**Review** by Márcia Balisciano

Corey Mead, Angelic Music, pp. 209

In reading Corey Mead’s charming tale of Benjamin Franklin’s glass armonica, it is clear he is as passionate about music, as he is a careful historian and Franklin admirer.

He begins his story by introducing perhaps the least known of Franklin’s many guises, that of musician.

**Franklin and music**

Franklin’s abiding interest in music has received less attention than his roles as an essential founder of the United States, and exceptional diplomat, scientist, civic contributor, and more.

Mead notes he played the harpsichord, the viola da gamba, the musical bells and was never without “a small dulcimer instrument called a sticcado.” He composed songs meant to be “sung communally, by roaring hearths in local taverns, or in the comfortable sitting rooms of [close] friends.” Among his compositions was My Plain Country Joan, in honour of his long-suffering wife Deborah:

Were the fairest young Princess, with Million in Purse

To be had in Exchange for my Joan,

She could not be a better Wife, mought be a Worse,

…I’d cling to my lovely ould Joan.

**Musical glasses**

Franklin first arrived in London as an 18 year old to learn about the printing trade – and the world – remaining for about 18 months [1724-1726]. When he returned, taking up residence at 36 Craven Street, he did so as the most celebrated colonial of his day, not least for his best-seller, Poor Richard’s Almanack, and his pioneering accounts of electricity.

The purpose of his second London sojourn [1757-1762] was to convince the sons of William Penn, proprietary owners of Pennsylvania, to pay more to defend the colony during the French and Indian war. A side benefit was exposure to London’s cultural richness in the second half of the 18th century, marked by a colourful array of aristocrats and dissenters, artists and music makers.

He was introduced to glass music by Edward Delaval in 1761. So common of those he called his friends, Delaval was, like Franklin, polymathic. Mead notes he “was a man of science, a chemist and electrician, as well as a classical scholar and linguist, and a known figure in experimental psychology.” Franklin helped him become a fellow of the Royal Society, the preeminent body for science (as he did pioneering anatomist, William Hewson, son-in-law of his Craven Street landlady Margaret Stevenson). They would later serve on a Royal Society committee to consider protection of St. Paul’s Cathedral from lightning strikes. They would, of course, recommend the Franklin lightning rod.

Enchanted by the tonal “sweetness” Delaval evoked by rubbing the rims of water-filled glasses, Franklin set out to capture its sound.

**A long tradition**

Mead recounts a long tradition of glass music, written about as early as the 13th century. He reproduces an Italian woodcut from 1492, the year Columbus sailed the ocean blue, showing contemporary instruments, including a table with liquid filled glasses.

Closer to Franklin’s time, an enterprising but hapless Irish gentleman, Richard Pokrich, created and played an “angelick organ,” a collection of vessels holding different levels of water. But he found it difficult to pay his bills, caused not least, Mead says, by the destruction of his glass organ by a rampaging pig at one recital.

**A better way**

In observing Delaval’s glasses, Franklin, always the improver, got to thinking about how they might be improved. Writing to Giambattista Beccaria, an experimental physicist teaching in Turin, he noted it would be superior “to see the glasses disposed in more convenient form, and brought together in a narrower compass, so as to admit a greater number of tones, and all within reach of hand to a person sitting before the instrument.” Typically Franklin, he provided “exhaustive detail” about how it should be constructed: glass bowls marked by “seven prismatic colours, viz C, red; D, orange; E, yellow; F, green; G, blue; A, indigo; B, purple; and C, red again.” The musician would press all 10 wet fingers to the bowls, emitting sound as they spun, allowing greater musical complexity; for with the musical glasses, only two could be played at the same time.

Franklin wanted to bring his theoretical instrument to fruition. He decided to call it the Armonica, the Italian word for harmony in a bow, he told Beccaria, to Italy’s “musical language.” He paid 40 guineas (roughly about $5000 today) to Hughes and Company at the Cockpit Glasshouse. The Bristol Journal noted in January 1762, “Mr. Franklin of Philadelphia…has greatly improved the musical glasses, and formed them into a compleat instrument to accompany the voice; capable of a thorough bass, and never out of tune.”

Mead cites a letter from Franklin to Polly, child of Margaret Stevenson, who became a kind of adopted daughter to him, complaining about the craftsmanship behind his armonica. Nevertheless, he began playing his instrument and gained such a reputation for it, that Thomas Penn, whom he was lobbying on behalf of Pennsylvanians, complained in a 1761 letter to the colony’s Governor, that Franklin was spending too much time on frivolous endeavours including his “musical glasses.”

Thinking he had done all he could to sway the Penns, Franklin left London in 1762 taking his armonica with him (he would return to Craven Street in 1764, sent back on behalf of Pennsylvania and other colonies, to meditate growing tensions with the Crown, and would not leave again until 1775, when despite his best efforts, war loomed). Lore has it that one night, soon after arriving home to Philadelphia, his wife Deborah awoke to the “angelick strains” of the armonica, which she had not yet heard, convinced “she had died and gone to heaven and was listening to the music of the angels.”

**Those who made it their own**

Mozart and his nemesis Salieri, J. C. Bach, Beethoven, Donizetti, and Hayden are all celebrated artists who composed for the armonica.

Others less well known today also made it their own. Marianne Davies [1743-1818], a precocious musical talent on flute and harpsichord, who had made her debut aged 7, met Franklin and became the first armonica virtuoso. J. C. Bach wrote that her playing had “such a beautiful effect and brilliance that I am sure…everyone…will enjoy it.” One German writer stated it was only Davies who could “play it with proper perfection; Mr. Franklin himself is only musical enough to play it for his own enjoyment.” She and her sister Cecilia, who sang to Marianne’s accompaniment, were hailed by Samuel Johnson and toured Europe, where they became friendly with Mozart and his family.

Needing to secure her and her sister’s financial future after the loss of their parents, Marianne wrote to Franklin when he was serving as first official representative of the fledging American government in Paris, exclaiming her “gratitude, respect, and esteem, by which I must always be most sincerely attach’d to my ever dear and worthy friend and benefactor Doctor Franklin.” She sought an annual pension from Marie Antoinette, her one time pupil, and hoped Franklin would make the request, not least because he was “universally ador’d by the French nation.” There is no evidence, Mead notes that Franklin received or responded to her plea. Highlighting the difficulty of being a female musician in the late 18th century, she and her sister served as music teachers to make ends meet but, as Mead writes, “after decades of hardscrabble living,” Marianne died in 1818 at the age of 74.

Another Marianne also became an armonica virtuouso. Marianne Kirchgessner [1769-1808], born in Bruchsal, Germany and blinded as a child, met Mozart too, performed with Hayden in London, and gave concerts for royalty (including literary royalty: Goethe is said to have heard her play) in Russia and across Europe. Mead reproduces a rapturous review from 1808 following a performance by Kirchgessner in Stuttgart:

Ha, a strange sunshine radiates from me!

Never have I felt such godly

Bliss flow over me. I hear

Eden’s clarity, a joyous choir,

Sounds of Hallelujah ring….

Thanks be to your magic playing,

Muse of the armonica!

But after suffering adversity during the Napoleonic wars, Kirchgessner died young of pneumonia aged 39.

**Mesmerised**

In 1778, Franz Anton Mesmer [1734-1815], a German doctor and armonica enthusiast married to a Viennese heiress, moved from Vienna to Paris. He enjoyed playing Purcell and Gluck on his armonica, and had hosted and played for the young Mozart. But it was his fame as an unorthodox medical theorist – charlatan to some – which proceeded him. He had developed the idea that all disease was the result of an “obstruction of the flow of animal magnetism inside the human body.” To heal, practitioners needed to apply animal magnetism to ensure proper flow of the “universal fluid.” Mead postures that Mesmer’s supposedly successful experiments in Vienna actually showed that he had mastered the “power of suggestion, not cosmological healing.” His craft came to be known as mesmerism.

In Paris, he held sessions with multiple patients and “rubbed their ailing bodies,” Mead says, with iron poles he claimed to have charged with his own animal magnetism; patients were asked to hold hands to increase the flow. Mesmer would then play the armonica to not only create the right mood but so that animal magnetism could be “communicated, propagated, and reinforced by sound.” His aim was to bring patients to an emotional crescendo, a critical step in Mesmer’s healing process. “Patients would often shake and faint,” Mead writes, “in the manner of a tent revival meeting. They would be moved to a padded room until they recovered.”

Craving legitimacy, he invited Franklin to observe a treatment séance in 1779 but Franklin, who himself had experimented with, but ultimately discounted, electricity as a medical cure, was unconvinced. French King Louis XVI appointed Franklin to a 1784 commission to make a final pronouncement on mesmerism. Mead recounts that Franklin hosted Mesmer at his residence in Passy, in today’s 16th arrondissement of Paris, and witnessed the master at work, but his earlier judgement was unaltered: “I cannot but fear that the expectation of great advantage from this new method of treating disease will prove a delusion….” If renown, however infamous, was what Mesmer sought, he would no doubt have welcomed knowing that his name lives on in the English language in the word mesmerise. He would be less pleased to know that the word mesmerism in French is hypnotiser.

**Decline**

It may have been the connection with mesmerism, and other oddities linked to armonica players and listeners, that hastened its decline. According to Mead, by the start of the 19th century, the armonica was purportedly linked to “illness, insanity, convulsions, fainting, marital disputes, and even death.” And, perhaps positively, waking the dead. He cites an Etienne Sainte-Marie, a member of the Medical Society of Montpelier, who claimed that the “melancholy timbre of the armonica plunges us into a profound detachment, relaxing all the nerves of the body, to the point that a very robust man is not able to listen to it for an hour without becoming ill.”

Austrian music journalist, Frederich Rochlitz [1769-1842], was one who attempted to redress claims against the instrument as the bringer of bad things. The idea that vibration caused nerves to be overstimulated leading to breakdown “would be terrible,” Rochlitz concluded, “if it were true.” It only induced melancholy, he said, if the songs played on it were sombre and laborious.

The armonica faced cultural challenges. The need for a female player to move her leg up and down to turn the foot pedal was viewed as overtly sensual (though this issue was often solved by strategic placement of a cloth). Other challenges were more prosaic, including the cost and difficulty of producing the instrument, its relative fragility, and the increasing popularity of larger concert halls in the early 19th century in which the armonica’s delicate tones were easily lost.

**Resurgence**

In the 1920s, German musician Bruno Hoffmann became interested in the musical glasses and devised an instrument called the glass harp based on them. He uncovered and recorded pieces by Mozart and others that had been written for the armonica.

Some forty years later, a German glassblower, Gerhard Finkenbeiner, discovered an armonica in a Paris museum and was intrigued. While working for IBM he saved the ends of glass furnace tubes for seminconductors, imagining them as potential armonica cups. He later crafted special glass bowls classified according to the note each most closely resonated. He then created a mechanism for attaching and rotating his bowls with an electric motor – Franklin would surely have been pleased. It is a painstaking, precise process reflected in a price tag of just under $10,000 for the least expensive models, rising to over $1 million for the larger and more elaborate.

Meanwhile, a music student at Indiana University, Dennis James, who read about the armonica and asked one of his professors what it sounded like, received the response that no one knew, as the instrument had not been played in 200 years. James vowed to find out. He met Finkenbeiner and convinced him to make an armonica he could afford, which took over a year. In 1988, James accompanied members of the New York Philharmonic on his armonica at an event at Versailles. The publicity material claimed the “armonica is back” and so it was. In just three years, James played nearly 200 concerts around the world. One day he got a call from Linda Ronstadt, with whom he went on to collaborate on seven projects involving the armonica, including, her album, Winter Light.

Mead also points to the work of French musician Thomas Bloch, who has taken the armonica into the world of rock. While equally adept at classical pieces, Bloch has played with leading-edge artists such as Radiohead, Daft Punk, Damon Albarn, Imogen Heap, and Tom Waits.

Along with James, Mead also credits writer and armonica player, William Zeitler, for his own attempts on Franklin’s instrument, sharing a picture of his Finkenbeiner Inc. armonica. As he says it’s hard not “to be struck by the power of something utterly unique.” Just as it did over 250 years ago, Franklin’s armonica continues to fascinate.