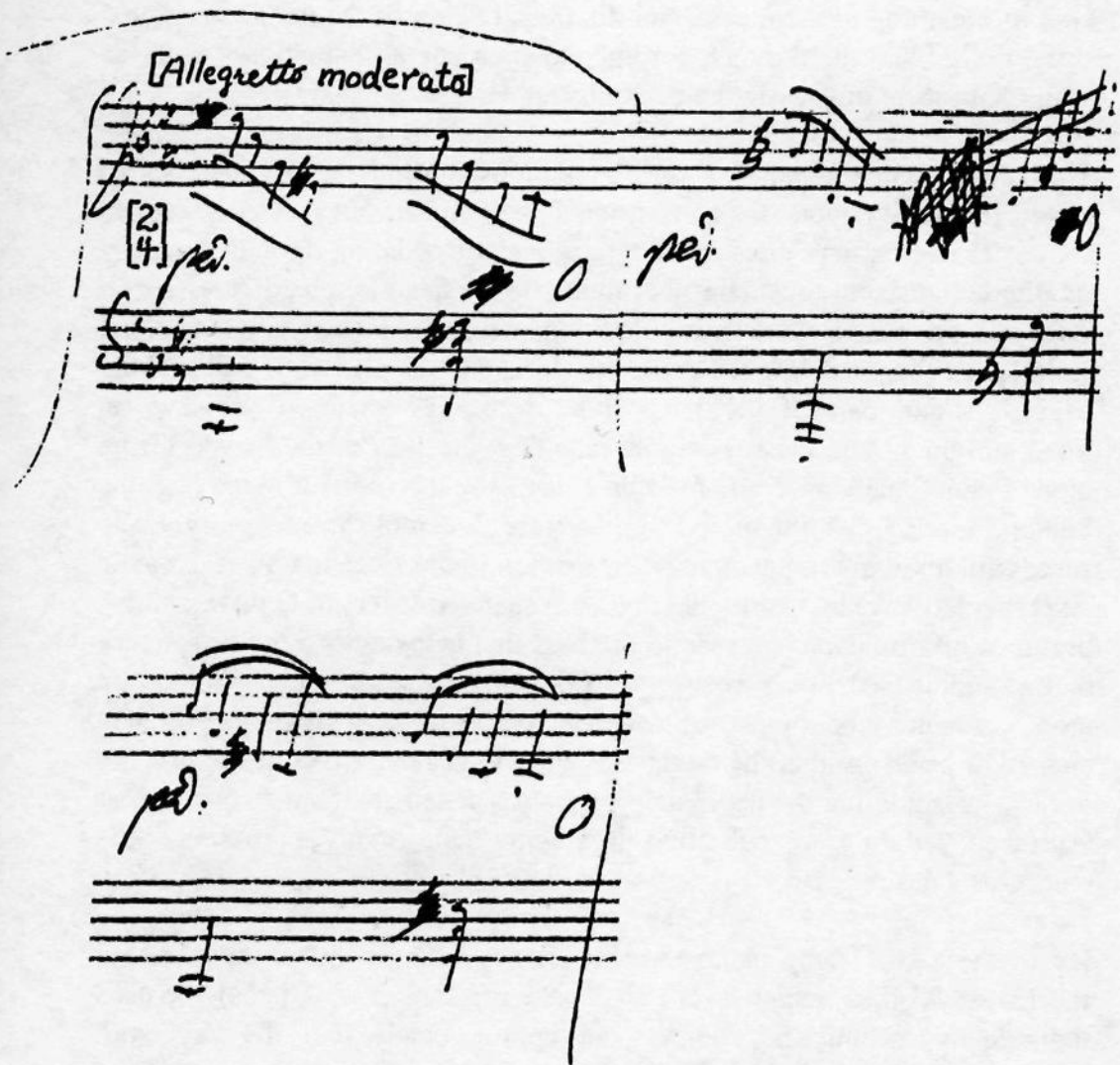


Figure 1).<sup>10</sup> This "rhythmic" pedaling (in contrast to the later "syncopated" pedaling) allowed time for inefficient damper mechanisms to work and for the increased resonance to die away. In addition, the resulting subtle interstices of damped sound, which often occurred between measures, added a kind of breathing to the music, and the fresh raising of the dampers emphasized the downbeat, thus supporting the metrical accentuation—itsself an important aspect of Classic-era performance.<sup>11</sup>

The raised dampers notated in Classic music often create unsuspected effects that went beyond the conventional practice. Haydn's were mentioned above. In Beethoven's music such effects include pedaling through carefully subdivided rests to maintain the sound to a specific place (e.g. Piano Concerto op. 58/ ii/ 62-64); highlighting important formal junctures (e.g. Quintet for Piano and Woodwinds op. 16/i, 135-41, 326-28); and making pedaled sound part of the musical structure by having it preserve an important note (e.g., the bass eighth-note C at the start of the Rondo theme in the Piano Sonata op. 53), or define a theme by its coloristic wash (e.g. the Piano Concerto op. 58/ iii/ 80-92). Figure 2 demonstrates one typically successful textural arrangement when harmonies are mixed: a quiet dynamic level, a relatively slow harmonic rhythm, separated layers of texture, and the presence of a fundamental tone in the bass that helps absorb the dissonance in the middle and upper registers. Adjusting these dissonant sounds on more resonant modern pianos can usually be done without a complete change of pedal, so that the bass notes and the general effect of the mix are not lost. Depressing the pedal only partway—called "half" and "quarter" or "surface" pedaling, or vibrating it slightly can often approximate the composer's desired effect.

Up to the 1830s some pianos were equipped with "split" damper-raising mechanisms, either a knee lever or a pedal, each side of which could be used individually, raising the dampers for approximately half the keyboard. Beethoven and Mendelssohn had such instruments, but seem not to have indicated a use of the divided dampers.<sup>12</sup>

<sup>10</sup>Earlier, when Beethoven's piano had knee levers, he used *senza* and *con sordino* to indicate the raising and lowering of the dampers.

<sup>11</sup>Sandra P. Rosenblum, *Performance Practices in Classic Piano Music* (Bloomington: Indiana University Press, 1988), 90, 105, 109.

<sup>12</sup>The Broadwood that Beethoven received in 1818 had a divided damper pedal. However, Beethoven's only mention of such a mechanism is in a marginal note on the holograph of the Piano Sonata op. 53, composed in 1803-04, in which he states that "Where Ped occurs the entire damper [apparatus] should be raised from bass as well as treble."

Figure 2. Beethoven, Fifteen Variations op. 35 (as in autograph),  
Var. 8, mm. 1- 8.



The shift mechanism on early pianos moved the action to the right so that the hammer hit two strings (*due corde*) and on some instruments also one, from which the name *una corda* derives. Beethoven took advantage of the two degrees of shifting in the Andante con moto of the Piano Concerto op. 58. Contemporary tutors recommended the *Verschiebung* for pianissimo passages, for echo effects, or for contrast with fortissimo sections.<sup>13</sup> On a well-regulated modern grand piano, when the *una corda* is engaged the hammers strike the strings on a less-worn part of the felt. This adds to the change in timbre that also arises from the sympathetic vibrations of the unstruck strings.

In the late 18th and early 19th centuries some continental piano-makers provided other mutations. A much-favored and very beautiful one on continental instruments was the "moderator," which produced a tender, muted sound by interposing leather or cloth tongues between the hammers and the strings. It enhances the central episode (in f-minor) of Mozart's Rondo KV. 494, or just as well the pianissimo chords in mm. 2 and 4 of his Fantasie KV. 475. Schubert called for its use in *Morgenlied* (1820) with "Durchaus mit dem pianissimo."<sup>14</sup> Whether any composers expected that pp might sometimes serve as an indicator for either the *una corda* or the moderator remains a moot question.

<sup>13</sup>Milchmeyer, *Wahre Art*, 65; Adam, *Méthode*, 220-21; Starke, *Pianoforte-Schule*, 16.

<sup>14</sup>Schubert *Neue Ausgabe, Lieder: Quellen und Lesarten*, vol. 1, ed. Walter Dürr (Kassel: Bärenreiter, 1972), 12.



Mutations regarded by some with disdain<sup>15</sup> were of the following kinds: (1) a "lute" stop or pedal, which shortened the duration of notes by pressing a cloth-covered batten against the strings; (2) a "harp" stop, which allowed a fringe of wool or silk to mingle with the strings, quieting the sound minimally; (3) a "bassoon" stop, which produced a raucous sound by placing a parchment strip across the strings of the lower octaves; and (4) a "janissary" stop, which produced percussion effects for the popular Turkish and military music, including pieces depicting battles. Beethoven's Érard piano, built in 1803 and presently in Vienna's Kunsthistorisches Museum, has lute, damper, moderator, and *una corda* pedals in that order from left to right. Signs for mutations other than the damper and *una corda* exist mainly in short examples or pedagogical pieces published in contemporary tutors (such as those of Milchmeyer, Adam, and Starke) and in some "battle" pieces.<sup>16</sup>

### The Romantic Era

A major change in piano music of the Romantic era may be seen in the increased importance attached to color and to variety in sonorities, these aspects often linked with the natural differences in color of the bass, middle, and upper registers of the pianos themselves. These elements, coupled with a new exploitation of the vibrating characteristics of the larger, more resonant instruments, made artistic pedaling an essential ingredient in performance. Many kinds of widely spread accompaniments and textures based on the physical properties of the harmonic series allowed the piano to sing when the dampers remained up, for example in Chopin's Nocturne op. 27, no. 2 (as in the autograph), mm. 1-6 (see Figure 3).

Although their music now depended on an extensive use of the damper pedal, most composers were still sparing in their indications. Mendelssohn marked some pieces abundantly, but in others left either no directions or only *sempre con (col) Pedale* at the start, an indication that pedaling (according to personal taste) was an assumed part of the sound. Similarly

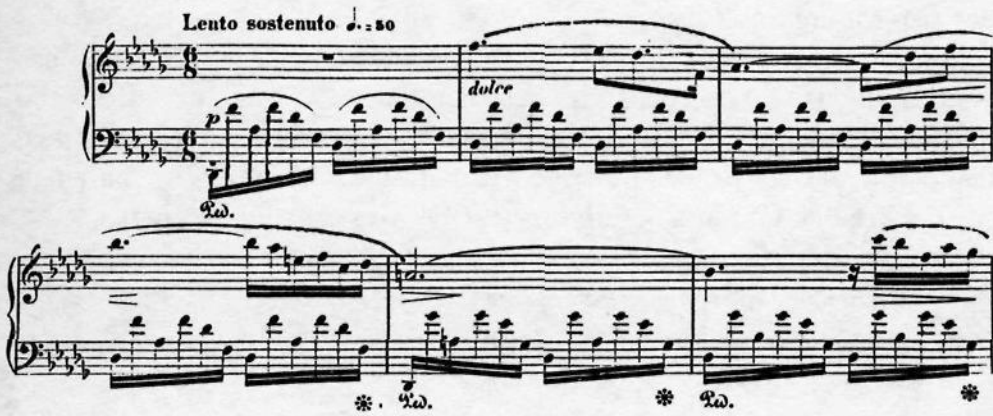
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<sup>15</sup>Hummel included even the moderator among the "useless" pedals: *Art of Playing the Piano Forte*, 62. Andreas Streicher expressed aversion to the moderator and lute stops, along with the other mutations, which he termed "merely childish amusement"—see Wilhelm Lütge, "Andreas und Nannette Streicher," *Der Bär: Jahrbuch von Breitkopf und Härtel* 4 (1927), 63-64.

<sup>16</sup>Bassoon and janissary stops are used to good effect in Schubert's *Ländler*, D. 790, no. 5 and Mozart's "Alla turca" from the Sonata KV 331 by Richard Burnett playing a piano by Johann Fritz (ca. 1814) on Amon Ra record SAR 6.



Figure 3. Chopin, Nocturne op.27/2 (as in autograph.), mm. 1-6.



Schumann, who considered "use of the pedal, as with Field," one of the most essential and characteristic ways in which the piano expresses itself,<sup>17</sup> often just placed *Ped* or *col Ped* at the start of a piece or a section. However, among his specific notations are such imaginative effects as the long pedals under the 12-measure outburst on the dominant-ninth chord at the close of "Florestan" in *Carnaval*; and in the Finale of *Papillons*, the 27-measure pedal that holds the bass D, the first note of the "Grossvater Tanz," with that tune placed in the tenor against the opening melody of No. 1 in the soprano. In mm. 15-16 of "Hasche-Mann" from *Kinderszenen*, composed in 1838, Schumann prophesied the invention of the sostenuto pedal. In fact, in the *Neue Zeitschrift für Musik* of 4 January 1839 he wrote that he expected the addition of pedal keyboards to pianos,<sup>18</sup> and in 1845 he rented a pedal

<sup>17</sup>Robert Schumann, "Two Sonatas by Carl Loewe," in *Schumann on Music: a Selection from the Writings*, trans. and ed., Henry Pleasants (New York: Dover, 1965), 45.

<sup>18</sup>Robert Schumann, "Das Clavier-Concert," *Neue Zeitschrift für Musik*, 10/2, 5.

attachment for his piano that resulted in his composing the *Six Studies*, op. 56, *Four Sketches*, op. 58, and *Six Fugues*, op. 60, for pedal-piano (the latter also for organ).<sup>19</sup>

It is not certain when during the 19th century pianists began to use "syncopated" or "legato" pedaling, in which the pedal was to be depressed immediately after the attack, released as a new harmony is played, then redepressed. Louis Köhler described it unmistakably in 1860,<sup>20</sup> although some believe that Czerny's description in 1839 was actually the first:

The quitting and resuming the pedal must be managed with the utmost rapidity, not to leave any perceptible chasm or interstice between the chords; and must take place strictly with the first note of each chord . . . The rapidly leaving and resuming the pedal must be practised . . . till such passages . . . sound as if the pedal was held down without interruption.<sup>21</sup>

Curiously, Czerny's example retains a release sign before each barline as do virtually all of Chopin's pedal indications. Was this force of habit?

Successive signs to depress the pedal, without intervening release signs, occur occasionally in Schumann's and Liszt's music of the late 1830s and by the 1850s such notation was commonplace. Around 1863 Hans Schmitt proposed notating syncopated pedaling with precisely placed notes and rests drawn on a line beneath the music.<sup>22</sup> Yet, if syncopated pedaling was used by mid-century, it must not have been widely cultivated or commonly taught, at least until the 1870s. In a letter of 6 June 1873 Amy Fay mentioned Liszt's "peculiar" use of the pedal as one of the secrets of his playing,<sup>23</sup> noting elsewhere that neither Carl Tausig, Theodore Kullak, nor Liszt had given pedaling any particular attention in her lessons.<sup>24</sup> When

<sup>19</sup>Gerald Abraham, *Schumann: a Symposium* (London: Oxford University Press, 1952), 72.

<sup>20</sup>Louis Köhler, *Der Clavierunterricht* (Leipzig: Weber, 1860), 172-7.

<sup>21</sup>Carl Czerny, *Complete Theoretical and Practical Piano Forte School*, op. 500, 3 vols., 1839, trans. J. A. Hamilton (London: Cocks, [1839]), vol. 3, 62.

<sup>22</sup>Hans Schmitt, *The Pedals of the Pianoforte*. Four lectures given at the Conservatory of Music, Vienna, publ. 1875, trans. Frederick Law (Philadelphia: Presser, 1893), 4.

<sup>23</sup>Amy Fay, *Music-Study in Germany in the Nineteenth Century*, 1880 (repr., New York: Dover, 1965), 224.

<sup>24</sup>Fay, *Music-Study*, 297.

Ludwig Deppe introduced her to syncopated pedaling later that year, she wrote that she recognized by the sound Liszt's manner of pedaling.<sup>25</sup> Liszt's letter to Louis Köhler in July 1875, in which he praised Köhler's description of taking the pedal after striking a chord as an "ingenious insight," probably referred to the carefully written description itself rather than to the newness of the idea.<sup>26</sup>

In 1876 Niecks wrote, "There is one way of using the [damper] pedal which is very little known, although perhaps often practiced unconsciously," and went on to describe syncopated pedaling.<sup>27</sup> By 1912 Matthay wrote that "even the most primitive and antediluvian of teachers have now at least some hazy sort of notion as to the nature and importance of 'syncopated' pedaling."<sup>28</sup> And in 1913 Eaglefield Hull called "connecting chords in the legato manner" the "second chief use" of the damper pedal.<sup>29</sup>

Chopin, whose foot was often described as seeming "literally to vibrate,"<sup>30</sup> may well have used syncopated pedaling intuitively, especially in cantabile textures. Since more rhythmic pedaling must have been used in the 19th century—especially in dance-based pieces—than has been usual since about the 1930s, pianists may want to re-examine the basis on which they have designed their pedalings. In the earliest available recordings of the giants of the pianistic world we hear less syncopated and more rhythmic pedaling, and more contrast between pedaled and unp pedaled sound than has been heard in recent decades.<sup>31</sup>

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<sup>25</sup>Fay, *Music-Study*, 297-8.

<sup>26</sup>*Franz Liszt's Briefe*, ed. La Mara, 2 vols. (Leipzig: Breitkopf und Härtel, 1893), vol. 2, 223.

<sup>27</sup>Frederick Niecks, "On the Use and Abuse of the Pedal," *Monthly Musical Record*, 6/72 (Dec. 1, 1876), 183.

<sup>28</sup>Tobias Matthay, *Musical Interpretation* (London: Williams, 1913), 131.

<sup>29</sup>Hull, "Pianoforte Pedalling," 32.

<sup>30</sup>Arthur Hedley, *Chopin*, 1947, rev. Maurice Brown (London: Dent, 1974), 123.

<sup>31</sup>E. g., Sergei Rachmaninoff's performance of Chopin's Waltz op. 18, rec. 1921 (RCA VIC-1543, publ. 1970); Moriz Rosenthal's performance of Chopin's Etude op. 10 no. 1, rec. 1931 (Opal 825, publ. 1984); Alfred Reisenauer playing Liszt's Hungarian Rhapsody no. 10; and Bernhard Stavenhagen playing Liszt's Hungarian Rhapsody no. 12, the latter two on the Welte-Mignon reproducing system, 1905 (Welte Legacy of Piano Treasures, Album 675). Reisenauer and Stavenhagen were both pupils of Liszt. The recordings of Vladimir de



Chopin probably notated more pedal indications than any other composer up to World War II, and he put the damper pedal to uses never before imagined. He invented new pedaled textures that took better advantage of the natural overtones—as in the Nocturne op. 27 no. 2 (see Figure 3 above) and in the opening measures of the Polonaise-Fantaisie op. 61, where he frequently mixed dissonant notes and chords with unusual boldness. He often carried the pedal through the end of one sub-phrase or phrase into the next to mask regularity of structure, as in mm. 5-8 of the Mazurka op. 30 no. 4 (see the Henle edition), or used it to connect the sections of a piece, as in the Nocturnes op. 62 no. 1, m. 67, or op. 62 no. 2, mm. 78-80 (see the Henle and Wiener Urtext editions). In repeated sections he sometimes varied pedaling, as he did slurs, rhythms, and ornaments (compare the pedaling in the "rocking-horse" theme of the Ballade op. 47 at mm. 52ff. and 103ff. in the Wiener Urtext edition, which follows the autograph facsimile quite closely), and he used pedaling to highlight and clarify small and large-scale formal and harmonic structure. Of the three pedal indications in the Prelude in B Minor, op. 28 no. 6, two color the pungent chord on the lowered second degree, C-natural (mm. 13-14), and one highlights the ultimate resolution of that bass C-natural to a tonic B at the beginning of the coda. Additional pedaling should not upstage the intended effect of Chopin's indications.

With the deliberately placed and corrected pedal marks in the autograph of the Nocturne op. 55 no. 2 (see Figure 4), Chopin gave particular care to maintaining the clarity of the interwoven polyphonic lines and of the wide-ranging bass, at the same time creating contrast between pedaled and unpedaled notes. (Unpedaled sound on a mid-19th-century piano is not as dry as it is on present-day instruments because of the earlier, less efficient damping, the greater richness of overtones, and the contrast of colors among the bass, middle, and treble registers.) Some unpedaled measures leave the pianist wondering whether Chopin intended them for contrast or whether he wanted performers to devise their own pedaling (e. g., mm. 39-40). And in the Ballade op. 23 pianists have to decide whether the lack of pedal signs in the first appearance of the principal theme means that they should pedal as they wish there (and then later as Chopin wished when the theme returns in both the development and recapitulation)—or rather, as seems quite possible from both practical and aesthetic standpoints, that the theme should be played without pedaling (after Chopin's single indication in its first measure) until m. 32, where a lush pedaled chord enters.

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Pachman display both a mixture of rhythmic and syncopated pedaling and a lighter pedaled sound than we usually hear today.

Liszt left a considerable number of pedal indications, and his "Ped vibrato" in m. 245 of the Tarantella in *Venezia e Napoli* (Supplement to volume II of *Années de pèlerinage*), composed and published ca. 1840, may have been the first attempt to notate vibrato pedaling. Brahms wrote many fewer pedal signs. Aside from indicating the pedaling for special effects—as in the opening of the Piano Quartet op. 60, where the tonic note in four octaves sustained by the pedal forms a backdrop for the entrance of the strings (Figure 5); the Rhapsody op. 79 no. 1, mm. 44-46, where pianists might not retain the chromatic dissonance; or at the beginning of the Intermezzo op. 118 no. 1, where Brahms pits harmony and pedaling against the meter—he left performers to plan their own pedaling, taking into account his cross rhythms and dense harmonic structures. Most notably, right from his Sonata op. 1, published in 1853, he used successive pedal signs without release signs, and in the Adagio of Piano Concerto op. 15 (publ. 1861), instead of

**Figure 4.** Chopin, Nocturne op. 55/2 (autograph), mm. 5-8. Courtesy of Biblioteka Narodowa, Warsaw.

[*Lento sostenuto*]



**Figure 5.** Brahms, Quartet for Piano and Strings op. 60/1 (as in the Sämtliche Werke).

*Allegro non troppo*

Violine

Bratsche

Violoncello

*Allegro non troppo*

Pianoforte

*f* *dim.* *f* *dim.*

*espress.* *espress.* *espress.*

*\**

*\**

*\**



pedal signs he wrote "legato Ped" (m. 29) or "legato" (m. 33) under the bass, followed by a few similar reminders.

Debussy and Scriabin rarely notated pedaling, but they and later composers continued to find new sounds through the assumed use of the damper pedal, with different arrangements of textures and combinations of harmonic elements. Debussy's sonorities, in which evanescent textures float together and dissolve, depend on new performance subtleties of touch, dynamic emphasis, and tonal coloring, for which he extended the uses of the damper pedal and *una corda* pedals. (French pianos, which he favored, did not have the sostenuto pedal.<sup>32</sup>) Sustaining the long notes, especially those in the bass, for their written values and creating an appropriate total effect with clarity of detail requires careful balancing of the parts, sensitive use of partial and flutter pedalings, and a keen imagination. For his rare notated pedalings Debussy relied on "laissez vibrer" (allow to vibrate) or short curved lines either at note heads or across barlines, as in *Bruyères*, for example (see Figure 6). These means were employed as well by other French composers. Conversely, they wrote "sec" or "très sec" (dry, very dry), when they wished to preclude the damper pedal.

**Figure 6.** Debussy, *Bruyères*, *Préludes*, Book 2 (as in 1st ed., Durand), mm.29-30.



<sup>32</sup>Arthur R. Tollefson, "Debussy's Pedaling," *Clavier* 9, no. 7 (Oct. 1970), 22, 33; Good, *Giraffes*, 213. In spite of all the evidence supporting this point, E. Robert Schmitz's book, *The Piano Works of Claude Debussy* (New York, 1950), suggests the historically fallacious use of the third pedal.

All these composers and others in the early decades of the 20th century still played and wrote for instruments that differed in various ways from our modern grand pianos. Liszt concertized on many makes of pianos and endorsed a number of them, including the overstrung Steinway in the 1870s; but his name is associated with the more conservative parallel-strung Érard, which he favored for the decades in which he composed the majority of his piano music.<sup>33</sup> Brahms preferred the conservative Viennese instruments. In 1856 Clara Schumann gave him the piano that the Graf firm had presented to her in 1840 when she married Robert.<sup>34</sup> About 1871 the firm of Streicher gave Brahms one of their instruments, still straight-strung, which he used until his death.<sup>35</sup> Debussy preferred Érards.<sup>36</sup> Among other things that have been changed since the turn of the century are soundboards, which had somewhat different patterns of thickness—especially toward the edges, and hammer coverings, which were more elastic. Both of those older characteristics helped create a clearer, less brilliant sound with more overtones than pianos produced in succeeding decades after about the 1920s.<sup>37</sup> Thus, pianists now approaching the turn of the 21st century may want to make adjustments in the pedaling notations conceived for these earlier (19th century) instruments, which had less sustaining power but greater color than our own, which are built with homogeneity of sound and brilliance as primary goals. In addition to adjusting the technique of pedaling, a careful choice of tempo and a balancing of dynamics among the voices in the texture will make positive contributions to possible solutions.

Still another type of pedaling, described in the 20th century, but undoubtedly used before, can only be applied after a silence: "anticipatory pedaling." With it the damper pedal is depressed before the notes are played. With the weight of the dampers removed, the attack is slightly

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<sup>33</sup>Robert Winter, "The Age of Virtuosity," in *The Piano*, The New Grove Musical Instruments Series (New York: Norton, 1988), 131.

<sup>34</sup>Good, *Giraffes, Black Dragons, and Other Pianos*, 150-51.

<sup>35</sup>Good, *Giraffes*, 201-2.

<sup>36</sup>Tollefson, "Debussy's Pedaling," 22.

<sup>37</sup>Information kindly provided by Frank Hansen and Edmund M. Frederick. Those who have played a succession of Steinway pianos built since World War II know that changes have been made in their hammers, and, according to Robert Winter, Steinway experimented with striking ratios until World War II ("Striking It Rich: the Significance of Striking Points in the Evolution of the Romantic Piano," *Journal of Musicology* 6 (1988), 291).

easier and less percussive and the sympathetic vibrations begin immediately when the strings are struck, producing greater resonance at the commencement of the sound. It would have been quite natural for Debussy, whose playing "made one forget that the piano has hammers,"<sup>38</sup> to have made use of this technique, especially in a piece such as *La cathédrale engloutie*.<sup>39</sup>

Indications for the *una corda* pedal are still infrequent in Romantic piano music, but the interest in color would have led to its use at many dynamic levels for the special sounds it can create. Some of Chopin's contemporaries remarked on his use of both pedals. Debussy's "Serenade of the Doll" in *The Children's Corner* carries the instruction to use "la pédale sourde" throughout the piece, "even at the places marked with an *f*." When the *una corda* is indicated, the place for its release may be relegated to the performer.

### The Modern Era

The "sostenuto" pedal, located between damper and *una corda* on many American and Japanese grand pianos and on some European makes, was first installed by Steinway in square pianos in 1874 and in grands in 1875;<sup>40</sup> however, not until the 20th century did composers think in terms of the sonorities that it makes possible. This pedal sustains only those notes that the fingers are holding down when it is activated. Its use is commonly notated with (1) S.P., (2) Sos., (3) M, or (4) 3. Ped., followed by an asterisk or \_\_\_\_\_ for its release. Although it is not always indicated, its use is appropriate for passages such as may be seen in Villa-Lobos's "Mulatinha," *Próle do Bêbé*, no. 1 (Figure 7), since it is the only way to achieve the effect apparently intended.

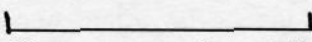
During approximately the first half of the 20th century the majority of composers, including Hindemith, Prokofiev, Schoenberg, Honegger, Martinů, and others, seldom indicated pedaling and used the traditional signs when they did. Each pianist had to determine whether and how to color the new fleeting motives and textures on the one hand and the percussive handling of the piano on the other. In his Sonatina op. 55 and other mainly

<sup>38</sup>Oscar Thompson, *Debussy: Man and Artist* (New York: Dodd, Mead, 1937), 250.

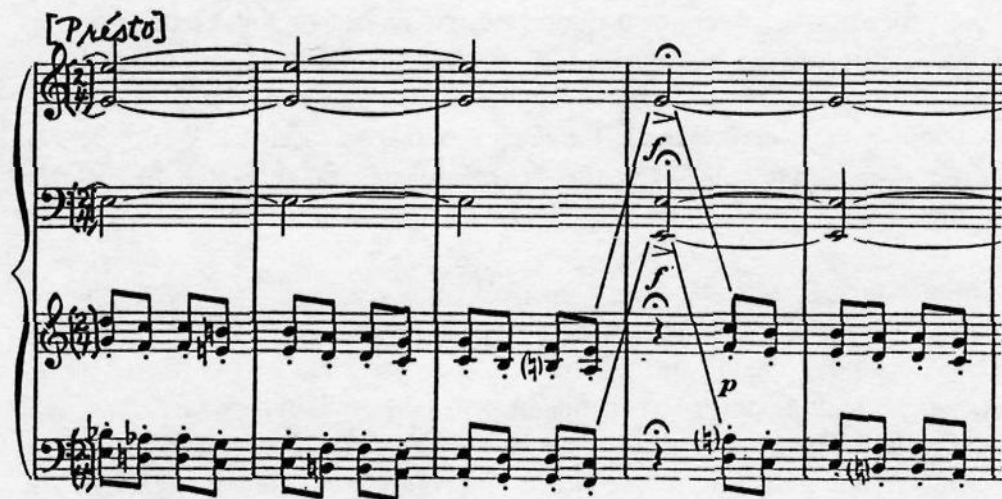
<sup>39</sup>Debussy recorded some performances on Welte-Mignon piano rolls. Although I have not yet been able to hear any of these, there is an allusion to his use of anticipatory pedaling in *La cathédrale engloutie* in William L. Sumner, *The Pianoforte* (New York: St. Martin's Press, 1966), 189.

<sup>40</sup>Cyril Ehrlich, *The Piano: a History*, rev. ed. (Oxford: Clarendon Press, 1990), 54.



pedagogical works Bartók experimented with a more precise notation: , which had been tried by Carl Nielsen in his *Humoresques-Bagatelles*, composed in 1894-1897, and by other composers

**Figure 7.** Villa-Lobos, "Mulatinha," *Próle do Bêbé* no. 1, mm. 31-35.  
Reproduced with permission of Editions MAX ESCHIG, Paris.



subsequently; but in much of his concert music pedal indications are scarce, occurring only for an unusual effect in conjunction with touch, texture, or harmony, as in the third movement of his Piano Concerto no. 2, mm. 108-114.

Since World War II composers have continued to expand the range of sonorities available from the piano by calling for new kinds and combinations of pedaling. Many have included the *sostenuto* pedal in their textural plans, and some have devised more specific pedal notations. Uses of and indications for the pedals may vary significantly from work to work even by the same composer, as they do between Boulez's Sonata no. 1 (composed in 1946), in which the familiar indications for the damper pedal appear sporadically; his Sonata no. 2 (composed in 1948), which has a moderate number of indications, again for the damper pedal—but all in French (e.g., *avec pédale*, *absolument sans pédale*, *pédale à moitié enfoncée*, *pédale vibrer continuellement*); and his Sonata no. 3 (composed in 1957), which contains signs that denote the application of the damper pedal at varying depths, the simultaneous use of the three pedals, and an "after-pedal," in which the resonance of a note or chord is caught after the attack is released.

In some pieces by Boulez, and in works by Cage, Berio, Stockhausen, Xenakis, and others, the directions for pedaling are detailed, the results are as important to the sound as are the dynamics and articulation, and a high degree of pedal virtuosity is necessary for a satisfying performance. Cage's pedal marks for *Music of Changes* (composed in 1951), are shown in Figure 8, and explained in a Preface as follows:

└───┘ = sustaining

└──½──┘ = after the attack, sustaining overtones

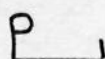
└ - - - - ┘ = *una corda*

└ . . . ┘ = *sostenuto*

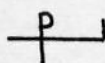
**Figure 8.** Cage, *Music of Changes*, vol. 1 (Manuscript, Henmar), m. 75.  
Copyright 1961 by Henmar Press Inc. Used by permission.



Boulez (in *Sonata no. 3*, 1957), Berio (in *Sequenza IV*, composed in 1966) and Stockhausen (in *Klavierstücke*, composed between 1952 and 1956) indicate after-pedal with a very short rest under a note followed by a pedal sign. Stockhausen's pedal directions are the most specific, as shown by three from the General Foreword to *Klavierstücke VII, VIII, and IX*:

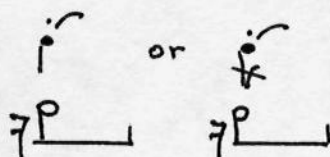


= depress right pedal all the way down.



= depress right pedal just so far down that the duration of the attack and a soft continuation of the note are audible after releasing the key.

Depress pedal about halfway for notes in the middle register, one-third for the low register, two-thirds for the low register, two-thirds for the high register, and completely for the highest register.



= staccato attack immediately followed by depressing the right pedal, so that the note continues softly.

The time between attack and pedal relatively long in the lower registers, minimal in the upper.<sup>41</sup>

The full roster of pedal indications (some combined with touch) for Stockhausen's *Klavierstücke* may not yet have been exceeded by those of any other composer.

<sup>41</sup>Karlheinz Stockhausen, *Klavierstück VII* (Vienna: Universal Edition, 1954), General Foreword (English translation is at the end of the volume.) The same Foreword appears also in *Klavierstücke VIII* and *IX*.



## Appendix

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