

Ghost Music: or, The Otherworldly Voice of the Glass Harmonica

ANNETTE RICHARDS

I.

INVENTED IN LONDON IN 1761 by an enterprising American celebrity and quickly unleashed on a Europe soon to be enraptured, and later unsettled, by its unprecedented sonority, the glass harmonica focused attention on the uncanny power of sound as no other instrument had ever done. It was sensational both as a popular phenomenon and in the way it could respond to the finest gradations of human touch. Its ethereal yet penetrating tones were disembodied yet apparently forceful enough to drive performer and listener alike to madness. Enthusing numerous avid, even cultish followers, and inspiring a rich body of criticism, the glass harmonica offered previously unknown expressive opportunities to the adventurous keyboard player. Its devotees claimed that its capacity for both dynamic range and sustained sound allowed it to supersede even that most expressive of keyboard instruments, the clavichord; in so doing, it reconfigured hearing, touch, and sensation to present a new musical ideal. As the instrument maker and glass harmonica player Karl Leopold Röllig wrote in 1787,

on account of the universal sensation which it created on its first appearance, on account of the unanimous acclaim from all who heard it, the Armonica was exalted as the most pleasing and most beautiful of all instruments that humankind ever possessed... Through the Armonica the highest ideal of pleasure and beauty is realized, which the most fertile imaginative powers cannot surpass.”¹

Benjamin Franklin’s creation enjoyed several decades of popularity, especially in German-speaking Europe, but had become nearly obsolete by the 1820s. Its short

⁰ I am indebted to numerous friends, colleagues, and students for their input on this project, especially grateful to David Yearsley, Nicholas Mathew, and David Rosen for their comments on my drafts, and above all to Dennis James for lending me a glass harmonica.

¹ “denn sie ward durch die allgemeine Sensation, welche sie nach ihrer ersten Erscheinung erregte, durch den ungetheilten Beifall aller die sie hörten, gleich zu dem angenehmsten und schönsten aller Instrumente erhoben, das je die Menschen besaßen... Durch die Harmonika [ist] das höchste Ideal des Angenehmen und Schönen realisiert, worüber hinaus selbst die fruchtbarste Einbildungskraft sich nicht zu schwingen vermag.” Karl Leopold Röllig, *Über die Harmonika. Ein Fragment* (Berlin, 1787), 4, 5. All translations in this essay are my own, unless otherwise stated.

history has been sporadically and only partially recounted in a handful of articles and books, as well as several fictional accounts (and various websites),² but my own recent research in the archives suggest that the Armonica's repertoire, critical literature, concert history, and quasi-mythical reception remain understudied.³

Having long been interested in the glass harmonica, I recently had the opportunity to begin to learn to play this rare and difficult instrument, thanks to the generosity of glass virtuoso, Dennis James. To coax the fragile spinning glass bowls into ringing life is a daunting prospect: dust, climate, sweat, grease, skin temperature, all have a direct impact on the act of playing. Even if conditions are optimal, intense practice is required to pull a singing chord from the Armonica, let alone to play passage-work on it. But to experience the instrument's uncanny way of sounding is also to begin to eavesdrop on, and feel with, those eighteenth- and early nineteenth-century musicians and writers for whom the music's haunting sounds brought elation and hints of incipient illness: banned in some German towns, its performances heavily policed in others, the Armonica could incite riots in audiences, induce erotic group trance in the patients of Anton Mesmer, fray the delicate nerves in the fingers, encourage solitary midnight reverie, and provoke nervous disease, even death. Or so it was thought.

Despite the glass harmonica's sensational history, the archival record indicates a more widespread use for the instrument than the Romantic tales of nocturnal madness and the reanimation of corpses would suggest; likewise, the surviving sources, which include narrative accounts of the Armonica, instructions on how to play it, and manuscript copies of arrangements and original works written for it, point to the ways in which Franklin's revolutionary musical invention

² See Peter Sterki, *Klingende Gläser: Die Bedeutung idiophoner Friktionsinstrumente mit axial rotierenden Gläsern, dargestellt an der Glas- und Tastenharmonika* (Bern: Peter Lang, 2000); Heather Hadlock, "Sonorous Bodies: Women and the Glass Harmonica," *Journal of the American Musicological Society* 53, no. 3 (2000): 507–42; Herman Ullrich, *Die Blinde Glasharmonikavirtuosin Mariane Kirchgessner und Wien: Eine Künstlerin der empfindsamen Zeit* (Tutzing: Hans Schneider, 1971); A. Hyatt King, "The Musical Glasses and Glass Harmonica," *Proceedings of the Royal Musical Association* 72nd Sess. (London, 1945–46): 97–122. See also Sascha Reckert, "Glasharmonika," in *Die Musik in Geschichte und Gegenwart*, ed. Ludwig Finscher, 2nd rev. ed. (Kassel: Bärenreiter, 1994–), 3:cols. 1408–9. Many sources are reproduced in English on William Zeitler's comprehensive website at www.glassharmonica.com and in his 2013 book, *The Glass Armonica: The Music and the Madness* (2013), available at www.williamzeitler.com.

³ The terms "glass harmonica" and "armonica" have been used variously in recent criticism to apply to Franklin's instrument. Franklin himself called it "Armonica"; most recent English-language scholarship has used "Glass Harmonica" (both French and German use "harmonica"). In this essay, I shall use "Armonica" when omitting the qualifier, but following Heather Hadlock in the *Journal of the American Musicological Society*, 'harmonica' in 'glass harmonica.' As I discuss below, Franklin's Armonica is distinct from its precursor, the musical glasses.

prompted serious reflection on music itself, and, by extension, on performance: even from its earliest reception, the glass harmonica posed in radical new ways questions about color and expression, mood and sensitivity, freedom and sincerity. An enviable accoutrement for the homes of those wealthy amateurs who could afford it, the glass harmonica also captured the fascination of royals and their composers, among them Johann Adolf Hasse at the imperial court in Vienna, whose cantata, “L’Armonica” (1769) not only celebrated the new instrument but showed how the fervor was more than merely a fad, how glass music could be the vehicle for a new kind of musical truth. The Armonica, as I hope to show here, even while drawing attention to nerves and bodies, at the same time staged the separation of sound from source, emphasizing immateriality, ‘pure sound’ in a revelation of music’s very medium. Rather than employing the oratorical strategies common to other instruments in the period, the Armonica tended to limit itself to a single rhetorical figure foundational to all the rest—that of emergence and disappearance, birth and death. In one of the earliest and most substantial pieces in the glass harmonica repertoire, Hasse’s “L’Armonica,” this rhetoric is at its most troubling (and effective) as music is put to work to celebrate a political union in which female envoicing and agency are deeply fraught, even to the point of evoking the mythical story of Philomela, a tale about voice and voicelessness, the violent loss of (female) human voices and the persistence of transcendent, ethereal ones.

II.

On June 19th, 1769, the young Austrian Archduchess Maria Amalia was married by proxy to the dissolute Bourbon prince Ferdinand, Duke of Parma. The groom, whom she would meet in Italy for the first time the following month, was 17, the bride 23. This was not a happy occasion. “We are in the midst of the greatest wedding celebrations,” her mother, the Empress Maria Theresa, wrote to her friend, the Countess Enzenberg in Innsbruck, on June 24th. “I pray to God that everything goes well, but my heart is heavy. I continually fear a catastrophe or that she will suddenly become ill on the journey [to Italy].”⁴ Her daughter would leave for Parma on July 1st. A highpoint of the celebrations was the

⁴ “Nous voilà dans les plus grandes fêtes du mariage. Je ne vous en dis rien, vous le saurez d’ailleurs, mais ce qui est sûr, c’est que ma fille part le 30 et sera le 10 à Innsbruck. Dieu veuille que tout passé heureusement, mais mon Coeur est opprimé, je crains toujours une catastrophe ou tomber malade en chemin.” Maria Theresa, letter to Countess Enzenberg, June 24, 1769, in *Briefe der Kaiserin Maria Theresia an ihre Kinder und Freunde*, ed. Alfred Ritter von Arneth, 6 vols. (Vienna: Wilhelm Braumüller, 1881), 4:490.

performance at the Schönbrunn palace of a new cantata that the Empress had commissioned from Pietro Metastasio and Johann Adolf Hasse for the occasion, as she had done for each of the family weddings during the previous decade. On the express wishes of the Empress, this wedding cantata was to provide a forum for the two English sisters Marianne and Cecilia Davies, and to spotlight the newly invented instrument that Marianne played, the glass harmonica.⁵ The Davies sisters had been in Vienna for several months performing regularly for, and finding extraordinary favor with, the Empress and her family. As Metastasio later recounted: “[Marianne] performs with admirable skill on an instrument of new invention, called the *Armonica*... The other sister, who is possessed of a very pleasing and flexible voice, sings extremely well, with much art and natural expression; ... They have been here universally admired, and applauded: and my most august Patroness, who has deigned to hear them frequently, has honored them with munificent testimonies of imperial approbation.”⁶ Hasse, in his turn, reported to his friend Giammaria Ortes that

These two *virtuose* were greatly distinguished by her majesty the Empress who loved to hear them... The first plays a subtle and melancholic instrument called the *Armonica*. To play it very well, one needs to employ imagination, and to have a good understanding of music. ... The other sings and has a beautiful voice, and excellent gifts. I had her under my direction for a little more than a year. ... For the rest they are two young people of spirit, well educated and of outstandingly honest character.⁷

⁵ The music remained unpublished; the sole source is in the collection of the Milan Conservatory, Riserva Mus. C-30; the libretto was published in *Opere del signor abate Pietro Metastasio* (Paris: Herissant, 1782), 11:283–85. Detailed information on the circumstances of its creation are given there: “L’*Harmonica*” was composed “on the sovereign orders by the author in Vienna in 1769, and performed in the grand salon of Schönbrunn, with music by Hasse, called the Saxon, by Signora Cecilia Davies, sister of the most excellent player of the new English instrument, called the *Harmonica*, which accompanied the singing; on the occasion of the celebration of the marriage of his royal highness Ferdinand the Bourbon Duke of Parma to Maria Amalia, Archduchess of Austria.” See also Sven Hansell, “The Solo Cantatas, Motets, and Antiphons of Johann Adolf Hasse,” 2 vols. (PhD diss., University of Illinois, 1966), 1:129–36.

⁶ Pietro Metastasio, letter to the Princess di Belmonte at Naples, January 16, 1772, in *Memoirs of the Life and Writings of the Abate Metastasio*, ed. Charles Burney (London: Printed for G. G. and J. Robinson, 1796), 82–83.

⁷ “Queste due virtuose sono state molto distinte dalla M. dell’Imperadrice che amava di sentirle, e come si produssero poi anche appresso la più cospicua nobilta, così hanno fatto qui piuttosto bene il fatto loro. La prima suona uno stromento flebile, e malinconico chiamato l’armonica. Per suonarlo bene assai, bisognerebbe lavorare di fantasia, ed avere buona musica in testa. Essa però vi eseguisce delle galanterie, e non lo tratta male. L’altra canta, ed ha una bella voce, e doni eccellenti. Io l’ho avuta qui sotto la mia direzione per quasi più di un anno. ... Del resto sono due giovani di spirito, ben educate, e di onestiss.^{mo} carattere.” Johann Adolph Hasse, letter to Giam-

The sisters and their parents lodged in Hasse's house during their more-than-a-year stay in Vienna, teaching English to Hasse's daughters in exchange for training in singing from Hasse for Cecilia. Wracked by gout, the aged Hasse was only just able to complete the cantata in time for the celebrations. As his daughter wrote to Ortes on 17 June 1769: "My father had to write a little composition for the upcoming nuptials, which will be produced at the end of the week of celebrations, and he was luckily able to finish it despite a renewed attack of the gout, added to the fact that his hand is already infirm. He hopes nevertheless to be able to be present at the production."⁸

Metastasio's text for "L'Armonica" is constructed in the form of two arias, each two quatrains long, framing a lengthy section of *versi sciolti*, freely alternating unrhymed lines of 7 and 11 syllables, to be set as recitative.⁹ The first aria acts as a vehicle for the voice of the 10 or 11 year-old Cecilia, while foreshadowing the larger themes of the piece. With conventional false modesty, Cecilia laments the inadequacies of her voice and invokes the mythical nightingale Philomela, the exemplary singer whose talents alone would be commensurate to the great occasion at hand: "Ah, why cannot I too weave a sweet chain for souls with my singing, Philomela, like you?" [Ah perchè col canto mio / Dolce all'alme ordir catena, / Perchè mai non posso anch'io. / Filomena, al par di te?] The voice of Philomela, unlike her own, she imagines, would mediate perfectly between sound and silence, speaking and not-speaking, bearing witness and looking away: "If today any lip casts to the breeze harsh words, it is too bold; but if it is silent on such a great day, it is no less guilty." [S'oggi all'aure un labbro spande / Rozzi accenti è troppo audace; / Ma se tace in dì sì grande, / Men colpevole non è.] In the lengthy recitative that follows, the soprano's invocation to Philomela is recast as a direct appeal to her older sister, Marianne, at the glass harmonica: "Be bold, Sister! Fit your skillful hand to the spinning crystals, and rouse their rare seductive harmony" [Ardir, germana: a' tuoi sonori adatta / Volubili cristalli / L'esperta mano: e ne risveglia il raro / Concenno seduttore].¹⁰ In her turn, Cecilia

maria Ortes, December 5, 1770; in *Johann Adolf Hasse e Giammaria Ortes: Lettere (1760–1783)*, ed. Livia Pancino, *Speculum Musicae* IV (Brepols: Turnhout, 1998), 219.

⁸ "Mio Padre ha dovuto fare una piccola composizione per le future nozze, che sarà prodotta alla fine della ventura settimana, ed ha potuto fortunatamente terminarla innanzi che gli sopraggiungesse il rinovato attacco di gotta, e quantunque la mano sia ancora inferma. Egli spera nulla di meno che potrà essere presente alla produzione." *Johann Adolf Hasse e Giammaria Ortes*, 188.

⁹ *Opere del signor abate Pietro Metastasio* (Paris: Herissant, 1782), 11:283–85. My warmest thanks to Carol and David Rosen for their help with the English translation.

¹⁰ Heather Hadlock ("Sonorous Bodies," 513) has suggested that the Armonica is mythologized

will match her voice to them (“I will try to imitate their amorous tone”). The text plays on the fabled qualities of the glass harmonica, and stages the real-life presence and reputation of the two sisters themselves, drawing attention to the famous way that the instrument’s “languid, tenuous, plaintive and soft sound” could come so close to the human voice, and the way Cecilia knew how to ghost the instrument’s sound with her own singing. Metastasio later wrote that “when accompanied by her sister on the *Armonica*, she has the power of uniting her voice with the instrument, and of imitating its tones, so exactly, that it is sometimes impossible to distinguish one from the other.” Young as she was, Cecilia must indeed have had considerable talent, even allowing for several months of training from Hasse himself, to have sung this work.¹¹

It is as if where the human voice, in all its beauty, fails, the new instrument has all of Philomela’s extraordinary musical qualities. Made of glass, spectral, transparent, glittering with light, the harmonica has the transporting ability to make sounds not only beautiful but revelatory, like the mythical nightingale in Ovid’s tale. To a startling degree the emphasis in “L’Armonica” is on music, and on the scenario of performance, rather than on the dynastic union that it ostensibly celebrates. Mention of the bride and groom themselves is limited briefly to the allegorical opposition of Love and War, and their embodiment as ‘Istria’ [for Amalia] and ‘Parma’ [for Ferdinand]. Even the closing aria avoids celebrating the specific occasion in favor of a general reference to the idyll of pastoral love that serves to display the union of *Armonica* and voice.

Hasse’s music, in its turn, sets Metastasio’s text (and surely the illustrious creative partners conceived together how this would go) so as to take advantage of, and draw attention to, everything that the *Armonica* can do. The central section (67 bars long), which takes as its theme the *Armonica* itself, begins simply in free recitative: Cecilia Davies invites her sister at the *Armonica* to join the music-making, and in reply the glass music begins to ring out—its quality of slow emergence from silence bringing with it a sense of hesitation, while the Adagio

here as a “sister instrument,” but this is a misreading of the literal exchange, in this one-off piece written for a particular performance, between a specified pair of performers, from one sister to the other. For more on the theme of sisters, see below.

¹¹ Most recent accounts of the Davies’ sisters tour, and of “L’Armonica,” seem to overlook how young Cecilia was when they set out. Several variations on her birthdate are given in the literature; I take the date of 1756/7 from Olive Baldwin and Thelma Wilson, “Davies, Cecilia,” in *Grove Music Online*, accessed October 8, 2015, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/07286>. To say that Marianne toured with her sister ‘the soprano Cecilia Davies,’ as most commentators do, is something of a stretch: at 10 years old she certainly was not yet a celebrated soprano, though by the time they returned home several years later she would be.

tempo, the notated fermatas, and subsequent rests allow the performer to swell and diminish the eerie sound on each harmony, without regard to meter. It is as if the new sound were questioning, wondering at its unfamiliar surroundings like Pygmalion's statue Galatea awakening into life. The ethereal Armonica speaks like a prophetic witness from another world, its wordless voice characterized by chords of indeterminate length that wax and wane at the discretion of the performer, its idiom slow and hymn-like with generally stepwise motion and sweet parallel thirds in the upper voices gently colored by the occasional simple trill. Muted strings enter, murmuring in *pianissimo* on the F major harmony as the voice joins in, vowing to try to imitate the Armonica's sounds. Voice and Armonica are now heard together for the first time, the singer freely elaborating her recitative under the Armonica's sustained chords (with or without interjections from the strings), or in alternation with short decorative runs from the Armonica. Music is called into being and awakened (see Example 1).

In the concluding aria, a pastoral idyll in which zephyrs gently trouble leaf and water as a sensual accompaniment to amorous encounters, Metastasio's generic text affords Hasse the chance to draw repeated attention to the Armonica, and to the trick of its perfect match with the voice. In this final movement the Armonica shares the role of soloist, given the same musical material as the soprano, replete with trills and runs, and extended passages in which the vocal line and the right hand of the Armonica part are perfectly aligned in parallel thirds, or sections of quick alternation between the two soloists (see Example 2). This demands remarkable skill from both the Armonica player and the singer (and is evidence of Marianne Davies's virtuosity and Hasse's knowledge of what she could do), especially in the fluid figuration (as at measures 57ff and the measures of quick imitation between the two around 115, Example 3). In a transition leading back to the *da capo* the Armonica steps forward again, its lilting triple-meter melody tinged with chromaticism, and supported with the most minimal of accompaniments in the *pianissimo* violins (Example 4).

Vln. I
 Vln. II
 Vla.
 Gl.
 Harm.
 S.
 B.

Ar - dir, ar - dir, ger - ma - na. A' tuoi so - no - ri a - dat - ta vo - lu - bi - li, cri - stal - li l'e - sper - ta

5
 ma - no, e ne ri - sve - glia il ra - ro con - cen - to se - dut - tor

f, *p*, *f*

Example 1 J. A. Hasse, 'L'Armonica,' (1769), Section II, mm. 1–19. The voice of the Armonica is called into being.

8 Adagio

Adagio

12

16 *con sordini*
pp
con sordini
pp
con sordini
pp

Col can-to anch' i - o

pp

Example 1 (cont'd).

45

Vln. I *p* *tr* *pp* *tr*

Vln. II *p* *pp* *tr*

Vla. *p*

Gl. Harm.

S. *p* *tr* *tr*
Al - la sta-gion de' fio - ri e de' no - vel - la a - mo - ri è gra - to il mol - le

Vc. *p*

B. *p*

50

fia - to d'un zef - fi - ro leg - gier. Al - la sta - gion de'

Example 2 Hasse, 'L'Armonica,' Section III, mm. 45–67. Duet between soprano and Armonica, with ornamentation and passagework for both.

54

fio - ri è gra - to il mol-le fia - to, è gra -

58

fio - ri è gra - to il mol-le fia - to, è gra -

Example 2 (cont'd)

62

Musical score for measures 62-64. The score is in 3/4 time with a key signature of two flats (B-flat and E-flat). It features a vocal line and a piano accompaniment. The piano part includes a complex arpeggiated figure in the right hand and a simpler bass line in the left hand. The vocal line has a melodic phrase with a trill-like ornament.

65

65

tr

to il mol - le fia - to, il mol - le fia - to;

Musical score for measures 65-67. The score continues in 3/4 time with a key signature of two flats. It includes a vocal line with lyrics and a piano accompaniment. The piano part features a trill in the right hand and a bass line in the left hand. The lyrics are: "to il mol - le fia - to, il mol - le fia - to;".

Example 2 (cont'd)

Vln. I

Vln. II

Vla.

Gl.
Harm.

S.
[fa]

Vc.

B.

114

Example 3 Hasse, 'L'Armonica,' Section III, mm. 110–18. Rapid passagework and imitation between voice and Armonica.

187 *Tempo di prima*

Vln. I *pp* *tr*

Vln. II *pp*

Vla.

Gl.
Harm.

S.
cer.

Tempo di prima

Vc.

B.

192 *tr*

Example 4 Hasse, 'L'Armonica,' Section III, mm. 187–203. Armonica solo at transition to Da Capo.

Musical score for Example 4 (cont'd). The score is written for a piano and voice. It consists of five systems of staves. The first system shows the piano introduction with a forte (*f*) dynamic. The second system continues the piano introduction with a piano (*p*) dynamic. The third system shows the piano introduction with a forte (*f*) dynamic. The fourth system shows the piano introduction with a piano (*p*) dynamic. The fifth system shows the piano introduction with a forte (*f*) dynamic. The score includes various musical notations such as notes, rests, and dynamic markings. The key signature is one flat (B-flat). The time signature is 4/4. The score ends with the instruction "D.S. al Fine".

The score is written for a piano and voice. The piano part is in the left hand, and the voice part is in the right hand. The piano part consists of a series of chords and single notes, while the voice part consists of a single line of music. The piano part is marked with a forte (*f*) dynamic, and the voice part is marked with a piano (*p*) dynamic. The score includes various musical notations such as notes, rests, and dynamic markings. The key signature is one flat (B-flat). The time signature is 4/4. The score ends with the instruction "D.S. al Fine".

Al - la sta-gion de' fio - re
 D.S. al Fine

Example 4 (cont'd)



Figure 1 Charles-Germain de Saint-Aubin, *harmonica*, 1765 in *Livre de Caricatures tant bonnes que mauvaises*; watercolour, ink, and graphite; 187 x 132mm; Waddesdon, The Rothschild Collection (The National Trust) Bequest of James de Rothschild, 1957; acc. no. 675.368. Photo: Imaging Services Bodleian Library © The National Trust, Waddesdon Manor.

III.

By 1769, Marianne Davies, who had received her instrument and instruction on it directly from Franklin, was still one of only a very small number of people who possessed a glass harmonica and played publicly on it.¹² That she could

¹² The only other musician known to have been giving concerts on the instrument in the late 1760s was the German composer and organist Philipp Joseph Frick (1740–1798). See Sterki, *Klingende*

already play it well enough to take it on tour in early 1765, the year in which she appeared in Paris as the world's only professional Armonica player some four years before these imperial nuptials, speaks to considerable talent and application. On 11 March that year, the Parisian newspaper *L'Avantcoureur* carried a notice about a new musical instrument:

Armonica. The only instrument of its type. This instrument has numerous perfections which are particular to it, above all that of being always in tune. Mademoiselle Davies is the only person who plays it. She comes from London to satisfy the curious and the music-lovers among us [*nos curieux & nos amateurs*]; she will perform various pieces of music on her instrument Mondays, Wednesdays and Saturdays from six o'clock in the evening until eight o'clock. She will also play on Tuesdays, Thursdays and Fridays from noon until two. Mademoiselle Davies offers to go to people who wish it, who send her a carriage and give notice a day in advance.¹³

That the new instrument and its player were an immediate success, visible, remarkable, and in demand among the cultured and curious, is evident not only from the contemporary press but also from the visual record. The glass harmonica was significant enough to have caught the eye of the artist Charles-Germain de Saint-Aubin (1721–1786), and to have been included in his private, often cynical, depictions of court and city life, the “*Livre de caricatures tant bonnes que mauvaises*,” whose nearly 400 drawings in watercolor, pencil, and ink are now in the Rothschild collection at Waddeson Manor. In one drawing late in the series, a young woman in a blue dress, sleeves billowing at the elbow, pink bow at the breast, bejeweled and bedecked, reads from a music stand attached to the right end of a glass harmonica as her fingers, hands splayed, catch the edges of the nested glass bowls of the instrument (see Figure 1). A curtain covers the front of the Armonica, the player's foot operating the treadle to turn the bowls concealed from view. In the manner of most of the drawings in St-Aubin's book, the image bears a caption—this one factual, without irony:

Armonica, instrument composed of forty glass bells of different sizes mounted on a wooden shaft or transverse cylinder, which the musician turns with the foot by

Gläser, 153. In Vienna, Anton Mesmer, inspired by Davies, had an Armonica built (presumably before she left the city in 1770), which was said to have surpassed its model; Leopold and Wolfgang Amadeus Mozart heard Mesmer play on it during a visit to his house in 1773.

¹³ “Harmonica. Instrument unique de son genre. Cet Instrument a plusieurs perfections qui lui sont particulières, sur-tout celle d'être toujours d'accord. Mademoiselle Davies est la seule personne qui en joue. Elle arrive de Londres pour satisfaire nos curieux & nos amateurs; elle exécutera differens morceaux de musique sur son instrument les Lundis, Mercredis & Samedis depuis six heures du soir jusqu'à huit heures. Elle jouera aussi les Mardis, Jeudis & Vendredis depuis midi jusqu'à deux heures. Mademoiselle Davies offre d'aller chez les personnes qui la demanderont, en lui envoyant un carrosse & la prévenant la veille.” *L'Avantcoureur*, no. 10 (11 March 1765): 151.

means of a crank: on touching the edges of the glasses in musical combinations, one can play the most harmonious of pieces with bass and accompaniment. An English-woman earned a great deal of money at Versailles playing this instrument. 1765.¹⁴

The precise drawing of the Armonica along with the detailed prose description, testify to the artist's interest in this new musical machine. The careful position of the fingers captures the unique hand position and registers a fascination with that crucial point of contact at the glasses' edge between the woman and her instrument. And unlike the caricature of Louis-Bertrand Castel earlier in the volume, seated at his ocular harpsichord enjoying a little shower from the enema machine attached to the lid of the instrument and operated by his foot as he plays (captioned "If only they had all occupied their time on the same machine"),¹⁵ this 'caricature' takes the instrument, and its player seriously.

Indeed, a drawing by St-Aubin's brother, Gabriel—perhaps merely a doodle—reflects a shared fascination with the glass harmonica, as if the instrument spawned a new music that was less a curiosity than a kind of truth, ringing not of absurdity but of wisdom. Gabriel de St-Aubin's drawing has the quality of a haunting trace from another world (see Figure 2). Measuring just 79 x 41 mm, in black chalk, pen and black ink and grey wash, it has as its main subject a statue of Athena, goddess of wisdom and science, inventor of musical instruments, and patroness of weavers. The helmeted statue stands, or perches, on a plinth on which is engraved simply the inscription and date 'A LA SAGESSE 1763' [To Wisdom, 1763]. Facing the viewer, she looks to her left but throws her arms open in a wide V gesturing dramatically in the opposite direction—towards an Armonica player squeezed in between herself and the margin of the page, her identity (and that of her instrument) confirmed by the inscribed plaque that substitutes for the instrument's curtain: "HARMONICA. Touché par Mlle Davies Irlandaise entendu le 12 Juillet 1765." In the light background on the right, faint pencil

¹⁴ On p. 368. "Harmonica, instrument composé de 40 cloches de verre [sic] de differents calibres montés / Sur un arbre ou cylindre transversal, que le musicien fait tourner avec le pied par / le moyen d'une manivelle: en touchant les bords de ces verres suivant les / combinaisons musicales, on Executte les morceaux les plus harmonieux avec leurs / basses et accompagnement. Une Angloise a gagné beaucoup d'argent dans ce / país cy a faire entendre cet instrument. 1765." Charles-Germain de Saint-Aubin, "Livre de caricatures tant bonnes que mauvaises" (ca. 1740s–1770s), 368. For the "Livre de caricatures" and very informative commentary on it, see the Waddesdon Manor website, accessed June 16th, 2015, <http://collection.waddesdon.org.uk/search.do?view=detail&page=1&id=41879&db=object>. The Waddesdon catalogue explains the expression "ce país cy" as a "customary in-group way of referring to the court at Versailles."

¹⁵ "Que sont ils tous Employés leur tems à la meme Machine." The caricature of Castel is on p. 302 of the volume.



Figure 2 Gabriel de St-Aubin, *Glass harmonica player (Marianne Davies) and statue of Athena* (1763 (?) and 1765). Drawing in black chalk, pen, and black ink and grey wash; 79 x 41 mm. Bibliothèque Nationale de France.

lines suggest other figures, hinting at the possibility that the page may once have been larger, cut down to be pasted into the book where it is now to be found, one of many drawings St. Aubin added to this copy of the catalogue of the famous Crozat collection of drawings.¹⁶ The Armonica player, a vivid, if mysterious presence, seems to have been sketched in once the drawing of Athena had already been cut out: slightly out of proportion in relation to the statue, she is fit tightly into the space at the left of the sheet, her face, upper torso and hands just visible as she bends her head to focus on her hands stretched out on the nested glass bowls. It is as if the fascinated artist, present at a performance on the new instrument at the French court in the summer of 1765, felt impelled to record the moment, and had therefore quickly drawn Marianne Davies and her Armonica onto the sheet he had to hand; the effect is magically to bring the statue of Athena to commanding life and to imbue the instrument in her

penumbra with the cachet of scientific invention, of truth and knowledge, while delicately too, seeming to assign it to the realm of women's work. Whatever the

¹⁶ Perhaps it was included here as an illustration of a Poussin drawing in Lot 186, detailed on the facing page, "Cinquante-cinq Dessains de Statuës & Bas-reliefs antiques, faits par le Poussin ..." See the exemplar annotated and illustrated by Gabriel de St Aubin of *Description sommaire des desseins des grands maistres d'Italie, des Pays-Bas et de France, du Cabinet de feu M. Crozat...* [1741], facing page 114; according to the Bibliothèque National de France where the book is held, the annotations were probably made between 1775 and 1785, and the drawings pasted in after the inscriptions were made.

actual circumstances of their creation, the two sketches attest to the captivating power of the new instrument and its player.

The first detailed technical description of the glass harmonica and its music appeared a few months later in the *Journal des Dames* (in the 1760s a radical periodical written and edited by, and intended for, women), whose pages were quick to report on scientific curiosities and new inventions.¹⁷ Although the notice announcing Marianne Davies's arrival in Paris (quoted above) contained no reference to Benjamin Franklin, her benefactor, the *Journal des Dames* was quick to make the connection to the renowned scientist, inventor and philosopher: under the title "New Inventions: Description of a New Musical Instrument made of Glass, called Armonica, which Mr. Franklin has invented," it reports that Franklin, "who is already famous for his many experiments with electricity, invented [the glass harmonica] a couple of years ago in London."¹⁸ The fact that the only illustration in the journal's entire set of fifty-odd volumes across its nineteen-year run is a large foldout engraving of the glass harmonica seems to testify to the excitement the instrument aroused: the Franklin Armonica was the latest musical novelty, but it also represented serious scientific invention and the work (and genius) of one of Europe's most celebrated experimenters and researchers into the secrets, and powers, of the natural world.

An aura of scientific inquiry and research runs through the Journal's account of the instrument. When the fingertips rub against them, readers are told, the spinning glass bowls give out a sound of great clarity and purity that can swell or diminish in strength according to the pressure of the fingers.¹⁹ Yet it is the mysterious properties of glass itself that affect the way the instrument sounds: forged at high heats, yet translucent and fragile, glass produces music that is,

¹⁷ The 'maverick' periodical ran from 1759 to 1778. See Nina Rattner Gelbart, "The *Journal des Dames* and its Female Editors: Politics, Feminism and Censorship in the Old Regime Press," in *Press and Politics in Revolutionary France*, ed. Jack R. Censer and Jeremy D. Popkin (Berkeley, Los Angeles, London: University of California Press, 1987), 51; and also Nina Rattner Gelbart, *Feminine and Opposition Journalism in Old Regime France* (Berkeley and Los Angeles: University of California Press, 1987).

¹⁸ "Herr Franklin, der bereits durch viele die Electricität betreffende Versuche berühmt ist, hat selbiges vor einigen Jahren in London erfunden." Quoted from the German translation of the *Journal des Dames* article in "Neue Erfindung. Beschreibung eines neuen musicalischen Instruments von Glas, Harmonica genant, welches Herr Franklin erfunden," *Neue Auszüge aus den besten ausländischen Wochen- und Monatsschriften* 2, no. 39 (September 27, 1765): 219.

¹⁹ "Man legt darauf beide Hände auf die Gläser und berührt selbige einzeln mit den Fingern, eben so als wenn man auf der Orgel oder Clavier spielen wolle. Durch das Reiben an die Gläser entstehet ein angenehmer, deutlicher und reiner Thon, der schwächer oder stärker wird, je härter oder gelinder man darauf liegt." *Ibid.*, 221.

likewise, powerful yet ethereal, delicate yet forcefully penetrating. Moreover, the glass instrument promises to yield further musical and material secrets to musicians and natural scientists alike: “If one can produce such astonishing effects from catgut strings and metal wire, why should one not do the same with glass—since indeed this material is better than all the others at producing a clear-sounding and pure tone.”²⁰ Then still in its infancy, the instrument’s weaknesses (such as the fainter sound of the bass by contrast with the treble, and the tendency for notes not to sound clearly in faster passages) might well be addressed by research and future technical improvements, the reporter suggests; these might even include the addition of small hammers as had recently been done to harpsichords (with reference to the early piano?)—an interesting anticipation of later attempts to create a ‘keyed’ Armonica [*Tastensharmonika*] and a reminder that the glass harmonica participated in the trend of endowing keyboard instruments with new kinds of dynamic expression.

While the *Journal des Dames* focuses more closely on the invention than on its performer, it does pay some attention to Marianne Davies herself. Described as the owner of the only Armonica in existence besides Franklin’s own, Marianne is said to play on it a repertoire of small keyboard pieces, sometimes accompanied by her father on the flute, or by her own singing voice in combinations that produce a particularly charming effect. With its gentle tone the Armonica seems best suited to arias and other “soft-sounding pieces,” rather than to symphonies and concertos with numerous other instruments.²¹ In a comment that prefigures later use of the instrument as a sound effect, the article’s writer goes beyond simple description to hint at something of the other-worldly effect of the Armonica’s sound: “It would be good for use in the theatre, when one wants to imitate a heavenly music of the angels or in the Elysian fields.”²² Already in this earliest detailed published account of the Armonica, then, the themes that would dominate subsequent reception shine through: the quality, both beautiful

²⁰ “Wenn man mit Darmsaiten und Drath von Metall so erstaunende Wirkungen hervorbringen können, warum sollte man denn nicht mit Glas eben dergleichen thun können, da doch diese Materie geschickter als alle die übrigen ist, um einen hellklingenden und reinen Thon anzugeben.” *Ibid.*, 223.

²¹ “Sie spielet bereits verschiedene Clavierstücke und Arietten darauf, und auch sogar Sonaten, wozu ihr Vater mit der Flöte accompagniret. Es klingt gleichfalls sehr angenehm, wenn sie dazu singt, weil das Instrument einen sehr gelinden und überaus anmuthigen Thon von sich giebt.” *Ibid.*, 221.

²² “Auf dem Theater wäre es gut zu gebrauchen, wenn man etwa eine himmlische Musik der Engel oder in den elisäischen Feldern nachahmen will.” *Ibid.*, 222.

and strange, of its sound; its effect of envoicing an utterance from another world; its status as a scientific achievement and novelty; the mystical quality attached to its primary material, glass; and the striking, even uncanny, effect of its ability to double the singing voice of a young woman.

The *Journal des Dames* was available across Europe—and certainly at the (predominantly French-speaking) court of Maria Theresa in Vienna where its volumes were bound in leather and embossed with the imperial crests when added to the libraries.²³ But access to information about the Armonica during Davies's first tour was not restricted to those who subscribed to the French journal. German readers could have seen the 1765 article in a translation printed in September of that year in the *Neue Auszüge aus den besten ausländischen Wochen- und Monatsschriften* (Frankfurt, 1765); further, the increasing appetite for information about Franklin's invention was fed by another German description of the instrument and its performer, written by the Göttingen professor and mathematician Albrecht Ludwig Friedrich Meister who had repeatedly visited Davies in Paris, and who claimed, wrongly, that the Armonica had been the accidental result of Franklin's combining electrical research with rubbing the rims of drinking glasses. Meister's article was published in 1766 in the *Hannoversches Magazin* and, such was the fascination with the instrument, quickly reprinted in Johann Adam Hiller's widely-circulating Leipzig journal, the *Wöchentliche Nachrichten und Anmerkungen die Musik betreffend*.

Meister borrows some of his technical description from the *Journal des Dames* article, but goes much further in recounting the impact of the instrument—and the performer—on the listener. Like so many others, Meister was especially struck by the similarity of the sound of the Armonica to the soprano voice. Prior to Franklin's transformation of the table-top musical glasses into the new instrument, the English singer, gambist and glass musician Ann Ford, had written in her 1761 treatise that "the Tones of the Musical Glasses are, from their Similitude, more like the human Voice than any musical Instrument, that ever was, or, perhaps, ever will be invented."²⁴ Marianne Davies perhaps knew Ms. Ford, and she certainly

²³ A leather-bound copy of the May 1764 issue bearing the coat of arms of Maria Theresa came up recently for sale, along with an August 1764 issue, in a similar binding with the coat of arms of her son, Joseph II. See the Bauman Rare Books website, accessed May 27, 2015, <http://www.baumanrarebooks.com/rare-books/joseph-ii/journal-des-dames/83213.aspx>.

²⁴ Glass music, she went on, "not only sets off the Voice with greater Advantage than any other [Instrument]: and if I was to say, will assist and improve the Voice, I do not think I should say more than is due to the exquisite Tone it produces." Ann Ford, *Instructions for Playing on the Musical Glasses* (London, 1761), 1. Quoted in Hadlock, 509 and Hyatt King, 105.

understood that the glass harmonica might offer the ideal accompaniment to her own singing. On hearing Davies in Paris, Meister was struck by the way she merged her voice with the ringing of the glasses, concealing any distinction between the two: “The tone of the instrument blends with the pleasant voice of this thoroughly musical woman that sometimes accompanies it in so harmonious a manner that it is difficult to distinguish which tones she brings forth with the mouth, and which with the fingers,” he recounted.²⁵

Not only was this combination of voice and glass music remarkable, but Davies also demonstrated to Meister a virtuosity with the glass harmonica that countered the notion (expressed in the earlier *Journal* article) that the instrument was really only suited to slow, melancholic music (time being needed for the glass bowls to begin to sound, and then for the sound to bloom): despite the difficulty of making the individual bowls speak quickly, Meister’s report heightened expectations that, under Davies’s hands, the Armonica was perfectly able to execute full chords, fast scales, beats [*Schwebungen*], trills, and “generally the finest and supplest ornaments.”²⁶ Above all, his glowing description ascribes Davies’s success to the combination of the ethereal and deeply affecting instrument with her own extraordinary musical talent:

To me at least it seemed as if its moving harmony and pathetic tones were exquisitely adept at stirring the passions, indeed even at inspiring that Enthusiasm that can make a musical instrument invented by a Quaker preacher worthy of its inventor; all the more so under the hands of a woman whom, in view of her melodious singing, her sound- and fantasy-full finger, even merely on account of the musical profundity radiating from her whole being, I would gladly call ‘Armonica’ herself.²⁷

The result was music so powerful that, like a rousing sermon, it could have the

²⁵ “Ihr Ton ... vermischt sich mit der ihn manchmal begleitenden angenehmen Stimme dieses durchaus musikalischen Frauenzimmers auf eine so harmonische Art, daß es schwer wird zu unterscheiden, welche Töne sie mit dem Munde, und welche sie mit den Fingern hervor bringt.” Albrecht Ludwig Friedrich Meister, “Nachricht von einem neuen musikalischen Instrumente Harmonica genannt,” *Hannoversches Magazin* 59 (25 July 1766), col. 935.

²⁶ “Volle Accorde, geschwinde Läufe, Schwebungen, Triller, und überhaupt die feinsten und geschmeidigsten Manieren lassen sich in grosser Vollkommenheit auf der Harmonica ins Werk setzen.” *Ibid.*, 937.

²⁷ “Mir kam es wenigstens so vor, als wenn dessen rührende Harmonie und pathetische Töne vorzüglich geschickt wären, die Leidenschaften rege zu machen, ja selbst zu demjenigen Enthusiasmo zu erhöhen, der ein von einem Quackerischen Prediger erfundenes musikalisches Werkzeug seines Erfinders würdig machen kan; zumal unter den Händen eines Frauenzimmers, die ich, in Ansehung ihres melodieusen Singens, ihrer Ton- und Phantasiereichen Finger, ja selbst wegen des aus ihrer ganzen Person hervorleuchtenden musikalischen Tiefsinnes, gerne selbst Harmonica nennen möchte.” *Ibid.*, 938.

effect on the listener of divine revelation in the heat of fancy, though Meister was doubly wrong in thinking Franklin a preacher and a Quaker.

The radiant female glass harmonica player, then, comes to embody metonymically not only her instrument, Armonica, but also, perhaps, L'Armonia—Music herself. As Franklin had written to his fellow electrical scientist, the Italian Giovanni Battista Beccaria, “in honour of your musical language, I have borrowed from it the name of this instrument, calling it the Armonica.”²⁸ With a sound likewise penetrating, sustaining, sometimes celestial, the organ was acknowledged to be the Armonica's closest cousin; it was a short step, then, in the contemporary imagination to associate the female Armonica player with the ideal musician, the organ-playing St. Cecilia: even the painter Angelika Kauffman, evidently an enthusiast of the glass harmonica who had likely learnt to play it from Marianne Davies before the latter's departure from London (if not, like Davies, from Franklin himself), was described in this role: the diplomat Helfrich Peter Sturz heard her in London in 1768 and wrote, memorably, that

When she sings Pergolesi's *Stabat*, at her Armonica, devoutly casts up her large soulful eyes, *pietosi & riguardar, a mover parchi*, [that look gracefully about her, and move languidly], and then succumbs to the expression of the piece with streaming eyes, she becomes an inspiring image of St. Cecilia.²⁹

Such portrayals respond to the glass harmonica as a transformative vessel, not only captivating but also transporting the listener and player beyond the

²⁸ Benjamin Franklin, letter to Giovanni Battista Beccaria, July 13, 1762; originally published as Letter 42 in *Experimenta, atque Observationes, quibus Electricitas vindex late constituitur atque explicatur* (Turin, 1769), 427–33. See L. W. Labaree et al., eds., *The Papers of Benjamin Franklin* (New Haven: Yale University Press, 1959–), 10:126–30.

²⁹ “Wenn sie, vor ihrer Harmonika, Pergolesis *Stabat* singt, ihre großen schmachtenden Augen, *pietosi & riguardar, a mover parchi*, gottesdienstlich aufschlägt, und dann mit hinströmendem Blicke dem Ausdruck des Gesanges folgt, so wird sie ein begeisterndes Urbild der heiligen Cäcilia...” Helfrich Peter Sturz, “Briefe, im Jahre 1768 auf einer Reise im Gefolge des Königs von Dänemark geschrieben,” *Schriften* (Leipzig, 1786), 162. The Italian quote is from Ariosto's description of the enchanting Alcina in *Orlando Furioso*, Canto VII, cited by Lessing in Chapter 20 of *Laocoon* as the epitome of beauty. See also Otto Erich Deutsch, “Neues von der Glasharmonika,” *Österreichische Musikzeitschrift* 9 (1954): 380–84. Heather Hadlock and Freia Hoffman have described how the glass harmonica came to be closely associated with women, and subsequently with nervous illness. These are important aspects of Armonica reception, stressed and argued over in several key texts of the period, but they are not my central concern here. The Armonica was by no means solely associated with female players, and its effects (good and bad) on health were widely contested. It was enormously popular with audiences, but claims that the instruments themselves were widespread are exaggerated. Glass harmonicas were very expensive, and not affordable for most: only those given an instrument by a maker or patron (such as Marianne Davies, or, later, Marianne Kirchgessner) or relatively well-off amateurs could own one, in addition to those like Röllig who made their own. See Sterki, *Klingende Gläser*, 168.

private music room, bourgeois salon, or royal chamber to higher realms. No instrument was more tactile yet more prone to descriptions emphasizing its rapturous transcendence of the physical. At the same time, in appearing to distill the pure essence of music the glass harmonica seemed to access higher truths, more telling even than the human voice, bypassing words as it spoke directly to the heart, or soul. Its music was closely associated with the most flexible of instruments, the human voice, but paradoxically it also transcended humanity altogether, evoking instead superhuman realms—the after-life, heaven, or, more darkly, a frightening underworld realm of ghosts and the undead. In 1761 the English poet Thomas Gray described the sound of musical glasses as the voice of an angel: “No instrument that I know has so celestial a tone. I thought it was a cherubim in a box.”³⁰

IV.

Franklin’s ingenious idea for his ‘Armonica,’ constructed in the same year that Grey heard the musical glasses, was to release the angel from its box, transforming the disorientating ergonomics of a set of wine glasses arranged in a grid in a small cabinet into the convenient linear compass familiar to any keyboardist. Played with all ten fingers, along with other parts of the hand, the glass harmonica is not technically a keyboard instrument, yet it was immediately understood as a superior tool for keyboard players, offering greater expressive flexibility than even the clavichord and with the capability not only to sustain sound as the organ could, but also to radically swell and diminish the long-held notes (an impossibility on continental European organs).

To turn the glass bowls on their sides and nest them into each other, graduating from the largest to the smallest, was to create a virtual keyboard stretching across an inclined plane; a keyboard of strange beauty and exotic glamour, translucent, glittering and rainbow-colored. Lacking the obvious visual and tactile hierarchies of ‘black and white’ keys when arranged successively in a row, the glasses could be decorated in various ways to enhance the player’s sense of orientation. Later Armonica makers painted various combinations of white, gold and color on the insides of their rims, but Franklin was comprehensive, using every color of the prism: indeed, the Franklin Armonica was a sort of glass version of Castel’s famous “Ocular Harpsichord” or, as it was called in Germany, “Color Keyboard”

³⁰ Thomas Gray, letter to James Brown, c. March 28, 1761, in *Correspondence of Thomas Gray*, ed. Paget Jackson Toynbee and Leonard Whibley, 3 vol. (Oxford: Clarendon Press, 1935), letter 309. Quoted in Hyatt King, 106.

[*Farbenclavier*]: the inner rims of the ‘semitone’ glasses were white, the others followed Castel’s scheme: C, red; E, the third above, yellow; D, lying between, orange; G, the fifth above C, blue; F, the note between G and E, green; A, above G and related to C, a combination of blue and red, so indigo; B, nearer to C than G, light violet.³¹ The result was a brilliantly colored glass ‘keyboard,’ all the more striking in performance when the wet bowls glittered, catching and refracting the light as they spun on their axle.

The Armonica likewise produced a wonderful sound that seemed to fulfill long-standing, even originary notions of what music really was, “the highest ideal of pleasure and beauty,” as Röllig (quoted above) wrote. If you’ve ever rubbed your finger around a half-filled water or wine glass you’ll know the magical, unsettling, effect of the sound: the tone blooms as the glass starts to vibrate, but it seems to be dislocated from its origin, suspended in an indeterminate space between the humming crystal, the buzzing finger of the player, and the ear of the listener in an uncanny effect of both distance and immediacy. From a mere whisper the ringing sound (often likened to that of a bell) can grow to a powerful intensity whose impact is physically felt in the body. For aficionados, the result was a kind of ecstatic transport; for those less enthusiastic, the plaintive howling could be not just irritating, but painfully discomforting.

If this music evoked, even fulfilled an ideal, it was one concerned still more with physical force. Indeed, in an era deeply interested in the sensations and the nervous system, the glass harmonica’s palpable effect on the body was critical to its identity, its success and, eventually, its demise. As Röllig and many other commentators noted, the aural impact of the glass harmonica could not be described or explained, it must be felt: “It would be in vain to try to make someone who has never heard the Armonica understand how it sounds. For this there is no expression, no comparison. Unique as it is, one can only hear, only feel it, not describe it.”³² Its piercing intensity seemed to give evidence of a physical energy transmitted through the atmosphere, a charge closely associated with Franklin

³¹ Franklin’s own account in the letter to Beccaria (quoted above, fn. 29) describes the use of the ‘seven prismatic colours’; Franklin’s letter, with its complete description of the new invention, is reprinted in full in Peter Sterki, *Klingende Gläser*, 47–51. The link to Castel is made by Wilhelm Christian Müller in his “Beschreibung des Harmonicons, eines neuen musikalischen Instruments,” *Genius der Zeit, eine Monatsschrift*, ed. A. Hennings (Altona, 1796): 277–96.

³² “Vergebens wärs—dem, der nie den Ton der Harmonika gehört hat, begreiflich machen zu wollen, wie er töne.—Hiezu giebt es keinen Ausdruck—keinen Vergleich. Einzig wie er ist, kann man ihn nur hören—nur empfinden—nicht beschreiben.” J. H. Röllig, “Einige Linien von der Charakteristik der Harmonika,” quoted in Franz Konrad Bartl, *Abhandlung von der Tastenharmonika* (Brünn, 1798), 19fn.

himself, the age's most famous experimenter with electricity: "Its vibrations," Röllig continued, "appear to be not common air, but ether—electricity."³³

Equally fascinating was the way the unearthly sound seemed to emerge with no beginning, possessing no trace of physical origin. Ann Ford had noted that the Musical Glasses were "perhaps the only [Instrument] from which you hear the Effect without the Cause."³⁴ Listeners to Franklin's new glass instrument heard it in the same way: in 1768 the young Milanese count Alessandro Verri wrote to his brother Pietro, after a visit to Franklin in London that,

What charmed me was to hear a sweet and aerial sound without being able to determine the place it came from, because there is no striking of strings, nor hiss of breath, which in other instruments determine the seat of the sound and make it harsh. This is a human voice, but of greater mellowness and sweetness.³⁵

Similarly, Röllig explained that with all other instruments a certain noise at the beginning of the tone was unavoidable, but that, lacking any initial impulse, the sound of the Armonica seemed to come from nowhere:

Given that even with the most delicate playing of the Pianoforte one still becomes aware of the striking of the hammer—or with every other instrument, either the puff of wind or the noise of the bow immediately before the tone, when even with the strictest diligence—the greatest care—one is not able to avoid this noise—: then the sound of the Armonica is superior, in that as it emerges it bears no trace of its origin.³⁶

Furthermore, the magical way the glass harmonica's sound emerged was matched by its incomparable ability to fade to silence: "and as it dies away even at the last moment of its disappearance it shivers through the most delicate fibers of the hearing." This sonic manifestation of a return to nothingness, uncanny representation in sound of death itself, was key to the haunting quality of the instrument. The reaction of the Viennese writer and Armonica-enthusiast Karl Anton Gruber von Gruberfels was typically effusive:

³³ "Seine Schwingungen scheinen nicht gemeine Luft—sie scheinen Aether zu seyn—Elektrik." Ibid.

³⁴ Ford, *Instructions*, 1. Hadlock discusses this point in "Sonorous Bodies," 509.

³⁵ Quoted in Antonio Pace, *Benjamin Franklin and Italy* (Philadelphia: The American Philosophical Society, 1958), 276.

³⁶ "Wenn man bey der sanften Berührung des Pianoforts doch noch den Anschlag des Hammers—bey jedem andern Instrument, entweder den Windstoß oder das Geräusch des Bogens stets vor dem Tone gewahr wird, wenn der eisene Fleiß—die größte Behutsamkeit—dieses Geräusch doch nicht zu vermeiden mag—: so hat der Ton der Harmonika voraus, daß seine Entstehung keine Spur des Ursprungs trägt—und sein Verschwindens die zartesten Fasern des Gehörs durchzittert." Röllig, "Einige Linien," in Bartl, *Abhandlung*, 19fn.

I know no instrument other than this that can more perfectly express beautiful death through the long resounding of its tones. It is the true expiring of a harmonic soul; as when a balmy breeze sets the strings of a lute to shivering, and after a sustained echoing away, [the sound] finally dies out. What human voice can paint this extinguishing? Even the throat of a Mara is incapable of it... I, along with numerous connoisseurs and friends of art, found myself convinced that until now nothing more beautiful, nor more heart-rending has ever been heard. Tears streamed down my cheeks—of these tears I am not ashamed.³⁷

While the ideal music of the Armonica was defined by its apparent lack of agency, by the hovering of the sound ethereally in an indeterminate space, and by its magical swelling and ebbing, virtuoso performers demonstrated that the Armonica could, with a great deal of practice and expertise, execute fast figuration and ornaments. Its quintessential idiom, however, was generally understood to be slow and serious, allowing for and showing to greatest effect the gradual blooming and decaying of the sound as each glass bowl was made to vibrate. Its music must express pleasantly melancholic feelings, working its effects “directly on the heart,” and “flood[ing] the soul with a soft bliss, painting not feelings of joy but of the soft ache that melts the bosom.”³⁸ Expressivity, sensitivity and metrical freedom were essential; the good Armonica player would be an “aesthetic musician” [ein ästhetischer Tonkünstler] who, in the name of beauty, dares to break rules and “step beyond the borders of pedantry.”³⁹ Rubato was a necessity, in fact, thanks to the physical structure of the glass bowls whose vibrations must be allowed to develop:

The basis for this last lies to some degree in the circular shape of the sonorous bodies, out of which longer-lasting vibrations are anyway produced than from strings

³⁷ “Ich kenne kein Instrument, das außer diesem durch das lange Hallen der Töne das schöne Erlöschen (smorzando) vollkommener auszudrücken vermag. Es ist das wahre Hinsterben einer harmonischen Seele; wie wenn ein laues Lüftchen die Saiten einer Laute zittern berührt, und nach einem längeren Hallen verlöscht. Welche menschliche Stimme kann dieses Verlöschen mahlen, selbst die Kehle einer Mara vermag es nicht. ... Ich habe mich mit mehreren Kennern und Kunstfreunden überzeugt gefunden, daß noch nie sobald etwas schöneres und herzangreifenderes gehört worden sey. Thränen gleiten mir über die Wangen; — ich schäme mich dieser Thränen nicht.” K. A. Gruber von Gruberfels, *Aesthetische Gedanken über Bartl's Tastenharmonika* (Vienna, 1798), quoted in Bartl, *Abhandlung*, 23–24fn.

³⁸ “er muß solche Tonstücke wählen die unmittelbar auf das Herz wirken, und die Seele gleichsam mit einem sanften Wonnegefühl durchleben, die nicht Gefühle der Freude, sondern des gemäßigteren Schmerzens, der den Busen schmilzt, mahlen.” Ibid., 24fn.

³⁹ “Der Spieler muß ... ein ästhetischer Tonkünstler seyn, der das Schöne fühlt und weiß, daß die göttliche Tonkunst zum Handwerk herabgewürdigt wird, wenn man nur sklavisch der Aengstlichkeit und pedantischen Regelsucht fröhnt; wenn man nie, auch da, wo es Schönheit fordert, ausserhalb den Gränzen des Pedantismus zu treten wagt.” Ibid.

under tension, or metal rods—but in particular, too, in the denser compound of the material, glass, from which the bowls are made, and through which the finest vibrations are possible. ... It is precisely through these tremblings that the magical vibrations arise—which partly detached, presently linked to one another—swirling, and then again in waves—swim past the ear of the attentive listener.⁴⁰

Strangely, while the Armonica was in one sense conveniently constant (as Franklin himself had advertised, once its construction was finished the glass bowls did not need to be tuned), at the same time its strange play with air and the sensing body rendered it extraordinarily sensitive to the weather (and to the body's emotional storms). The Armonica might, indeed, be seen as a kind of "musical barometer," responding to atmospheric (and emotional) conditions of dampness and dryness, heaviness and lightness, "electricity" and "elasticity." Attuned to the weather, it was a kind of Enlightened Aeolian harp:

No musical instrument so clearly demonstrates a connection between the player and the coincidence of external mechanical elements. Morning or night—outside or inside—fair or stormy—etc. have a powerful influence; and therein lies the reason why with practically every change of location the effect of the instrument also changes. ... If one could penetrate into [the complex collisions of the air particles], how easy it would be to create, through the Armonica, a musical barometer, which could show precisely the heaviness of the atmosphere through all its gradations, and through the degree of pleasantness of the sound, would often serve as a measuring stick for unexplainable moods.⁴¹

Hence the instructions from makers and players alike, advice borne out today by modern attempts to reanimate the instrument: the Armonica should be in a room that is not too warm nor too cold; in a cooler room it will sound better than in a warm one; yet if it is too cold, the glass might crack, and if too warm

⁴⁰ "Der Grund des letzteren liegt einiger massen in der Zirkelform klingender Körper, woraus sich überhaupt dauerhaftere Vibrationen ergeben, als die der gespannten Saiten, oder Metallstäbe—insbesondere aber noch in den dichterem Verbindungen des Elemente des Glases, woraus die Schalen gebildet, und der feinsten Erzitterungen fähig werden. Eben durch diese Erzitterungen entstehen diese zauberartigen Schwingungen—, die halb getrennt—bald an einander gekettet—wirbelnd, und bald wider wellenförmig vor dem Ohre des Aufmerksamen vorüberschwimmen." Röllig, "Einige Linien," in Bartl, *Abhandlung*, 19–20fn.

⁴¹ "...daß kein musikalisches Instrument so sehr das Zusammentreffen mechanischer äußerer Dinge in Verbindung mit dem Spieler bezeichnet als dieses. Morgen oder Nacht—freye oder verschlossene—heitere oder Gewitterlust u.d. gl. haben mächtigen Einfluß; und in dem liegt die Ursache, warum beynahe mit jeder Veränderung des Ortes—auch das Instrument die Wirkung wechselt. ... Könnte man in sie eindringen, wie leicht wäre es dann, durch die Harmonika ein musikalisches Barometer darzustellen, welches genau die Schwere der Athmosphäre durch alle Abstufungen zeigen, und durch die Grade der Annehmlichkeit des Tones oft zum Maasstab unerklärbarer Launen dienen würde u.s.w." Ibid., 21–22fn.

the glasses dry too quickly; a certain ‘density’ in the air is required for a good tone, “The thicker and purer air appears to be the reason that the instrument sounds generally stronger and purer in the morning, than in the afternoon.”⁴² This in addition, of course, to the requirement that the pads of the player’s fingers be both wet and absolutely free of grease, meticulously soaped before playing, often resulting afterwards in unpleasantly dry and cracked skin.

From the period of its first appearances in the early 1760s into the 1790s (and in some cases well beyond), the glass harmonica generated a notably consistent critical response. Even thirty years after its invention, and despite increasing suspicion, fear, and perhaps cynicism in some quarters, its later reputation continued to be founded in the way the instrument was first heard in the circles of Benjamin Franklin and Marianne Davies; the Armonica was the focus of widespread anxieties about ideal music and music’s power, about touching and being touched (the ‘tactile’ performer, risking nerve damage, as she touches the vibrating glass in order to ‘touch’ the sensitive listener), about sound, silence and articulation, and about musical performance as celestial women’s work, whether associated with the saintly Cecilia or with the knowing and skilled Athena.

V.

Given Marianne Davies’s success in Paris in 1765, and the Europe-wide dissemination of reports about her, it comes as no surprise that she should have been welcomed at the court of the music-loving Austrian Empress on her return to the Continent two years later.⁴³ The Empress’s commission of the cantata “L’Armonica” for her daughter’s wedding of 1768 speaks remarkably to the instrument’s special status, and to the favor the Davies sisters found with her. Hasse’s

⁴² “Die dichtere und reinere Luft scheint auch die Ursache zu seyn, warum es Vormittag gemeiniglich stärker und reiner tönet als Nachmittag.” Ibid., 72.

⁴³ The letters of recommendation she brought with her on tour trace an impressive circle of friends and acquaintances: among her recommenders, J. C. Bach wrote to his brother Carl Philipp Emanuel that “She has with her a newly invented instrument, which she plays very well, and which is made of glasses and is played like a clavier. It has such a beautiful effect and brilliance [‘brio’] that I am sure that you and everyone else will enjoy it...” [30 September 1767]. The girls’ introduction to the Viennese court included letters to numerous important aristocrats, as well as to Gluck, obtained in the course of their journey; Gluck was himself a glass music enthusiast who had performed in London and Copenhagen on the musical glasses in the 1740s. See Betty Matthews, “The Davies Sisters, J. C. Bach and the Glass Harmonica,” *Music and Letters* 56 (1975): 150–69; and Rüdiger Thomsen-Fürst, “This will be delivered to you by Mr. & Mrs. Davies & charming Daughters. Die Konzertreise der Familie Davies 1767/68–1773,” in *Le musicien et ses voyages: Pratiques, réseaux et représentations*, ed. Christian Meyer (Berlin: Berliner Wissenschafts-Verlag, 2003), 349–69.

setting, moreover, was unprecedented. “L’Armonica” stands in stark contrast to the usual repertoire for the instrument: where most of the music played on it consisted of arrangements of small keyboard works, hymns and chorales, and, especially, free improvisations, the piece composed by Hasse and Metastasio was unusually ambitious: it combined, for the first time, glass harmonica with other instruments, and its scale was unequalled before the end of the century (and perhaps in the whole history of the instrument). Even in subsequent years, perhaps reflecting the fact that the instrument remained the exclusive purview of a limited market of wealthy amateurs along with a handful of professionals, only a relatively small number of pieces were composed specifically for the glass harmonica. A few were published, among them 6 *Sonatas* (Dresden, 1786) by J. G. Naumann, a number of pieces in C. L. Röllig’s *Kleine Tonstücke für die Harmonika oder das Pianoforte* (Leipzig, 1789), and J. Schlett’s 2 *Sonaten* (Munich, 1803). A number of ambitious pieces for Armonica, voice, and other instruments in various combinations were written for, and seemingly performed exclusively by, the virtuosa Marianne Kirchgessner in the years between 1790 and 1810,⁴⁴ but Hasse and Metastasio’s “L’Armonica” (which appears to have remained, uncirculated, in the possession of the composer himself), was unmatched in its full realization of the musical and expressive potential of the glass instrument.

But as occasional music for a major imperial occasion there is something strange, too, about the meta-theatrical “L’Armonica,” whose ‘action’ consists in the exchange between two characters, the soprano voice and the wordless—mute yet speaking—glass harmonica, between Cecilia Davies and Franklin’s new instrument under the hands of her sister Marianne. It is very unlike the dramatic, overtly allegorical occasional works commissioned throughout the previous decade by the Empress from Metastasio and Hasse for the weddings of the imperial children, works in which text and music celebrated and flattered bride and groom with accounts of the deeds, and apotheoses, of their allegorical counterparts. In *Alcide al bivio*, for example, written for the wedding of Maria Theresa’s eldest son Joseph to Isabella of Parma on October 8, 1760, the figure of Alcide dramatized the moral choice of his counterpart, the Archduke Joseph, between the paths of sensual pleasure and heroic responsibility; in *Partenope*, performed on the 7th and 8th of September 1767 for the soon-to-be-aborted wedding celebrations of the Archduchess Maria Josepha to Ferdinand IV of

⁴⁴ See Sterki, *Klingende Gläser*, 92–98. These include the Adagio and Rondo, K. 617 by Mozart, two works by Anton Reicha, and others, all of them remaining in manuscript and little circulated.

Naples, the detailed directions of staging, and lavish sets, resulted in a fabulous homage to Naples itself in honor of the groom.

“L’Armonica”, by contrast, is a light and charming piece that seems to eschew allegory in favor of fashion, presenting an innocuous, if intriguing, display of the new musical instrument in place of a momentous and monumental statement. Furthermore, it seems deliberately to steer away from the praise-worthy matter at hand, the new dynastic union, to focus instead on the meta-theatrical idea of finding a voice with which to utter celebratory praise, and on the potential vehicle for such praise, the other-worldly, oracular, glass harmonica. In fact, “L’Armonica” seems closer generically to another, quite different, set of works written by Metastasio and Hasse for imperial occasions: the ‘Complimenti’ composed for the children of the household to perform on their parents’ namedays. Like “L’Armonica,” these pieces focus less on the occasion itself, than on the scenario of two sisters considering how best to celebrate it. The Complimento “Apprendesti, germana, i rispettosì sensi,” for their father’s name day on 8 December 1760, opens with Maria Carolina (age 8) asking Maria Antonia (age 5) “O sister, have you learned the respectful wishes which you must make to our father?” [“Apprendesti, germana, /I rispettosì sensi / Ch’èspor tu devi al Padre?”], only to receive the impudent reply, “I didn’t learn anything and I don’t want to learn them. He would see that they are not mine.” The dialogue continues: [MC] “But you know that today is the birthday of our Most August father?” [MA] “I know it.” [MC] “That we should go to him right now?” [MA] “Let’s go.” And so on—followed by a brief discussion of what they will say—and the little Maria Antonia’s straightforward statement that she will “tell him that I love him, and to love me; that I desire to be dear to him and have nothing else in my heart.”⁴⁵

Sweet and informal, the ostensibly celebratory Complimento is essentially a little domestic scene between sisters, ending in a reflection on the comparative innocence and experience of the pair as they express their love and respect for their father. Likewise, the Complimento written for the Archduchesses to perform on their mother’s name day on 13 May 1760 opens with Maria Carolina calling out to her sister “Where, beloved sister, are you running to so happily?” [“Dove, amata germana, /Dove corri sì lietà?”]⁴⁶ Maria Antonia answers that she is running to entertain her mother on her name day. What follows, in recitative and two little arias (for which the music is now lost), is a discussion of the best way

⁴⁵ The original text is to be found in *Opere del signor abate Pietro Metastasio* (Paris: Herissant, 1782), 11:255–56; translation from Hansell, “Solo Cantatas,” 124.

⁴⁶ *Opere del signor abate Pietro Metastasio*, 11:263–66.

to do so. Both Complimenti conflate the generic gestures of commemoration with the meta-dramatic gesture of showing two sisters discussing how to mark the occasion, as imperial celebration gives way to the affective demonstration of sisterhood. “L’Armonica,” likewise, takes the occasion of the Imperial wedding to dramatize an exchange between sisters and to highlight the interplay of their musical talents. Here, though, the second sister responds not in her own voice but through that of her magical double, the glass harmonica whose sound so perfectly ventriloquizes human singing.

Anchoring the echoing resonances between these meta-celebratory pieces is the prominent use in each of the Metastasian poetic word for sister, ‘Germana.’⁴⁷ In “L’Armonica,” when Cecilia Davies encourages her older sister to let the Armonica sound with the exhortation, “Ardir, Germana,” — “Be bold, sister,” her language recalls the opening dialogues of those earlier musico-dramatic collaborations, “Apprendesti, germana” and “Dove, amata germana, corri,” rehearsed and performed in her honor by the Empress’s youngest daughters a few years earlier. The Empress’s instructions to Metastasio and Hasse to make the 1769 wedding cantata a specific vehicle for the visiting Davies sisters, and their recall of the earlier Complimenti in the work, suggest that the extraordinary favors given the Davies sisters by Maria Theresa may have taken the form of a welcome into the inner circle of this highly musical family; Marianne and Cecilia were relatively close in age to the two Archduchesses who still remained in the household when they arrived in Vienna—Marianne just a couple of years older than Maria Amalia, and Cecilia just a little younger than the 13-year-old Maria Antonia.⁴⁸

Aware of the parallel pairs of sisters playing and listening here, the ear hears more than meets the eye in “L’Armonica,” the wedding music of Maria Amalia and Ferdinand of Parma. As members of the Habsburg court in 1769 would have known, Maria Amalia was sent deeply unwilling into the marriage with Ferdinand,

⁴⁷ “Sorella” is used by Metastasio in his *drammi per musica* only in prosaic descriptions of the *personaggi*.

⁴⁸ Gerber wrote that the Davies sisters were employed by Maria Theresa to teach her daughters, but I have not been able to find corroborating evidence for this. That the English sisters formed a remarkably close connection to the Empress is evident not only from the letters of recommendation written by the Empress herself for their continued journey to Italy, but also by Marianne Davies’s later lament, after Maria Theresa’s death in 1780, that had not she herself “giddily” wanted to travel to Italy, she and Cecilia would have been able to make a secure permanent home at the Viennese court, and to “have had recourse at any time” to the Empress who “had formerly graciously deign’d to Patronize [us] in a most particular manner.” Marianne Davies, unpublished letter to Benjamin Franklin, April 26, 1783, in *The Papers of Benjamin Franklin*, digital edition by The Packard Humanities Institute, accessed on June 3, 2015, <http://franklinpapers.org/franklin/framedVolumes.jsp?vol=39&page=389>.

having unsuccessfully petitioned her mother to marry a man of her own choice, Prince Charles of Zweibrücken, the previous year.⁴⁹ Hasse and Metastasio, who had taught the Archduchesses since their early childhood, must have been all too aware that this marriage stood as the penultimate in a long series of unions designed by the Empress to cement political ties across Europe. The last sister to go would be Maria Antonia in April 1770, at fourteen-and-a-half years old the future Queen Marie Antoinette of France. But the multiple marriage plans of the second half of the 1760s had been dogged by bad luck, sickness, and death—and surely mounting dread for the sisters left in the household, each knowing her turn would come. As one young Archduchess after another left the household for a grim fate, either for a man she had not met, or for the tomb, the condition of sisterhood itself stood in stark relief: sisters were interchangeable, substitutable one for another should death intervene, pawns to be readily sacrificed in the political game.

Maria Amalia, the oldest of the remaining daughters, had been offered to the Spanish royal family a year and a half earlier as the wife of the boy-king Ferdinand IV of Naples (Ferdinand of Parma's cousin), in the place of her younger sister Josepha (1751–1767) who was to have married him in November 1767 but had died of smallpox on October 15th; Josepha's death had come after several weeks of wedding celebrations in Vienna, that included the public inspection of a luxurious trousseau (among its treasures, one hundred dresses ordered from Paris that the sisters must eagerly have examined) and performances of Hasse and Metastasio's *Partenope*. The shock of the Archduchess's death was compounded by the fact that Josepha herself had been forced into the engagement as a substitute for an older sister, Johanna Gabriela (1750–1762), who had been betrothed to Ferdinand since early childhood, but had died of smallpox at the age of 12.⁵⁰ In November 1767, two of the remaining three unmarried girls had been offered as Ferdinand's bride—Maria Amalia, then 21, and her younger sister, Maria Carolina, 15, both immune to smallpox (as the Austrian marriage brokers were keen to explain to their Spanish counterparts). The Spaniards had chosen the younger of the two, and Maria Carolina, wracked by superstitious fear as she took the place of two now-dead sisters, was married to Ferdinand IV of Naples on 1st April 1768.

For the Empress their mother, the martyrdom of daughters in such arrange-

⁴⁹ Of all her many children, Maria Amalia appears to have been the one most actively disliked by her mother. See Friedrich Weissensteiner, *Die Töchter Maria Theresias* (Vienna: Kremayr & Scheriau, 1994), 129.

⁵⁰ Maria Josepha's fear of smallpox was increased by the death of her sister-in-law, also called Josepha, of smallpox on June 1, 1767.

ments was no secret; Ferdinand IV, as she knew, was largely uneducated, devoid of interests, and, more worryingly, lacking in self-control: “He is very childish, he understands nothing, he knows only bad rural Italian, and even that very coarsely; he ignores anything that calls for concentration, and has even shown evidence of severity and harshness on many occasions,”⁵¹ she had written to her daughters’ governess, the Countess Lerchenfeld, on the engagement of the ill-fated Josepha to the Neapolitan prince: “I cannot hide from you that I know very well the advantage of this alliance, but my mother’s heart is extremely alarmed by it. I regard the poor Josepha as a sacrifice to politics. As long as she fulfills her duty to God and her husband and attends to the welfare of her soul, were she to be unhappy I should still be content.”⁵² It requires little imagination to sense the eddying circles of dread and the burdens of duty of which the girls themselves must have been aware. The worst fears are confirmed by the letter written from Naples home to her former governess by Carolina four months after her marriage to this man:

I at least openly admit that I would far rather die than ever again have to bear what I suffered at the beginning. Now everything is fine, and therefore I dare speak of it. But it is no exaggeration when I declare that had my faith [Religion] not said to me, “Think of God” I would have killed myself, for living like that for 8 days was hell to me and I desperately wanted to die. If my sister should once find herself in a similar situation I would weep many tears, since I would be able to imagine what she would be suffering.⁵³

It would be the turn of Maria Amalia to be married to Ferdinand’s unsavory

⁵¹ “Il est très-enfant, n’apprend rien, il ne sait que le mauvais italien du pays, et meme très-grossièrement; il ignore ce que c’est attention, et il a meme donné des marques de sévérité et rudesse en plusieurs occasions.” Maria Theresa, letter to the Countess Lerchenfeld, October 13, 1763, in Arneth ed., *Briefe*, 4:117.

⁵² “Je ne saurais vous cacher que je connais très-bien l’avantage de cette alliance, mais mon Coeur maternel en est extrêmement alarmé. Je regarde la pauvre Josephe comme un sacrifice de la politique. Pourvu qu’elle fasse son devoir envers Dieu et son époux, et qu’elle fasse son salut, — dût-elle meme être malheureuse, je serais contente.” Ibid., 4:116.

⁵³ “Ich wenigstens gestehe offen, daß ich weit lieber sterben als noch einmal ertragen möchte, was ich im Anfang erdulden mußte. Jezt ist alles gut, und darum darf ich davon reden. Es ist aber keine Übertreibung wenn ich es ausspreche: wenn mir die Religion nicht gesagt hätte, denk an Gott, ich hätte mich getötet, den 8 Tage so zu leben, schien mir eine Hölle, und dringend wünschte ich mir zu sterben. Wenn einmal meine Schwester in die gleiche Lage kommen sollte, werde ich viele Tränen vergießen, indem ich mir vorstellen werde, was sie leiden wird...”. Maria Carolina, letter to the Countess Lerchenfeld (13 August 1768), cited in Severin Perrig, ed., *“Aus mütterlicher Wohlmeinung”: Kaiserin Maria Theresia und ihre Kinder, Eine Korrespondenz* (Weimar: Hermann Böhlaus Nachfolger, 1999), 137.

cousin, the Duke of Parma, the following year. No wonder, perhaps, that her mother the Empress should have had a sense of foreboding during the celebrations.

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Metastasio and Hasse's "L'Armonica," stages a dialogue between two musical sisters that thematizes the fundamental question of giving voice, the contradictory impulses of speaking and remaining silent, the power of music—embodied in the new, oracular glass harmonica—to speak appropriately and to speak truth. The glass harmonica, the strange musical voice that surpasses the human, is textless (inarticulate) yet speaking (more so than the voice), dumb yet expressive, an echoing or doubling of the voice of the singer that brings with it a strange and compelling power. The central musical voice in the cantata, that of the Armonica, emerges from nothing as if to mimic the voice of the greatest of all singers, Ovid's nightingale Philomela, reaching out into the present from the mythical past, aroused from silence as the wet fingers begin to touch the spinning glasses in response to the opening apostrophe, "Ah, why cannot I too weave a sweet chain for souls with my singing, Philomela, like you?"

And indeed it is the remembered, or imagined, voice of Philomela that commands the listener's attention for fully the first third of the piece (with its 158 measures of instrumental introduction and the 208 measures of the opening aria), before the carefully-staged and by then long-awaited entry of the Armonica seems to bring that voice to life. The sheer amount of music given to the Philomela invocation, the elaborate melismas sung on Philomela's name, the vocal roulades and element of pure vocalize at those moments, evoke Philomela's wordless song—and its magical power—even as the soprano soloist disclaims her own vocal abilities (see Example 5).

But Hasse and Metastasio's invocation to Philomela, which elaborates the tension between speaking and not speaking, song and silence, is troubled by darkness. With Cecilia Davies's seemingly generic invocation, yet another set of sisters is brought hauntingly into the sonic landscape—the Athenian princess Philomela whose brutal rape, mutilation, and incarceration at the hands of her brother-in-law Tereus, the King of Thrace, is avenged by her sister Procne in a shifting kaleidoscope of marriage, sisterhood, rape, death, and music.

Procne, the daughter of Pandion, King of Athens, is given in marriage to Tereus, the King of Thrace. Homesick and longing to see her beloved sister, Philomela, she entreats her husband to return to her father to bring Philomela to visit her. When Tereus sees Philomela for the first time he is consumed with desire, but

69

Vln. I *p*

Vln. II *p*

Vla. *f*

S. Ah per - chè col can - to mi - o, per - chè

B. *p* *f*

poco, f

74

3 *p*

p

p

3 *p*

ma - i non pos - so ench' i - o dol - ce all' al - me ar -

p

79

f *p*

f *p*

f *p*

dir ca - te - na, Fi - lo - me - na al par - di

f *p*

Example 5 Hasse, 'L'Armonica,' Section I, mm. 69–96. Opening soprano solo, invocation to Philomela.

84

88

92

te? al par

di te, al par di te;

poco *f*

poco f

poco f

poco f

Example 5 (cont'd)

concealing his lust and expressing the request of her sister, his wife, he persuades their deeply reluctant father to let his youngest daughter leave:

There the father choked
On his goodbye.
His voice collapsed into sobs,
Overwhelmed of a sudden
By fear—
Inexplicable, icy,
A gooseflesh of foreboding.

On their arrival in Thrace, Tereus takes Philomela to the forest and rapes her. She curses him and vows to tell all the world of his crime, to bear witness, even if just as a voice echoing among the rocks:

I may be lost,
You have taken whatever life
I might have had, and thrown it in the sewer,
But I have my voice.
And shame will not stop me.
I shall tell everything
To your own people, yes, to all Thrace.
Even if you keep me here
Every leaf in this forest
Will become a tongue to tell my story.

To silence her, Tereus brutally cuts out Philomela's tongue rendering her mute before, "like an automaton," repeatedly raping her once again:

Speechless, mindless,
In a confusion of fear and fury

He hauled her up by her hair,
Twisted her arms behind her back and bound them,
Then drew his sword.
She saw that
As if she were eager, and bent her head backwards,
And closed her eyes, offering her throat to the blade—

Still calling to her father
And to the gods
And still trying to curse him
As he caught her tongue with bronze pincers,
Stretched it out to its full length and cut it
Off at the root.

The stump recoiled, silenced,
Into the back of her throat.

But the tongue squirmed in the dust, babbling on—
Shaping words that were now soundless.⁵⁴

The battered and mute Philomela is shut up in the forest tower, and Tereus returns to his wife claiming that her sister has died on the journey. But Philomela is not dead, and, though now tongueless, she finds a way to speak of what has happened, using her female skills—under the sign of the goddess Athena—to weave a tapestry that recounts Tereus's crime. The tapestry is brought to Procne, who immediately understands the truth and vows revenge. In a continuation of the bloody horror, she rescues her sister and together with her murders the beloved son that she, Procne, has borne with Tereus. The son is baked in a pie and fed to his father in a climax of violence, at which point all three protagonists are changed into birds: Tereus becomes a hoopoe, Procne a swallow, and the raped, mutilated, and silenced Philomela is metamorphosed into a nightingale, the greatest singer who will become an emblem for music itself.

As Pierpaolo Polzonetti and others have shown, Ovid's *Metamorphoses* were a central point of cultural reference in late 18th-century Vienna; to the courtly guests and imperial family members gathered at Schönbrunn in 1769 the myth of Philomela would have been well known, its potent violence ready to trouble the surface of any generic-seeming reference to the song of the nightingale.⁵⁵ In prominently evoking Philomela, and strikingly envoicing her through the ghostly double of the glass harmonica, Hasse and Metastasio's wedding cantata for Maria Amalia and Ferdinand undercuts a celebration of musical sisterhood with a horrific tale of rape and murder.

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Ghosts, W. G. Sebald writes, "are known for their habit of observing life from their marginal position in silent puzzlement and resignation."⁵⁶ The ghost, then, is the figure for the chronicler: "The strange constellation, in which sympathy and indifference are elided, is as it were the professional secret of the chronicler, who sometimes covers a whole century on a single page, and yet keeps a watch-

⁵⁴ This translation is by Ted Hughes, *Tales from Ovid* (New York: Farrar, Straus, Giroux, 1997), 214–29.

⁵⁵ See Pierpaolo Polzonetti, "Haydn and the *Metamorphoses* of Ovid," in *Engaging Haydn: Culture, Context, and Criticism*, ed. Mary Hunter and Richard Will (Cambridge: Cambridge University Press, 2012), 211–39.

⁵⁶ W. G. Sebald, *A Place in the Country*, trans. Jo Catling (London: Penguin Books, 2014), 14–15.

ful eye on even the most insignificant circumstances...”⁵⁷ Perhaps we might think of the seasoned intimates of Viennese court life, Hasse and Metastasio, as ghostlike, commenting invisibly, if goutily, from the sidelines in 1769 when they collaborated on one of their last joint creations, “L’Armonica.” Obliquely, the glass harmonica—in all its sensational musical novelty, with its purity and languid beauty, its evocation of an oracle speaking truths from another world, its penetrating power to communicate like a human voice but inarticulate, without words—provided a vehicle for them to introduce, with studied professional distance, an element of sympathy into the ritual sacrifice of the Empress Maria Theresa’s daughters in the successive dynastic marriages of the 1760s. Even while contributing to the ceremonial pomp in 1769 of the penultimate in a series of weddings that would seal Habsburg political ties across Europe, “L’Armonica” exploited the set of associations already accrued to Franklin’s musical invention; not only did it celebrate the instrument’s magical powers of communication, with which it bypassed language and spoke directly to the heart (or soul), but in so doing it cut open the fabric of the present to complicate it, in an uncanny and deeply unsettling fashion, with ghastly memories of the mythical past. We can only speculate as to the conscious role of Hasse and Metastasio in creating those constellations of meanings, but an attentive ear cannot miss the seepage up to the surface of their seemingly harmless, and sweetly entertaining, wedding cantata of a darker set of implications. In this the glass harmonica is a crucial conveyor of meaning.

⁵⁷ Ibid.