

Timbre, Expression, and Combination Keyboard Instruments: Milchmeyer's Art of *Veränderung*

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COMBINATION KEYBOARD INSTRUMENTS PRESENT a fascinating picture of the aesthetic priorities of the eighteenth century. Embracing variety as a key to musical expression, these instruments offered players a potent means to communicate with and move their listeners. Combination instruments harnessed what were viewed as the positive attributes of a wide array of keyboard mechanisms—harpsichords, pianos, organs, *Tangentenflügel*, and *Pantolons*—modifying each of these through their successive or simultaneous activation and through application of *Veränderungen*, a term literally meaning “changes” or “modifications,” but used in the context of organ and keyboard terminology to mean “registrations” or “stops.” Indeed, the dictum of Jakob Adlung, presented in his discussion of organ registration, that “*Veränderung* is and remains the soul of music” was as applicable to performance on combination keyboard instruments as it was to the organ.¹

Despite the increasing attention to combination instruments in recent literature, practical aspects of performance and usage have remained elusive, and this has hampered a clear understanding of the aesthetic principles that motivated builders and players to design and use them. With only a handful of exceptions, the repertoire that might have been deemed suitable for such instruments is still largely unknown. Peter Wollny has presented a manuscript of C. P. E. Bach's fantasy in C major, Wq 61/6, which aligns the dramatic shifts in character inscribed in the music with shifts in registration apparently intended for the *clavecin roïal*, an instrument that Bach is known to have owned at the time of his death.² Yet

¹ “Die Veränderung ist und bleibt doch die Seele der Musik” Jakob Adlung, *Musica mechanica organoedi. Das ist: Gründlicher Unterricht von der Struktur, Gebrauch und Erhaltung, etc. der Orgeln, Clavicymbel, Clavichordien, und anderer Instrumente, in so fern einem Organisten von solchen Sachen etwas zu wissen nöthig ist* (Berlin: Friedrich Wilhelm Birnstiel, 1768), 1:165.

² Peter Wollny, “Carl Philipp Emanuel Bachs Rezeption neuer Entwicklungen im Klavierbau: Eine unbekannte Quelle zur Fantasie in C-Dur Wq 61/6,” *Bach Jahrbuch* 100 (2014): 175–87. The inventory of Philipp Emanuel's instruments is available in the *Verzeichniß des musikalischen Nachlasses des verstorbenen Capellmeisters Carl Philipp Emanuel Bach* (Hamburg: Gottlieb Friedrich

beyond isolated cases such as this one, relatively little documentation concerning the historical usage of such instruments has been unearthed. Consideration of such practical issues, moreover, points to a larger aesthetic gap: combination instruments, with their novel effects and their emphasis on timbral diversity, seem to occupy a sound-world utterly foreign to modern ears, such that it is difficult for both scholars and performers to approach the question of how this lost aesthetic might be revived.³

In this essay I propose to address both the aesthetic underpinnings of combination instruments and the practical question of repertoire by considering the work of the builder, player, and pedagogue Philipp Jacob Milchmeyer (1749–1813).⁴ Known as the author of the first treatise devoted exclusively to performance on the piano,⁵ Milchmeyer has generally been dismissed in scholarly literature as old-fashioned and representative of traditions prevalent outside Germany, and thus the advice that he offers in his treatise has largely (if selectively) been ignored. Most notably, David Rowland has characterized Milchmeyer's discussion of *Veränderungen* in the context of the history of piano pedaling as “well out of date as far as the most progressive pianists were concerned.”⁶ Yet the popularity of Milchmeyer's treatise suggests that his ideas resonated with some German readership—even if primarily an amateur one.⁷ As such, these dismissive assessments of his work eclipse the light that his treatise sheds on the aesthetics and

Schniebes, 1790); fasc. ed. with preface and annotations in Rachel W. Wade, *The Catalog of Carl Philipp Emanuel Bach's Estate* (New York and London: Garland Publishing, 1981).

³ The recording by Andreas Staier and Christine Schornsheim of Mozart's works for two keyboards on the *vis à vis*, a combination piano-harpsichord by Johann Andreas Stein, is an important first step, but as I hope to show, this only scratches the surface of the repertoire that would have been considered well-suited to combination instruments. See Andreas Staier and Christine Schornsheim, *Mozart am Stein Vis-a-vis*, Harmonia mundi 901941, 2007, compact disc. See Tilman Skowronek's review of this CD on p. 206 of this volume.

⁴ Biographical information on Milchmeyer, including an explanation for the confusion surrounding his first names, may be found in Silke Berdux, “Johann Peter oder Philipp Jacob Milchmeyer? Biographische und bibliographische Notizen zum Autor der Hammerklavierschule *Die wahre Art das Pianoforte zu spielen*,” *Musica Instrumentalis: Zeitschrift für Organologie* 2 (1999): 103–120.

⁵ J. P. [P. J.] Milchmeyer, *Die wahre Art das Pianoforte zu spielen* (Dresden: Carl Christian Meinhold, 1797). A translation, with introduction and notes, is available in Robert Rhein, “Johann Peter Milchmeyer's *Die wahre Art das Pianoforte zu spielen*: An Annotated Translation” (DMA Diss., University of Nebraska, 1993).

⁶ David Rowland, *A History of Pianoforte Pedalling* (Cambridge: Cambridge University Press, 1993), 43.

⁷ On the popularity of Milchmeyer's treatise, see Berdux, “Johann Peter oder Philipp Jacob Milchmeyer?” 112.

performance practices of keyboard music in the last quarter of the eighteenth century—especially his approach to *Veränderungen* and the combination of diverse timbres within a single instrument and within a single work of music.

This essay offers a reconsideration of Milchmeyer's understanding of *Veränderungen* as expressed in multiple sources: his treatise on piano playing (1797), his pedagogical anthology entitled *Pianoforte Schule* (1798–1800), and his description of the remarkable combination instrument that he built and advertised in Carl Friedrich Cramer's *Magazin der Musik* in 1783. As I will argue, all three of these sources are rooted in a unified aesthetic outlook: in all three, he described timbre—rather than graduated dynamics alone—as a vehicle for expression in music. The instrument that he invented, the *mechanischer Clavier-Flügel*, which could accommodate either one or two players, offered as many as 250 *Veränderungen* comprised of individual stops and their combinations. Milchmeyer's description of this remarkable instrument included an offer to potential purchasers to provide them with scores of music that he deemed ideally suited to it. Using this list, together with Milchmeyer's treatise and his pedagogical anthology, I propose that, in fact, more can be discerned about the repertoire for combination keyboard instruments in the eighteenth century than has previously been thought. These findings, in turn, have the potential to reanimate the aesthetics of combination instruments in the contemporary age.

Milchmeyer's *mechanischer Clavier-Flügel*

The invention of Milchmeyer's *mechanischer Clavier-Flügel* was first announced in the *Magazin der Musik*, edited by Carl Friedrich Cramer:

Mainz, 1782: The local court builder [*Hofmechanicus*] Milchmeyer has invented a new mechanical *Flügel* [a wing-shaped keyboard instrument], which is not much bigger than a regular *Flügel*, and yet it features 250 new *Veränderungen*. It has three keyboards. The lowest can be screwed out, so that two people can play. Increases and decreases in volume can be executed very well on this instrument.⁸

Milchmeyer himself penned a more detailed description for Cramer's publication in the following issue. As he explained, the instrument included three keyboards—two connected with harpsichord mechanisms and one on the bottom

⁸ “Maynz, 1782.) Der hiesige Hofmechanicus Milchmayer, hat einen neuen mechanischen Flügel erfunden, der nicht viel größer als ein gewöhnlicher Flügel ist, und doch 250 neue Veränderungen enthält. Er hat 3 Claviere. Das untere läßt sich herauschrauben, wo alsdenn 2 Personen spielen können. Das Steigen und Fallen der Stärke der Töne kann auf diesem Instrument sehr gut hervorgebracht werden.” Advertisement in Carl Friedrich Cramer, ed., *Magazin der Musik* 1, no. 1 (1783): 210–11.

that activated a *Pantolon*. The diversity of sounds created by these mechanisms was compounded by the many adjustments to the timbres of each keyboard action, enabled through the application of *Veränderungen* and through the combination of the sounds through the coupling of the keyboards. Milchmeyer tallied these *Veränderungen* and claimed that the instrument was capable of producing no fewer than 250 distinct sounds. In case the reader was skeptical of this seemingly impossible number, Milchmeyer provided a table of the 102 *Hauptveränderungen* (principal registrations), as shown in Figure 1.

The terms in which Milchmeyer described the capacities of this instrument are of great import, as he connected its novel timbral effects with emotional expression in music:

All people experienced with [this] art know that the harpsichord, because of its silvery [sound], has a tone that is the most beautiful and yet often completely contrary to the finest feelings in music. I have applied all of my efforts to remedying this problem. One can now produce upon [this instrument] the most extreme *pianissimo*, *smorzando*, *crescendo*, *forte*, and *fortissimo* at will and as desired. Many virtuosos will think it impossible to imitate the flute, the bassoon the clarinet, and the gut-stringed harp on metal strings; however, a test on this *Flügel* can change their minds about this and assure them that the opposite is true.⁹

As this passage makes clear, Milchmeyer viewed expression of “the most beautiful and the finest feelings” in keyboard playing as a product of two factors: graduated dynamics and timbre.¹⁰ Indeed, as Emily I. Dolan has shown, the

⁹ “Alle Kunsterfahrne wissen, daß der Flügelton wegen seines Silbers den schönsten und doch dem feinen Gefühle der Music oft gänzlich zuwider laufenden Ton hat. Diesem Uebel nun abzuhefeln, habe ich mir alle sinnliche Mühe gegeben; man kann jetzt das größte Pianissimo, Smorzando, Crescendo, Forte und Fortissimo nach Willen und Verlangen darauf machen; manche Virtuosen werden es für unmöglich halten, die Flöte, das Fagott, die Clarinette, und Darmsaitenharfe auf der metallenen Saite zu imitiren: jedoch die Probe von diesem Flügel kann sie davon überführen, und sie des Gegentheils versichern.” Philipp Jakob Milchmeyer, “Beschreibung eines mechanischen Clavierflügels, erfunden und verfertigt von dem Hof-Mechanicus und Mitglie der musicalischen Academie Seiner Churfürstlichen Durchlaucht zu Pfalz-Bayern in München, P. J. Milchmeyer,” in Carl Friedrich Cramer, ed., *Mazgin der Musik* 1, no. 2 (1783): 1027.

¹⁰ On the connections between timbre and expressivity in combination keyboard instruments, see Michael Latcham, “Swirling from One Level of Affects to Another: The Expressive Clavier in Mozart’s Time,” *Early Music* 30, no. 4 (Nov., 2002): 502–30; Latcham, “Mozart and the Pianos of Johann Andreas Stein,” *The Galpin Society Journal* 51 (Jul., 1998): 114–53; Latcham, “The Apotheosis of Merlin,” in *Musique ancienne—instruments et imagination. Actes de rencontres internationales harmoniques, Lausanne 2004. Music of the Past: Instruments and Imagination: Proceedings of the Harmoniques International Congress, Lausanne 2004*, ed. Michael Latcham (Bern: Peter Lang, 2006), 271–98; Latcham, “Johann Andreas Stein and the Search for the Expressive Clavier,” in *Cordes et clavier au temps de Mozart. Bowed and Keyboard Instruments in the Age of Mozart*, ed. Thomas Steiner (Bern: Peter Lang, 2010), 133–216.

concept of timbre was essentially invented during the late eighteenth century, and differences in instrumental “color” came to be associated with an expanded palette of expressivity.¹¹ Dolan has traced the orchestration practices of late-eighteenth-century composers as a manifestation of this new idea of timbre, showing that Haydn in particular deployed timbral effects in his orchestral music to achieve his expressive goals. In this context, it is significant that Milchmeyer criticized the uniform timbre of the harpsichord in terms of color, noting that it contained a “silvery” sound, and was, in effect, monochromatic. Two decades earlier, in an advertisement published in the *Leipziger Zeitungen* of 1765, the harpsichords of Franz Jakob Späth had likewise been described as possessing a “silvery” sound, but this feature was advertised as an advantage, rather than a detriment, of Späth’s instruments.¹² For Milchmeyer, by contrast, the “silvery” quality of the harpsichord connoted both a lack of dynamic flexibility and a uniformity of timbre that limited the instrument’s expressive potential.

Whereas, as Dolan has shown, Haydn prescribed the timbres of his orchestral music with their expressive potential in mind, the application of diverse timbres on keyboard instruments—that is, the application of *Veränderungen*—remained largely unnotated through the end of the eighteenth century. Johann Adlung, whose treatise on organ building and performance remained influential through the end of the century—Daniel Gottlob Türk cited it in 1789 as an authoritative text on the organ¹³—advised that the player constantly vary his registration practices.¹⁴ The principle of variety in registration applied equally to stringed keyboard instruments like Milchmeyer’s *mechanischer Clavier-Flügel* as to organs; indeed, variety in registration as a means to achieving musical expressivity underlies Milchmeyer’s description of his instrument: the more *Veränderungen*, the better. That the application of the *Veränderungen* was generally left to the discretion of the performer and could be altered from one performance to the next would have enhanced, rather than negated, their expressive potential.

Milchmeyer proposed an analogy between his instrument and a larger mixed ensemble, claiming that “in strength and variety of instruments [the *mechanischer*

¹¹ Emily I. Dolan, *The Orchestral Revolution: Haydn and the Technologies of Timbre* (Cambridge: Cambridge University Press, 2013).

¹² Advertisement in the *Leipziger Zeitungen* of 1765, quoted in Michael Latcham, “Franz Jakob Späth and the *Tangentenflügel*, an Eighteenth-Century Tradition,” *The Galpin Society Journal* 57 (May, 2004): 166.

¹³ Daniel Gottlob Türk, *Klavierschule, oder Anweisung zum Klavierspielen für Lehrer und Lernende, mit kritischen Anmerkungen* (Leipzig: Schwickert; and Halle: Hemmerde, 1789), 1.

¹⁴ See Adlung, *Musica mechanica organoedi*, 1:160–173 and *passim*.

Clavier-Flügel] is similar to a complete small orchestra.”¹⁵ Christian Daniel Friedrich Schubart echoed this idea in his description of pianos with *Veränderungen*, included in his treatise on aesthetics of 1806:

If more mezzotints could be brought in the fortepiano, no desire would remain for the great keyboard player... There are fortepianos with ten, twelve, up to twenty stops. A nobleman in Mainz has made one where the flute, violin, bassoon, oboe, even horns and trumpets were conjured up in the fortepiano. If the secret of the construction is made known by this great inventor to the world, one will have an instrument that devours all others.¹⁶

Although Schubart referred to the builder of this remarkable instrument as “a nobleman in Mainz,” he may indeed have had Milchmeyer in mind; as Cramer’s first announcement of the instrument indicated, Milchmeyer was in Mainz at the time. Whether he had in mind the specific instrument developed by Milchmeyer or some other invention of this sort, it is clear that Schubart shared Milchmeyer’s view that *Veränderungen* contributed to the expressive potential of the keyboard instrument, even as late as the first decade of the nineteenth century. Schubart’s statements contradict the narrative offered by David Rowland, who has suggested that “despite the interest of a few writers, musicians in general seldom expressed enthusiasm for this proliferation of devices on whatever keyboard instrument.”¹⁷ Indeed, if the writers whom Rowland cites—among them Petri and Reichardt—were so preoccupied with criticizing instruments with devices to vary their timbres, it must mean that such instruments were common enough or valued highly enough to warrant a response.

Milchmeyer’s suggestion that his instrument could encompass a range of timbres as wide as that of the orchestra was more, it seems, than just a rhetorical gesture. One passage in the description of his instrument suggests that he actually used this impressive array of timbres to perform music originally composed for ensembles of instruments other than the keyboard. The performance of such works in an arrangement for the *mechanischer Clavier-Flügel* allowed for the

¹⁵ “es [ist] wegen der Stärke und Verschiedenheit der Instrumente einem kleinen Orchester vollkommen ähnlich.” Milchmeyer, “Beschreibung,” 1028.

¹⁶ “Wenn man das Mezzotinto noch ins Fortepiano bringen könnte; so wäre für den grossen Flügelspieler kein Wunsch mehr übrig. ... Es gibt Fortepianos von 10, 12, bis 20 Zügen. Ja ein Edelmann in Mainz hat eins verfertigt, wo die Flöte, Geige, das Fagott, die Hoboe, ja sogar die Hörner und Trompeten, ins Fortepiano gezaubert wurden. Wenn das Geheimniss des Baues von diesem grossen Erfinder der Welt kund gethan wird; so hat man ein Instrument, das alle andern verschlingt.” Christian Daniel Friedrich Schubart, *Ideen zu einer Ästhetik der Tonkunst* (Vienna: J. S. Degen, 1806), 288; trans. in Dolan, *The Orchestral Revolution*, 49–50.

¹⁷ Rowland, *A History of Pianoforte Pedalling*, 34.

retention of the timbral diversity normally associated with mixed instrumental ensembles. This suggestion appears near the end of Milchmeyer's description, where he explained that achievement of the full range of 250 *Veränderungen* required use of one of the most innovative aspects of the invention: its ability to accommodate two players, rather than just one. As Milchmeyer wrote,

This *Flügel* has yet another beauty, which no other instrument maker has yet imagined: the bottommost keyboard (a *Pantalon*) can be pushed out, [so that] two people can play it at the same time, which creates an exceptionally beautiful effect in duos. Also, in this way, more *Veränderungen* can be used, since **at the same time that one plays the [sounds of a] harp, flute, and bassoon on the harpsichord, the other accompanies [by playing] the part of the violin on the *Pantalon* or lute [stop]**. The most curious of all, however, is the [combination of the] harpsichord and *Pantalon* at the same time.¹⁸

This description is frustratingly vague. However, it seems to suggest that Milchmeyer expected players using the instrument in the two-keyboard set-up to perform arrangements of chamber works. The keyboardist using the double-manual harpsichord would play one of the parts, applying the *Veränderungen* that would produce the sounds of a harp, flute, or bassoon. The keyboardist using the *Pantalon* mechanism would play the part originally assigned to the violin. The implication, then, is that this hypothetical work is a trio for two soprano lines (original assigned to a violin and the right hand of the harpsichord) and bass (originally executed by the harpsichordist's left hand). In light of this passage, Milchmeyer's claim that the *mechanischer Clavier-Flügel* could simulate an orchestra takes on new significance. Instead of constituting merely a rhetorical exaggeration, the analogy to an orchestra has practical ramifications for the choice of repertoire: whatever else it was used for, the instrument was suitable for the performance of arrangements.

Perhaps sensing that potential purchasers of his own day would be confused about what music would be suitable for performance on such a curious instrument, Milchmeyer indicated that he had gathered a "collection of choice music by the most famous composers, such as Bach, Bocherini, Eckard, Edelman,

¹⁸ "Dieser Flügel hat noch eine Schönheit, an welche noch nie von keinem Instrumentenmacher ist gedacht worden, das untere Clavier oder Pantalon schiebt sich heraus: es können zu gleicher Zeit zwey Personen auf einmal spielen, welches bey den Duos einen ausserordentlichen schönen Effect macht; auch können hierbey mehrere Veränderungen gebraucht werden, denn unter der Zeit, daß der eine auf dem Flügel, Harfe, Flöte und Fagotte spielt, so accompagnirt der Andere die Partie der Violin auf dem Pantalon oder Laute; das Merkwürdigste von allem aber ist, daß Flügel und Pantalon zu gleicher Zeit, oder von einer Person auf einmal können gespielt werden, und es wegen der Stärke und Verschiedenheit der Instrumente einem kleinen Orchester vollkommen ähnlich [ist]." Milchmeyer, "Beschreibung," 1027–28. Emphasis added.

Lichner, Forckel, Gluck, Mozart, Schobert, Schroeter, Sterkel, Vogler, and other famous composers, as well as my own compositions, which I will freely give to the owner of this instrument.”¹⁹ No collection of music survives today that matches this list exactly, so it is impossible to know precisely which pieces of music it might have included. Nevertheless, for both the one-player and the two-player configurations, some educated guesswork may be undertaken. The evidence I propose to draw upon emerges from late-eighteenth-century manuscripts of music for two keyboards, from the section of Milchmeyer’s treatise that deals with *Veränderungen* on the piano, and from the four-volume pedagogical anthology that he published between 1798 and 1800 of the music that he deemed suitable for performance on the piano with *Veränderungen*. Together, I argue, these sources shed new light on the uses of combination instruments, and the ways in which builders and players harnessed the wide array of timbres that such instruments provided. It is to this body of evidence—and to its implications for the question of repertoire—that I now turn.

The Question of Duo Repertoire: Evidence for the Performance of Arrangements

Milchmeyer was perhaps overstating his case when he wrote that “no other instrument maker” had yet thought of constructing an instrument such as his. Adlung made special mention of harpsichords for two players in his monumental treatise on organ building, the *Musica mechanica organoedi* of 1768. In his chapter on stringed keyboard instruments, Adlung provided a diagram of a harpsichord designed for two-keyboard repertoire (Figure 2), explaining it as follows:

It is also possible to build a harpsichord case with two keyboards, so that the two of them can play together. An instrument of normal length is built, but perhaps a foot or so longer. But its width is constant, thus forming a rectangle. A soundboard is placed across the entire [instrument], but a divider is built on top of it from corner *a* to corner *b*. . . This then forms a double harpsichord, one of whose keyboards extends from *a* to *c* and the other from *d* to *b*. Everything else is built as described above.²⁰

¹⁹ “Sammlung ausgesuchter Music, von den berühmtesten Tonkünstlern, als Bach, Bocherini, Eckard, Edelman, Lichner, Forckel, Gluck, Mozart, Schobert, Schroeter, Sterkel, Vogler und andern berühmten Tonkünstlern, wie auch von meiner eigenen Composition, welche ich dem Besitzer dieses Instrumentes freywillig communicire.” Milchmeyer, “Beschreibung,” 1028.

²⁰ “Man kann auch ein Clavicymbel-Corpus mit zwey Clavieren Machen, damit ihrer zwey spielen können. Man macht nämlich die Länge gewöhnlicher maaßen, ohne daß man etwann 1’ oder etwas weniger drüber nimmt. Aber die Breite wird durchaus überein in forma quadrati oblongi.

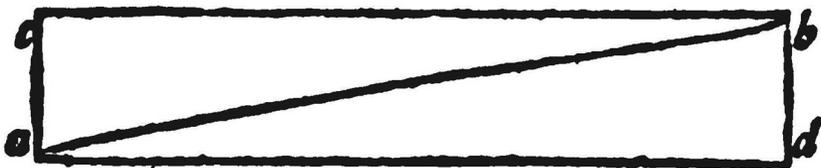


Figure 2 Diagram of the layout of a double-harpsichord, in Jakob Adlung, *Musica Mechanica organoedi* (Berlin: Friedrich Wilhelm Birnstiel, 1768), 109.

Although Adlung's diagram seems rudimentary, surviving instruments from subsequent years seem to fit his plan; indeed, it seems possible that Adlung was describing building practices for double-harpsichords already in use. One such instrument from the subsequent decade is Johann Andreas Stein's *vis à vis*, the earliest surviving exemplar of which dates to 1777; a keyboard at one end of this rectangular instrument activates a piano, while three manuals at the opposite end engage a harpsichord mechanism. Like Milchmeyer's instrument, the *vis à vis* can be played by two people separately, or by a single person seated at the harpsichord end, who can couple the harpsichord and piano mechanisms.²¹ It is possible that the novelty to which Milchmeyer was referring, "which no other instrument maker has yet imagined," was the movability of the bottommost keyboard; yet in its combination of a wide array of sounds, and in the construction of a single instrument for two players, Milchmeyer was certainly not the first. His claim to primacy in instrument design and the emphasis he placed on the wide array of *Veränderungen* of which his instrument was capable emphasize the importance of novelty and comprehensiveness in the construction of combination instruments.

As I have shown elsewhere, trios originally composed for mixed ensembles were often arranged in the eighteenth century as keyboard duos, with each player seated at a separate instrument.²² Instruments such as the *vis à vis* and

Alsdann macht man auch die Decke durchaus; doch wird oben darüber ein Unterschied gemacht von einer Ecke zur andern von a nach b, etwann also: [Fig. 2]. So präsentirt dieß ein doppelt Claveßin, deren das eine das Clavier von a nach c hat; das andere aber von d nach b. Das übrige wird gemacht, wie bisher gesagt worden." Jakob Adlung, *Musica Mechanica organoedi*, 2:109. Translation adapted from Adlung, *Musical Mechanics for the Organist, that is, Fundamental Instruction Concerning the Structure, Use, and Maintenance, etc. of Organs, Harpsichords, Clavichords, and Other Instruments, to the Degree that it is Necessary for an Organist to Know Something about Such Things*, trans. Quentin Faulkner (Lincoln, NE: Zea E-Books, 2011), 109.

²¹ The *vis à vis* has been studied and described extensively by Michael Latham; see especially Latham, "Swirling from One Level of Affects to Another," "The Apotheosis of Merlin," and "Johann Andreas Stein and the Search for the Expressive *Clavier*."

²² I have explored this practice, and its relationship to the combination keyboard instruments of

the *mechanischer Clavier-Flügel* would have been especially useful for this type of arrangement, since the wide range of timbres that they offered would have allowed the two players to maintain the individuality of each line in the original scoring. The practice of making such arrangements dated at least to the 1720s, when François Couperin described it in the introduction to his *Apothéose de Lully*. As Couperin wrote,

This trio, as well as the *Apothéose de Corelli*, and the complete book of trios that I hope to publish next July, may be executed on two harpsichords, as well as all other types of instruments. I play them [on two harpsichords] with my family and with my students, with a very good result, by playing the first soprano line and the bass line on one of the harpsichords, and the second [soprano line], with the same bass line, on another at the unison. The truth is that this requires having two copies [of the score] instead of one, and two harpsichords as well. But I find that it is often easier to assemble these two instruments than four separate professional musicians.²³

Performance of trios in this configuration—with each of the two treble lines played by one of the keyboardists' right hands, and the bass line played in unison by both left hands—is attested in dozens of manuscripts produced between 1750 and 1800 featuring music from throughout the eighteenth century. Consideration of these sources sheds light on the list of composers whose music Milchmeyer offered to supply to purchasers of his instrument. Manuscript arrangements of the organ trios of Johann Sebastian Bach, BWV 525–530, were produced in precisely the manner described by Couperin. The two treble lines, each of which would likely have been played in the original composition on a separate manual of an organ, are distributed in this arrangement between the two right hands of the players, each seated at a separate instrument. The bass line is played by both at the unison (see Figures 3a and 3b).²⁴ Indeed, there are more manuscript

the late eighteenth century, in Rebecca Cypess, "Among Family and Students: Keyboard-Duo Arrangements, Hybrid Instrumentation, and the Expression of Sympathy in the Eighteenth Century," paper under review.

²³ "Ce trio, ainsi que l'Apothéose de Corelli; & le livre complet de trios que j'espère donner au mois de Juillet prochain, peuvent s'exécuter à deux clavecins, ainsi que sur tous autres instrumens. Je les execute dans ma famille; & avec mes élèves, avec une réussite tres heureuse, sçavoir, en jouant le premier dessus, & la basse sur un des clavecins: & le second, avec le même basse sur un autre à l'unisson: La verité est que cela engage à avoir deux exemplaires, au lieu d'un; & deux clavecins aussi. Mais, je trouve d'ailleurs qu'il est souvent plus aisé de rassembler ces deux instrumens, que quatre personnes, faisant leur profession de la musique." François Couperin, "Avis" to *Concert instrumental sous le titre d'Apothéose composé à la mémoire immortelle de l'incomparable Monsieur de Lully* (Paris: L'auteur and Le Sieur Boivin, 1725), n.p.

²⁴ The sources are described in Dietrich Kilian's critical report to organ trios in the *Johann Sebastian Bach: Neue Ausgabe sämtlicher Werke*, edited by Johann Sebastian Bach Institut of Göttingen and

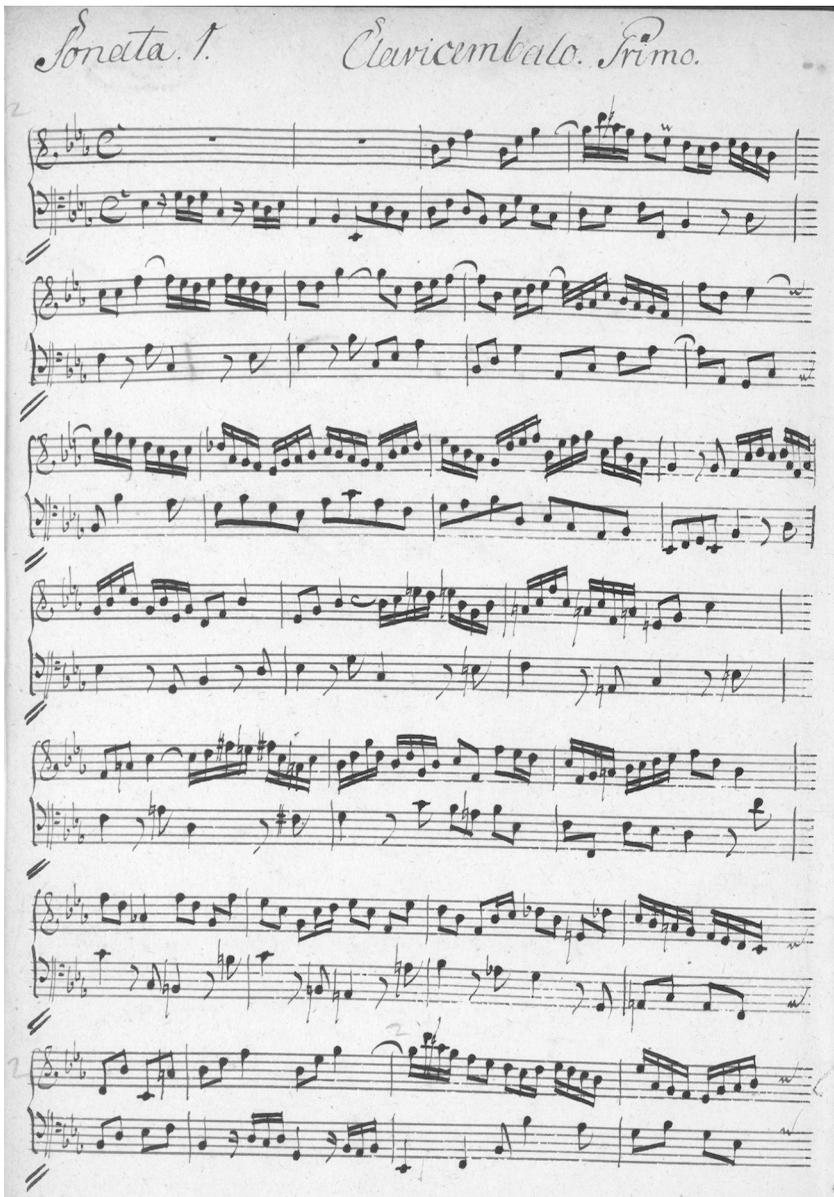


Figure 3a J. S. Bach, organ trio BWV 525 in the arrangement for two keyboards. First opening of the partbooks, side by side. Österreichische Nationalbibliothek, Mus.Hs.5008, onb.digital/result/10038985.

Sonata. 1. Clavice mbalo. Secondo.

A page of handwritten musical notation for a sonata. The title at the top reads "Sonata. 1. Clavice mbalo. Secondo." The score is written in a historical style, likely 18th-century, and is organized into eight systems. Each system consists of two staves, one for the right hand (treble clef) and one for the left hand (bass clef). The music is in common time (C) and features a variety of rhythmic patterns, including eighth and sixteenth notes, as well as rests. The notation includes slurs, ties, and dynamic markings. The paper shows signs of age, with some staining and a slightly uneven texture.

Figure 3b.

arrangements of the organ trios of J. S. Bach than any other work from the period, suggesting that they formed a *locus classicus* for the adaptation of trios in this configuration. Yet, as Couperin's statement suggests, the production of dedicated partbooks for the performance of trios on two separate keyboard instruments was not necessary: players could just as easily read from trio scores, extracting the bass line and the relevant soprano line as they played. Performance on two keyboard instruments, indeed, seems to have been a clear possibility for any trio sonata in circulation in the late eighteenth century.²⁵

By the time Milchmeyer advertised his instrument and his collection of repertoire suitable for it, references to "Bach" probably pointed to Carl Philipp Emanuel Bach rather than his father. There is evidence, too, that Philipp Emanuel employed the same arrangement technique for his own works as that found in the manuscripts of Sebastian's organ trios and described by Couperin. The possibility of this type of arrangement, indeed, must have been so widely understood that for his sonata in C major, Wq 87, Philipp Emanuel left nothing more than a page of manuscript instructions.²⁶ Rather than informing the reader how to *create* the arrangement, however, this page offers a means to *deviate* from the standard arrangement technique. Originally composed for flute and obbligato keyboard, the sonata contains numerous sustained notes in the flute part. Emanuel's instructions for the two-keyboard arrangement mandate that the player assuming the part of the flute alter these sustained notes through the introduction of idiomatic keyboard figuration. Aside from these changes to the flute line, the piece was to remain identical to the original version. That Philipp Emanuel did not find it necessary to write out more complete instructions—much less a complete realization—of this arrangement suggests that he expected his readers to know how to create the basic components of such an arrangement themselves.

The possibility that Milchmeyer advocated performance of arrangements for two keyboards in addition to original compositions for this instrumentation is supported by the list of composers whose works he offered to provide for purchasers of his instrument. Although there was a small repertoire of music

the Bach-Archiv of Leipzig, series IV, vol. 7 (Kassel: Bärenreiter, 1988), 59. Among these, the most important are two manuscripts associated with the Baron van Swieten, now held in Salzburg (A-Sm D 2 3/1245) and Vienna (A-Wgm Q 11719), and that of Fanny von Arnstein (A-Wn Mus.Hs.5008).

²⁵ Further evidence for this claim appears in Cypess, "Among Family and Students."

²⁶ The manuscript page of instructions, as well as a fully realized version of the two-keyboard arrangement, may be seen in the appendix to Carl Philipp Emanuel Bach, *Keyboard Trios II*, ed. Steven Zohn, appendix ed. Laura Buch (Los Altos, CA: The Packard Humanities Institute, 2010). See also Buch's explanation of the process for producing the two-keyboard arrangement, p. 79.

composed for two keyboards during the eighteenth century, including works by the Bach family and Mozart, it is unclear that Milchmeyer would have had access to those in 1783. For example, Mozart's sonata in D major for two keyboards was composed in 1781, but it was not published until 1795, after the composer's death. Keyboard duos by Wilhelm Friedemann Bach and Johann Sebastian Bach circulated in manuscript, but one writer in 1772 described these as "rather difficult to find."²⁷ Carl Philipp Emanuel Bach is known to have composed only a handful of diminutive pieces for two keyboards. Other composers on the list, including Boccherini and Gluck, are not known to have composed any keyboard music at all, much less music for two keyboards.

Although this paucity of surviving works designated especially for two keyboard instruments amounts only to circumstantial evidence, the possibility that Milchmeyer might have expected his players to perform arrangements for two keyboards on his *mechanischer Clavier-Flügel* opens the way to some interesting possibilities. What works by composers on Milchmeyer's list might have been suitable for performance on his instrument in its configuration for two players? The trios by J. S. Bach and C. P. E. Bach cited above are only the beginning. A set of sonatas had appeared in 1746 under Gluck's name, though their authenticity is now doubted; these works are scored for two treble instruments and bass. It would be easy to imagine that works such as these sonatas could be performed on Milchmeyer's instrument to good effect. Indeed, the counterpoint and the intertwining of lines would be clarified through the application of Milchmeyer's various *Veränderungen* (see Example 1).

Johann Samuel Schroeter wrote music for solo keyboard; it is certainly possible that Milchmeyer was distributing this solo music to purchasers of his instrument, with various stops engaged at different sections so as to enhance the distinction from one to the next. However, Schroeter also wrote chamber music that appears to have been adapted for two keyboards. One set of works that meets this description is his opus 2 collection of keyboard trios. These were not trios in the baroque sense, with two treble lines and bass; rather, they employed obligato keyboard parts with the "accompaniment" of a violin and a cello. Manuscript and printed sources transmit these works in different configurations: the English edition included a score laid out on three staves showing both the obligato keyboard part and the violin part, suggesting, perhaps, that these two lines may be the only ones really required; separate violin and cello partbooks also

²⁷ "[...] ziemlich schwer zu bekommen sind." "Duetto für 2 Claviere, 2 Flügel, oder 2 Fortepiano..." in Friedrich Nicolai, ed., *Allgemeine deutsche Bibliothek* 17 (1772): 239.

Example 1 Attributed to Christoph Willibald Gluck, *Sonata Wq 53, no. 4, mm. 23–31*.

appeared with this publication. Later, however, a manuscript version was made of Schroeter's op. 2 trios by a copyist active in Dresden in the court of Elector Friedrich August III of Saxony, who took a special interest in the performance of keyboard duos, and for whom numerous two-keyboard arrangements were made.²⁸ Although this manuscript is designated "for harpsichord and pianoforte with the accompaniment of violin and violoncello" (*pour le clavecin ou le piano-forte avec l'accompagnement d'un violon, et violoncelle*), its layout also suggests that performance on two keyboards would also have been possible. The copyist produced two separate partbooks: one containing the obligato keyboard part, and the other juxtaposing the violin and cello parts in one grand staff, rendering them suitable for performance on a single keyboard instrument (Figures 4a and 4b). Indeed, this same copyist produced dozens of manuscripts in this configuration, designating them explicitly for "cembalo I" and "cembalo II."

The trios op. 12 of Luigi Boccherini, likewise scored for obligato keyboard, violin, and cello, provide another compelling example of music that might

²⁸ Richard Engländer, "Die Instrumentalmusik am sächsischen Hofe unter Friedrich August III. und ihr Repertoire," *Neues Archiv für sächsische Geschichte und Altertumskunde* 54 (1933): 75–84; and Annegret Rosenmüller, *Die Überlieferung der Clavierkonzerte in der Königlichen Privatmusikaliensammlung zu Dresden im letzten Drittel des 18. Jahrhunderts* (Eisenach: Verlag der Musikalienhandlung K. D. Wagner, 2002), 177–96.



Figure 4a Schroeter, trio, op. 2, no. 1. Obbligato keyboard partbook. SLUB Dresden, Mus.3568-Q-2, digital.slub-dresden.de/id314677461 (Public Domain Mark 1.0).



Figure 4b Schroeter, trio, op. 2, no. 1. Partbook containing violin and cello lines on a single grand staff. SLUB Dresden, Mus.3568-Q-2, digital.slub-dresden.de/id314677461 (Public Domain Mark 1.0).

have been suitable for performance on the *mechanischer Clavier-Flügel* in the duo set-up. In such works, the two players would be able to contrast the bright figuration of the original obbligato keyboard part with the longer lines of the string parts. The same holds true, for example, in the opus 16 trios of Schobert.

If, indeed, Milchmeyer expected his players to use his instrument for the performance of trios, then the comparison that he made between his instrument and an orchestra is far from idle. In fact, he may actually have seen his invention as taking over the roles of various other instruments, not just in emotional effect, but also in the experience of non-keyboard music on his keyboard instrument. In this sense, Milchmeyer's instrument could indeed be seen, as Schubart suggested, as capable of "devour[ing] all others."

The Question of Solo Repertoire: "One must know exactly the nature of all instruments that one wants to imitate"

The suggestion that players might have used the *Veränderungen* of Milchmeyer's instrument in its two-player configuration to play arrangements of works for other instruments raises another possibility: perhaps even in the configuration for one player, the *mechanischer Clavier-Flügel* was well suited to music that focused players' and listeners' attention on contrasts in timbre, including arrangements as well as solo repertoire. This usage is supported by evidence first from Milchmeyer's pedagogical anthology, the *Pianoforte Schule*, which contained "the best pieces composed for this instrument, from the works of the most famous composers,"²⁹ and second, his description of the uses of *Veränderungen* in his treatise *Die wahre Art das Pianoforte zu spielen*. Both of these sources suggest a particular and distinctive way of thinking about timbre at the piano. Although the *mechanischer Clavier-Flügel* evidently did not achieve the popularity that might have enabled Milchmeyer to publish an anthology expressly designated for *that* instrument, I argue that his approach to timbre and *Veränderungen* remained consistent in the years between the invention of his instrument and the publication of these works dealing with piano performance. It is therefore possible that the repertoire that Milchmeyer deemed suitable for the piano might also have been used in the combination keyboard instrument that he had invented in the previous decade.

²⁹ P. J. Milchmeyer, *Pianoforte-Schule, oder Sammlung der besten, für dieses Instrument gesetzten Stücke, aus den Werken der berühmtesten Tonkünstler ausgewählt, nach steigender Schwierigkeit des Spiels geordnet, und mit Fingersatz, Ausdruck und Manieren bezeichnet* (Dresden: Carl Christian Meinhold, 1798–1800).

The contents of Milchmeyer's *Pianoforte Schule* may be divided into three general categories: works originally written for the piano or other keyboard instrument; works not initially composed for the piano but transcribed and adapted for it; and works for chamber ensemble. The presence of the second and third categories might seem surprising: after all, the title of the anthology expressly states that the music it contains is "composed for this instrument." Yet it seems that Milchmeyer viewed both transcriptions and chamber works as integral to the repertoire of the keyboardist. It is clear from the scores of the *Pianoforte Schule* that the chamber works are not intended for transcription on two keyboards—at least not primarily. This is most obvious from the fact that the keyboard fingerings are only given for the keyboard part, while the other instrument parts have no fingerings at all.

A sonatina for flute or violin by Clementi, printed in the second *Jahrgang* of Milchmeyer's anthology, is an interesting case in point. The piece is scored for piano and "flauto o violino," indicating a flexible approach to the timbre of the non-keyboard instrument; what mattered more was the contrast between the timbre of the piano and that of the accompanying melody instrument. The opening eight measures of the piece (Example 2) contain three clearly distinct ideas: a melody in the violin/flute, an oscillating accompanimental figure in the mid-range of the piano, and an independent bass line. After the first phrase, the violin/flute rests and the piano restates its melody; subsequently the violin/flute and the right hand of the piano bring the theme to conclusion in homophony. It is clear that the timbral distinctions between the instruments help to project the character of these separate lines. While there is nothing remarkable about this sequence of musical events, in the context of a piano anthology the presence of pieces such as this seems noteworthy: Milchmeyer was training his readers to listen to distinctions in timbre, and to combine them sensitively in performance.

Changes of timbre were essential to the execution of aria transcriptions, *potpourris* of operatic arias, and theme-and-variations sets that use arias as their basis. It is telling, therefore, that Milchmeyer's anthology included a number of arrangements of vocal pieces in each of these categories. The importance of timbral manipulations in this music is demonstrated in an aria from Giuseppe Sarti's 1782 opera *Le nozze de Dorina*, which appears in Milchmeyer's collection in an arrangement for piano made by Daniel Steibelt (Example 3). The distinct characters of the right-hand part, originally for solo voice, and the left-hand accompaniment seem, in the piano version, to foreshadow the textures of Chopin's nocturnes (albeit with a more compressed bass range), with their quasi-improvised melodies and their placid, harp-like accompaniments. It would be appropriate,

Moderato

Flauto o
Viol o

mf

a o

p

mf

4

mf

p

6

p

f

mf

Example 2 Clementi, *Sonatina for flute or violin and piano*, printed in Milchmeyer's *Pianoforte Schule* (Dresden: Carl Christian Meinhold, 1800), 2:13, mm. 1–8.

perhaps, to apply to this aria Milchmeyer's advice concerning the *una corda* moderator on the piano: "The modification in which the hammer strikes only one string is excellent, and, when one plays with closed lid [of a square piano], suggests a very distant music, or the answer of an echo. Players who possess musical feeling will avail themselves of it often."³⁰

The appearance of Steibelt's name in conjunction with this work is noteworthy; Milchmeyer mentioned him throughout *Die wahre Art das Pianoforte zu*

³⁰ "Die Veränderung, wo der Hammer nur eine Saite anschlägt, nimmt sich sehr gut aus, und stellt, wenn man mit zugemachtem Deckel spielt, eine weit entfernte Musik, oder die Antwort des Echos vor. Spieler, welche musikalisches Gefühl besitzen, werden sich derselben oft bedienen können." Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 65; trans. in Rhein, "Johann Peter Milchmeyer's *Die wahre Art das Pianoforte zu spielen*," 156.

Example 3 “Air” de Noce de Dorine, arrangé par le Sig. Steibelt, *Pianoforte Schule* (Dresden: Carl Christian Meinhold, 1800), 2:20, mm. 1–8.

spielen as a master of the instrument—especially of the use of *Veränderungen*. In Milchmeyer’s view, “Composers and teachers did not pay [the *Veränderungen*] enough attention, and considered them unnecessary, until finally the talent of Mr. Steibelt, a native of Berlin who now lives in London, precisely developed all these modifications, showing the effect of each and defining its place.”³¹ Milchmeyer claimed, further, that all of his examples in the chapter on *Veränderungen* derive from Steibelt’s works. Steibelt’s own treatise, published in both French and German in 1810, adds further evidence in support of Milchmeyer’s conception of timbre as an integral component of keyboard performance practice and expression, and of the pedals as a means of introducing timbral variety. As Steibelt wrote,

To mask [the piano’s] monotony, I have concerned myself only with those means that are particular to it in order to enhance its reputation. A certain art of pressing the keys, and curving the fingers, judicious use of the pedals (modifications of the tone through pressing the foot), which have been little used, and the advantages of which I was the first to demonstrate, give this instrument an entirely different expression....I will, in the following [pages], show how this important addition [of the pedals] serves to draw out the colors better and to bring light and shadow into a performance, and that its use is subject to the rules of good taste.³²

³¹ “Componisten und Lehrer achteten nicht darauf, und hielten sie für unnöthig, bis endlich das grose Talent des Herrn Steibelt, eines gebohrnen Berliners, der ietzt in London lebt, alle diese Veränderungen genau entwickelte, die Wirkung einer ieden zeigte, und ihr ihren Platz bestimmte.” Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 58; trans. in Rhein, “Johann Peter Milchmeyer’s *Die wahre Art das Pianoforte zu spielen*,” 141–42.

³² “Um seine Einförmigkeit zu verstecken, habe ich mich bemüht nur durch die Hülfsmittel, die ihm eigen sind, allein seinen Ruhm zu vermehren. Eine gewisse Art die Tasten zu drücken, und die Finger zu biegen, ein genau bezeichneter Gebrauch der Züge (Tonveränderungen durch die Tritte), die man sonst wenig benutzte und von denen ich zuerst die Vortheile gezeigt habe, geben

Milchmeyer cited Steibelt as a master of the *potpourri*, in no small part because of his command of the *Veränderungen*. Because the *potpourri* changes character continually, it is ideally suited to the deployment of the timbral contrasts that they enabled. It was in discussing this feature of the *potpourri* that Milchmeyer wrote, “I want to mention more than once that a very good pianoforte is necessary in order to be able to make all possible modifications [*Veränderungen*] and all possible expression. One may be able to play a big sonata encumbered with many difficulties quite perfectly, and yet be a beginner in the *potpourri*. In this kind of music...one must be perceptive of all the caprices of the composer, and **know exactly the nature of all instruments that one wants to imitate on the pianoforte.**”³³ This point—that the piano is to be used to imitate other instruments—pervades Milchmeyer’s approach to piano playing. The analogy between the piano and the orchestra has practical ramifications, in repertoire, technique, and expression.

That the *Pianoforte Schule* includes operatic *potpourris* arranged by Steibelt and others like him is not surprising in light of Milchmeyer’s statements. One such work appears in the October issue of the first *Jahrgang*, and it consists of a series of aria transcriptions and variations made by Steibelt on themes by Paisiello. A movement marked “Andante con espressione” is followed by three increasingly virtuosic variations. Subsequently another theme, from the “Pastorella nobile,” takes over; this piece, too, is treated to ornamental procedures. Finally, the opening theme returns to close the set. One might easily imagine a performance of this work in which each of the sections receives its own timbral combinations—its own orchestration.

Another suggestive example of an arrangement in Milchmeyer’s *Pianoforte Schule* is the duet from the seventh day of Haydn’s *Schöpfung*, “Der tauende Morgen,” in which the characters first sing of nature, and then of their love for one

diesem Instrumente einen ganz andern Ausdruck... Ich werde in der Folge zeigen, wie diese wichtige Erweiterung des Instruments dazu dient, die Farben besser heraus zu heben und Licht und Schatten in den Vortrag zu bringen, und dass sein Gebrauch den Regeln des guten Geschmacks unterworfen ist.” Daniel Steibelt, *Pianoforte Schule / Méthode de Piano ou l’art d’enseigner cet instrument* (Leipzig: Breitkopf & Härtel, 1810), 2.

³³ “Ich...will dabei das nicht einmal erwähnen, daß ein sehr gutes Pianoforte nöthig ist, um alle mögliche Veränderungen, und allen möglichen Ausdruck machen zu können. Man kann eine grose, mit vielen Schwierigkeiten verbundene Sonate ganz vollkommen spielen können, und im Potpourri ein Anfänger ist. In dieser Art Musik...man muß alle Caprizen des Componisten nach empfinden können, und die Natur aller Instrumente, die man auf dem Pianoforte nachahmen will ganz genau kennen.” Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 70; trans. in Rhein, “Johann Peter Milchmeyer’s *Die wahre Art das Pianoforte zu spielen*,” 170. Emphasis added.

Allegretto Adam

Der thau - en - e r - en

7
ie er-mun-tert er!

12 Eva

Die Küh - le es A - ben s ie er - quick - et siel

Example 4 Arrangement of Haydn's *Schöpfung in Milchmeyer's Pianoforte Schule 2, no. 2* (1799): 43, mm. 1–16.

another. The rising melody at the opening of the duet (Example 4) may be taken as a representation of morning: “The dewy morning, how it enlivens [us].” What better opportunity to employ Milchmeyer’s advice concerning the representation of sunrise: “In order to make a big *crescendo* effectively, by which one can suggest the rising sun, a dispersing cloud, or the like, one begins it *pianissimo*, without dampers, with the lid closed; when one arrives at the *fortissimo*, one gradually raises the lid higher and higher while playing, and finally opens it completely. These passages produce an extraordinary effect when, in the right place, they are perfectly executed.”³⁴

³⁴ “Um ein großes crescendo, durch welches man die aufgehende Sonne, eine sich zertheilende Wolke und dergleichen vorstellen kann, gut zu machen, fängt man solches pianissimo ohne Dämpfer

Some of the examples that Milchmeyer offered in his treatise to demonstrate the application of *Veränderungen* pertain to character or sound: among these is the “harp or leather stop,” in which a piece of leather mutes the strings which is “suited to pieces whose character is one of gaiety and light fun, such as pastorals and siciliennes.”³⁵ Yet in other passages, he gave his readers remarkably specific information about the kinds of instruments and instrumental ensembles that could be imitated through the judicious use of the *Veränderungen*. He suggested ways to make the piano sound like various combinations of voices accompanied by violins, like a glass armonica, a harp, a snare drum, and like “a kind of Spanish music, in which one strikes round wooden plates of various sizes, which are tuned to certain notes.”³⁶

Milchmeyer’s anthology of course included numerous works for solo piano, including sonata movements (not always full sonatas) by the likes of Haydn, Mozart, Clementi, and Beethoven. Yet of these solo works, composed from the outset for the piano rather than arranged from other sources, it is clear that Milchmeyer favored movements that could accommodate liberal use of the *Veränderungen*. Thus variations and rondos, as well as movements with frequent changes of character, are common in the anthology. He was intent upon teaching his readers to use timbre as an expressive device.

Milchmeyer’s approach to *Veränderungen* as expressed in his treatise has been dismissed in recent literature as representative of an outdated or an overly “French” sensibility, largely irrelevant to German musical practice at the end of the eighteenth century. Even his translator, Robert Rhein, assumes a defeatist stance, apologizing that Milchmeyer was “rather provincial, out of touch with the mainstream, with pet ideas destined to be short-lived.”³⁷ Yet the popularity of the treatise, the appearance of the anthology, and the publication of Steibelt’s treatise

mit dem zugemachten Deckel an, wenn man an das fortissimo gekommen ist, hebt man unter dem Spielen nach und nach den Deckel immer mehr in die Höhe, und öffnet ihn endlich ganz. Diese Gänge thun eine außerordentliche Wirkung, wenn sie am rechten Orte, in ihrer ganzen Vollkommenheit, vorgetragen werden.” Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 61; trans. in Rhein, “Johann Peter Milchmeyer’s *Die wahre Art das Pianoforte zu spielen*,” 148.

³⁵ “schickt er sich aber zu Stücken, deren Charakter Lustigkeit und leichter Scherz ist, zu manchen Hirtenliedern, und sizilianischen Stücken.” Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 59; trans. in Rhein, “Johann Peter Milchmeyer’s *Die wahre Art das Pianoforte zu spielen*,” 142.

³⁶ “eine Art spanischer Musik nachahmen, wo man auf runde hölzerne Teller von verschiedener Größe schlägt, welche nach den Noten gestimmt sind.” Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 63; trans. in Rhein, “Johann Peter Milchmeyer’s *Die wahre Art das Pianoforte zu spielen*,” 153–54.

³⁷ Rhein, “Johann Peter Milchmeyer’s *Die wahre Art das Pianoforte zu spielen*,” xi.

in both French and German, demonstrate that these ideas were more mainstream than has previously been admitted. Instead of looking at Milchmeyer's treatment of *Veränderungen* in the 1790s as a pre-determined failure in light of later developments, I propose instead that they shed light on musical aesthetics during the crucial period in which the concept of timbre was first developed. If timbre, as Dolan suggests, was so essential to the emergence of modern orchestration practices during the last decades of the eighteenth century, is it any wonder that keyboardists and keyboard builders would seek to harness the expressive potential that it offered? Since that period, pianists have sought expressive means in other aspects of musical performance—especially the extreme dynamic contrasts that would enable the piano to match the volume of a large orchestra. In the process of accommodating those needs, however, the aesthetic ideal of timbral diversity was compromised. Milchmeyer's work represents this lost ideal. While his conception of *Veränderungen* might seem quaint and backwards-looking, he was so impassioned about them that a serious reading of his work might prompt us to ask what we are missing.

It also prompts a new look at the list of composers whose music Milchmeyer deemed suitable for performance on his *mechanischer Clavier-Flügel*. In addition to the arrangements for two keyboardists discussed above, I suggest that a good deal of the repertoire that Milchmeyer printed in his *Pianoforte Schule* likely overlapped with the collection of works that he assembled for his combination instrument. Although the square piano about which he wrote in the *Wahre Art das Pianoforte zu spielen* could not approach the 250 *Veränderungen* that could be produced by players using the combination instrument, it is clear that Milchmeyer's conception of timbre in keyboard instruments remained consistent. Not merely vehicles for idiomatic compositions, Milchmeyer's instruments were simulacra of the orchestra.

In determining the repertoire for the *mechanischer Clavier-Flügel*, then, it is to the *Pianoforte Schule* and the musical culture that it reflects that we must turn. A precise reconstruction of the "collection of choice music by the most famous composers" that Milchmeyer assembled for his combination instrument is impossible. But a *precise* reconstruction is not necessary. The repertoire for the combination instrument would have been as fluid and as vast as the musical world allowed. Solo keyboard music, with special emphasis on theme-and-variation works, rondos, and other genres that display extreme contrasts; trios arranged for two keyboardists sharing a musical experience; ensemble works accompanied by violins, cellos, flutes; *Lieder* and arias in arrangement—all of these would have been suitable for Milchmeyer's instrument. Through his impossibly wide

range of *Veränderungen*, Milchmeyer put the complete musical world beneath the keyboardist's fingers.

Milchmeyer's Concluding Offer

Aside from an occasional suggestion that a repeated section of music be played first *pianissimo* and then *fortissimo* Milchmeyer's *Pianoforte Schule* did not include instructions for *Veränderungen*. Milchmeyer himself hinted at one rationale for this omission, writing in his treatise that "beginners should exert all possible effort to bring out all musical expressions by means of the fingers; and only then, when they have the expression completely under their control with the fingers, may they make use of the lid and of the other modifiers, in order to give their playing finished expression."³⁸ The *Pianoforte Schule*, as a pedagogical text, might have omitted the *Veränderungen* because the composer felt his readership was insufficiently prepared to undertake study of these effects. Another possible reason is that, as in organ works of the early eighteenth century, the art of registration at keyboard instruments was left to the discretion of performers, to vary as they wished from piece to piece, from performance to performance.

One obvious answer for Milchmeyer's omission of notated *Veränderungen*, of course, is that he may not have been able to assume that purchasers of his anthology would own an instrument capable of making all of the effects that he would have suggested. Indeed, he lamented the paucity of instruments that could do justice to his ideas. Perhaps he was thinking of his own inventions as a keyboard builder, including the *mechanischer Clavier-Flügel*, when he wrote, "As for the modifications of the pianoforte, one cannot praise the instrument makers enough for their many years of tireless labor to bring about a great number of modifications on these instruments. However, they are seldom used enough by players, and are therefore like a beautiful collection of books in which no one wants to read."³⁹

³⁸ "[...] Anfänger sich alle nur mögliche Mühe geben, allen musikalischen Ausdruck durch die Finger hervorzubringen, und erst dann, wenn sie den Ausdruck mit dem Finger ganz in ihrer Gewalt haben, mögen sie sich des Deckels und der andern Veränderungen bedienen, um dadurch ihrem Spiele den vollendeten Ausdruck zu geben." Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 65–66; trans. in Rhein, "Johann Peter Milchmeyer's *Die wahre Art das Pianoforte zu spielen*," 158–59.

³⁹ "Was die Veränderungen des Pianoforte's betrifft, so kann man die Instrumentmacher nicht genug loben, daß sie seit vielen Jahren unermüdet bemühet gewesen sind, eine grose Anzahl Veränderungen an diesem Instrumente anzubringen. Allein sie wurden von Spielern selten genug benutzt, und gleichen daher einer schönen Büchersammlung, in der Niemand lesen mag." Milchmeyer,

Yet if, indeed, Milchmeyer feared that his readers would be incapable of procuring an instrument suitable for the execution of *Veränderungen*, he himself could provide the means to remedy this problem. Concluding his chapter on these effects in piano performance, he reminded his readers of this fact:

Of course, much skill is necessary in order to perform effectively all modifications that I have given in this chapter, and to show the proper place of each; in addition, a very consummate instrument is required. Now, if there should be found among the readers of my book any who wish to own such an instrument, then in this they can turn to me in full confidence; I promise to attend to it, so that they will be completely satisfied. In this matter, my reputation and my honor prescribe to me principles to which I, as artist and honorable man, will always remain true.⁴⁰

If Milchmeyer's readers had accepted his offer and sought him out to purchase such an instrument, one wonders what sorts of *Veränderungen* they might have heard through the workshop door.

Die wahre Art das Pianoforte zu spielen, 58; trans. in Rhein, "Johann Peter Milchmeyer's *Die wahre Art das Pianoforte zu spielen*," 141.

⁴⁰ "Freilich ist viele Geschicklichkeit nöthig, um alle Veränderungen, die ich in diesem Capitel angegeben habe, gut vorzutragen, und einer ieden ihren wahren Platz anzuweisen, auch gehört ein sehr vollkommenes Instrument dazu. Wenn nun unter den Lesern meines Buchs sich einige finden sollten, welche ein solches Instrument zu besitzen wünschten, so können sie sich mit vollem Zutrauen deshalb an mich wenden, ich verspreche dafür zu sorgen, daß ihnen vollkommene Gnüge geleistet werde. Mein Ruf und meine Ehre schreiben mir in diesem Puncte Gesetze vor, denen ich als Künstler und ehrlicher Mann stets treu bleiben werde." Milchmeyer, *Die wahre Art das Pianoforte zu spielen*, 66; trans. in Rhein, "Johann Peter Milchmeyer's *Die wahre Art das Pianoforte zu spielen*," 159.

