



# Australian Voice

Volume 11  
2005

# Manuel García (1805–1906): A Bicentenary Reflection

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## The 'Christopher Columbus of the Larynx'

On March 17, 1905, Manuel Patricio Rodríguez García celebrated his one hundredth birthday in London, where he had resided since 1848. The preeminent voice teacher, who had been credited with the invention of the laryngoscope, was received personally by King Edward VII, and honored at a huge gala event. A newspaper account declared: 'It may be said that there has never probably been a testimonial before wherein the arts and the physical sciences have so happily combined.'<sup>1</sup> Citations were read by royal ambassadors from Spain and Germany, as well as representatives from numerous international laryngological societies and colleagues from the Royal Academy of Music, where García had taught until 1895. A highlight of the centenary celebration was the unveiling of García's portrait, painted by John Singer Sargent, which caused the recipient to remark: 'It is a strange experience to see one's very self spring out at one from nothing in a flash.'<sup>2</sup>

Many of García's former students, now acclaimed professional singers, were on hand to honor their illustrious teacher. One of these was Blanche Marchesi (1863–1940), the daughter of one of García's greatest disciples, Mathilde Marchesi. Blanche presented a large bouquet of flowers in the red and yellow colors of Spain, with the inscription: 'To the Christopher Columbus of the larynx'.<sup>3</sup> Representing García's most famous pupil, Jenny Lind, was her husband, Otto Goldschmidt, who, 'in a few words, rendered indistinct through emotion, declared that his wife to the end of her days continued to have veneration, regard and respect for the master who enabled her to attain her greatest musical position'.<sup>4</sup>

## The García Family

Manuel García was a member of the most important family in the history of singing. His father, Manuel del Pópulo Vicente García (1775–1832), was born in Seville. García *père* is remembered today as Rossini's favorite tenor, for whom the composer wrote the part of Count Almaviva in *Il barbiere di Siviglia*. He was a dynamic, dramatic performer, whose *chaleur andalouse* thrilled audiences, particularly when he portrayed Rossini's *Otello* and also when he sang the part of *Don Giovanni*, considered by many as his best role. A superb virtuoso and brilliant improviser, García was occasionally criticised for an excess of ornamentation.<sup>5</sup>



**FIGURE 1**

Manuel Patricio Rodríguez García (1805–1906). Sketch by Pauline Viardot (1821–1910), date of sketch unknown. Courtesy of the García Family.

Even during the height of his performing career, García was a passionate teacher, and he was indeed the founder of famous *École de García*. In addition to his three children, he taught the French tenor, Adolphe Nourrit (1802–1839). García was also a prolific composer, who wrote over fifty works for the stage to Spanish, Italian and French texts, as well as numerous songs. Rossini is said to have proclaimed that if García's *savoir-faire* had been equal to his talent, he would have been the foremost musician of his generation.<sup>6</sup> Unfortunately, most of García's compositions remain unpublished and unheard.<sup>7</sup>

In 1797 García secretly married his first wife, Manuela Morales, in Cádiz. She was a singer and a celebrated dancer of boleros, and the two of them performed together onstage. They had three children, one of whom, Josefa Ruíz-García (b. Madrid, 1804?–?), later studied with her father and became an accomplished singer. Manuela's parents did not

approve of the marriage, and their negative assessment proved correct, for García soon left their daughter for another singer in the same performing company, Joaquina Siches Briones (1778?–1864).<sup>8</sup> It is not certain when Joaquina Briones and Manuel García were married. Certainly the marriage occurred after the arrival of their first child, Manuel Patricio Rodríguez García, who was born on March 17, 1805 in Madrid, and baptised the next day, in the church of San Martín.<sup>9</sup>

In 1808 Manuel's younger sister, María Felicia, was born in Paris. She became one of the most famous singers of all times, who during her short life personified the spirit of Romanticism. Like her father, she was a passionate and brilliant singer. She was immortalised in numerous works of art as 'La Malibran', the last name she kept from her short-lived first marriage.<sup>10</sup> A tragic fall from a horse caused Malibran's early death at the age of twenty-eight.

Since García *père* believed that every singer should be first and foremost a consummate *musician*, both Manuel Jr. and María at a very young age received comprehensive training in piano, harmony and ultimately, in voice. As a singing teacher, their father was extremely strict with them, and he was accused of being abusive. There is an anecdote about a stranger passing by the García residence in Paris, who heard 'sobs and objurgations' pouring out of the window. Upon his anxious inquiry, the passer-by was informed not to be concerned: 'Ce n'est rien. C'est Monsieur García, qui fait chanter ses demoiselles.'<sup>11</sup>

Manuel Jr. also had a few lessons with his father's voice teacher, the tenor Giovanni Anzani, who was another harsh disciplinarian. More significantly, Anzani was a disciple, and possibly a student, of the esteemed Nicola Porpora (Naples, fl. 1770s, 1780s), who had taught the famous castrati Farinelli and Cafarelli. Therefore, through Anzani, both elder and younger Garcías were indoctrinated in the method of the 'Old Italian School'.<sup>12</sup> Manuel Jr. later related how rigorous and tedious his early vocal training had been. He was made to sing 'an endless variety of ascending scales' to the point where he finally exclaimed: 'Oh dear! mayn't I sing down the scale even once?'<sup>13</sup> Apparently neither young Manuel nor María were naturally self-disciplined, and María later acknowledged to her sister Pauline that their father's severity had contributed to her success.<sup>14</sup>

The youngest child of Manuel García and Joaquina Briones, Pauline Ferdinande, was born in Paris in 1821. She proved to be even more precocious than her older brother and sister, and as a tiny child she was already industrious. Like her siblings, she also had voice lessons with her father, who gently guided her from the age of four. He remarked that, unlike her unruly sister María, Pauline only needed to 'be led by a silk thread'.<sup>15</sup> Pauline studied with Franz Liszt, and became an accomplished pianist. By age ten she was playing for her father's voice lessons,<sup>16</sup> and later she accompanied María and the violinist Charles de Bériot in recitals. She studied composition with Reicha, and eventually produced many beautiful songs and chamber operas, which are being performed and recorded today.<sup>17</sup>

After the early death of her sister Pauline was coerced into becoming a singer, and although she was said to have had more intelligence than voice, she has been universally regarded as one of history's greatest mezzo-sopranos. Her artistry was greatly admired by many famous contemporaries, among them Clara Schumann, Brahms, Liszt, Berlioz, Chopin, and George Sand, who became her most intimate *confidante*. It was George Sand who encouraged Pauline to marry Louis Viardot (1800–1883), a man twenty-one years older than she, who was influential and dedicated to promoting her career. Pauline's long list of friends included most of the important artists, writers and musicians of the time. The Russian writer Ivan Turgenev (1818–1883) became so obsessed with her that, despite her marriage to Viardot, he followed her around for the rest of his life. After her performing career ended, Pauline dedicated herself to teaching and composing. Like her father and brother, she also produced method books on singing.

Of Manuel Patricio García's offspring, two children by his first marriage (to Eugénie Mayer, an operatic soprano) have achieved some historical recognition. Gustave, García (1837–1925) was a singer and actor, and author of three books on vocal and stage techniques (1880, 1910, 1914).<sup>18</sup> Albert García (1875–1946), the son of Gustave, studied voice with his great aunt, Pauline Viardot, became a respected baritone, and produced an edition of his grandfather's treatise on singing (1924).<sup>19</sup>

### The First Italian Opera Season in the New World

A significant milestone in the accomplishments of the García family occurred in 1825, when Manuel Sr. brought his family troupe to the United States and Mexico, to give the first professional performances of Italian opera in the New World. Except for Pauline, who was only four years old, all the family members played the leading roles. They began rehearsing on board within 24 hours of the ship's departure, and soon thereafter the elder García was reprimanded by the ship's captain for violently striking his son during a rehearsal.<sup>20</sup> When they arrived in New York, he managed to prepare a local chorus and orchestra in only ten days time for their first performance.

The historic opening night took place on November 19, 1825, in the Park Theatre, and the opera was, not surprisingly, Rossini's *Il barbiere di Siviglia*. García *père* sang Almaviva; Manuel Jr. was Figaro; Joaquina Briones played Berta; and María, at age seventeen, charmed everyone with her performance as Rosina. The performance was a success, but Americans really preferred to hear opera in their own language. María was able to oblige them by singing Scotch songs and accompanying herself at the piano in 'Home Sweet Home' during the lesson scene.<sup>21</sup> At the age of twenty, Manuel Jr. was performing challenging roles in America, including Leporello in *Don Giovanni*<sup>22</sup> and Iago in Rossini's *Otello*. When the García troupe went on to perform in Mexico, Manuel also substituted for his father, and strained his voice trying to sing tenor

roles. He became discouraged by his failures as a singer, but his parents encouraged him, and sent him back to Italy to continue study.<sup>23</sup>

### Manuel García's Failure as a Singer

Manuel Jr. returned to Europe in 1828, in time for Maria Malibran's spectacular operatic debut in Paris. While his sister was enjoying her rise to stardom, poor Manuel's vocal studies in Italy were not going very well. Inspired by the eminent basso, Luigi Lablache (1794–1858), he unfortunately tried very hard to imitate him, which resulted in further strain to his voice. Pauline Viardot later said that her brother was playing the part of 'the frog that wanted to make itself as big as a bull'.<sup>24</sup> In 1829, at the age of 24, when Manuel made his début as Figaro in *Il barbiere di Siviglia*, he was criticised in *La Revue musicale* for his dull voice and lack of stage presence, and advised to pursue another career:

Nous conseillons à ce jeune homme, qui est d'ailleurs intéressant sous plusieurs rapports, de suivre une autre carrière.<sup>25</sup>

Manuel actually was relieved to have evidence to show his parents that he was not suited to an operatic career. Unlike his father, he was retiring and methodical. He had a keen interest in science, and pursued studies in astronomy and navigation, with the idea of becoming an officer in the French navy. This met with strong objections from his parents, who had by this time returned to Paris from Mexico. Manuel relented and remained in Paris, assisting his father in teaching voice lessons. But the two could not get along, and so the son tried another escape route: in 1830 he joined the French army and went off to invade Algiers.

As a result of this experience, Manuel began to work in French military hospitals, where he learned about medicine and studied anatomy, and notably, the physiology of the larynx. According to Pauline Viardot, around this time her brother enjoyed conducting experiments with the throats of chickens, sheep and bulls, which he would bring home:

You would have imagined that these would have disgusted me. But it was not so. He would give me a pair of bellows, which I would insert in these windpipes, one after the other, and blow hard. Heavens! What extraordinary sounds they used to emit.<sup>26</sup>

### L'École García

With the knowledge he was acquiring in anatomy, García's teaching was greatly enhanced, and his pedagogical style was taking a much more detailed path than that of his father. At the age of 27, he had already earned a reputation as a fine teacher, and the García School was well respected in Paris. Then in 1832 Manuel Sr. suddenly died, at the age of fifty-six. Neither Maria nor Manuel attended their father's funeral, but both of them were mentioned in the numerous funeral addresses. One speech made this proclamation: 'But he has given us his son Manuel, worthy heir of his talents as a

teacher, and who possesses in depth the precious secrets of his doctrine.'<sup>27</sup>

In another funeral speech, it was suggested that García's son Manuel would provide 'the most beautiful, the most durable monument' to his father's memory by publishing 'a great Treatise on the art of singing'.<sup>28</sup>

### Le Professeur de Chant

In 1835 García was appointed Professor of Singing at the Paris Conservatory, and five years later the first edition of the *Complete Treatise on the Art of Singing* appeared.<sup>29</sup> In the preface, it is made clear that the method was passed down by his father:

The son of an artist generally appreciated as a singer ... I have collected his instructions, fruits of a long experience and of a most cultivated musical taste. It is his method which I have wanted to reproduce by trying to reduce it to a more theoretical form and by attaching the results to the causes.<sup>30</sup>

While paying tribute to his father's teaching, García at the same time acknowledged that his own method would be more analytical, and would establish the teaching of singing on a physiological basis.

The following list of García's first publications includes two editions of the *Complete Treatise*, and the *Mémoire sur la voix humaine*, which was presented at a meeting of the Academy of Sciences on April 12, 1841. The *Mémoire* has been recognised as the foundation of all subsequent investigations into the voice.

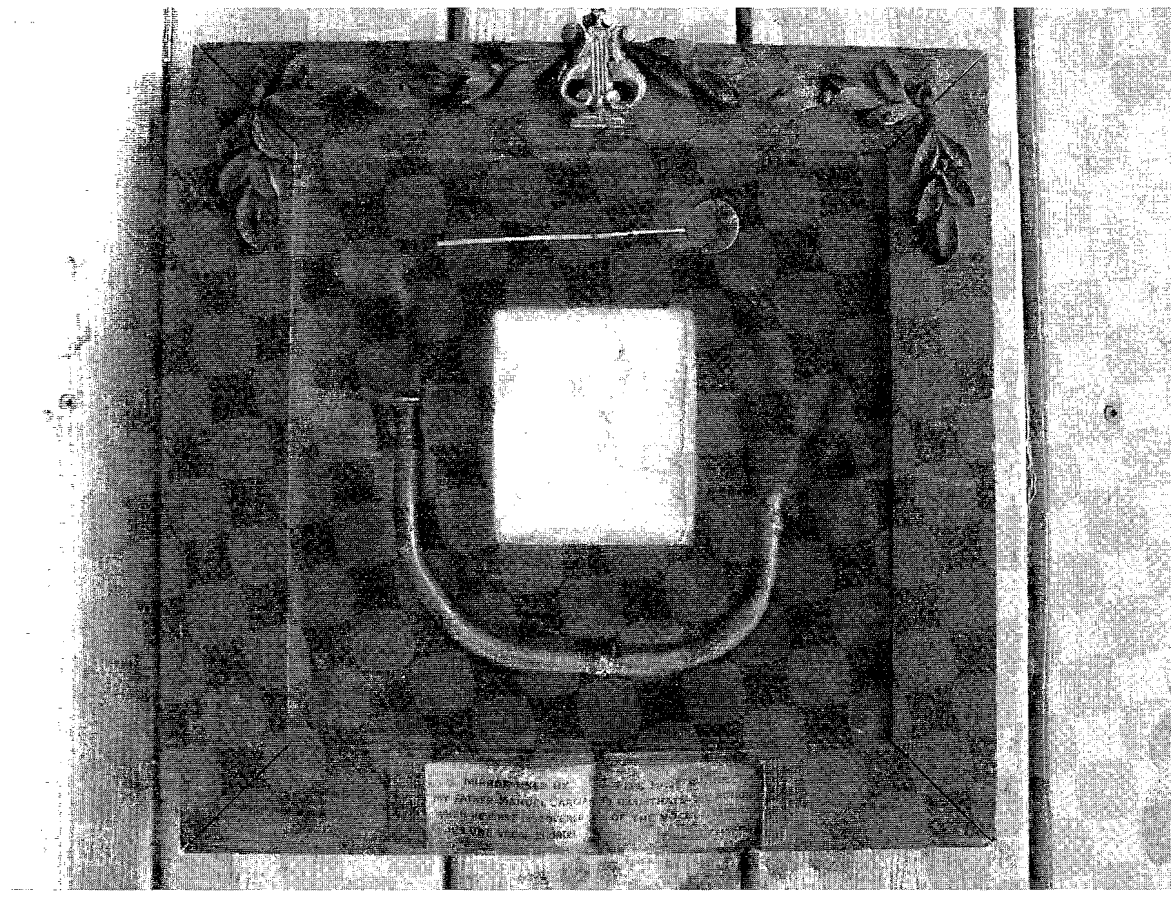
- 1840 — École de García — *Traité complet de l'art du chant*
- 1841 — 'Mémoire sur la voix humaine,' *Comptes rendus des séances de l'Académie des sciences* (April 12, 1841)
- 1847 — 2nd ed., *Traité complet de l'art du chant* (addition of Part Two).

### The Laryngoscope

By 1848 the political unrest in Paris caused García to leave for London, where he was soon appointed Professor of Voice at the Royal Academy of Music. Around this time, García indicated that 'one wish was ever uppermost in my mind — if only I could see the glottis!'<sup>31</sup> When he went to Paris for a vacation in September of 1854, García suddenly conceived the idea of the laryngoscope: 'Like a flash, he seemed to see the two mirrors of the laryngoscope in their respective positions as though actually before his eyes.'<sup>32</sup>

He quickly went to a surgical instrument maker and bought a long-handled dentist's mirror. Heating the mirror, and placing it against his uvula, he used another, hand-held mirror to reflect sunlight back onto the dentist's mirror.

By good fortune he hit upon the proper angle at the very first attempt. There before his eyes appeared the glottis, wide open and so fully exposed that he could see a portion of the trachea. So dumbfounded was he that he sat down aghast



**FIGURE 2**

Photograph of the original laryngoscope and a pipe used by Manuel García, framed by Gustave García, with the inscription: 'Mirror used by my father Manuel García when he first discovered his own vocal chords — pipe made by him to illustrate the action of the vocal chords'. Courtesy of the García Family.

for several minutes. On recovering his amazement he gazed intently for some time at the changes which were presented to his vision while the various tones were being emitted.<sup>33</sup>

García reported his findings to the Royal Society of London in 1855, as 'Observations on the Human Voice', which was later translated into French in 1861.<sup>34</sup>

García's use of mirrors to view the larynx was not unprecedented. Recent research credits the invention of the laryngoscope to a London physician, Dr. Benjamin Guy Babington (1794–1866), who used it to examine his patients as early as 1829. Other physiologists, including Czermak and Türck, also did extensive work with the laryngoscope, and developed its potential for clinical use.<sup>35</sup> Whether or not García was aware of Babington's discovery of the laryngoscope, and its subsequent clinical use, he nonetheless was praised for inventing it. This was perhaps due in part to the fact that García became highly skilled at observing his own larynx, since he was able to tolerate prolonged contact of the mirror against the uvula without gagging. García's use of laryngoscopy originated solely from his desire to understand the physiology of the *singing* voice, and he was undeniably the first to employ mirrors for this purpose.

It is truly remarkable that García was able to observe so many details with his simple laryngoscope. He experienced difficulty, due to the position of the epiglottis, which would tend to lower itself and block the view of the vocal cords. Even with a modern fiberscope, the epiglottis can obstruct the view of the larynx, and therefore García's apparent virtuosity with his mirrors is astonishing and admirable. We must remember that *prior* to using the laryngoscope, García had already come to many important conclusions about the physiology of singing, based on his anatomical studies, his teaching experience and his good instincts. His use of the laryngoscope served only to validate his conclusions.

As far as García was concerned, the laryngoscope ceased to be of any special use as soon as his first investigations were concluded. By his examination of the glottis he had the satisfaction of proving that all his theories with respect to the emission of the voice were absolutely correct.<sup>36</sup>

### Basic Principles

García's conclusions are copiously articulated in his treatises, which are readily available for perusal. Here will be examined only a few basic principles. Although these may seem obvious to us today, we must remember that García was the first to fully

document these principles, and to validate them via laryngoscopy:

- The *vocal cords* are the source of all tone.
- There is a distinction between the *glottal source* and the *vocal tract*.
- There are two opposite *timbres* of the voice.
- The registers of the voice result from separate mechanical principles.

### The Vocal Cords

From examining the vocal cords, or ‘lips of the glottis’, García observed that they were the source of all tone: ‘The “lips of the glottis” alone produce all vocal sounds, with their modifications of ringing and veiled quality, of piano and forte.’<sup>37</sup>

What García observed was that the vocal cords vibrated in different lengths. The glottis could be completely open or partly closed, depending on the approximation of the arytenoid cartilages. When the arytenoid cartilages were pressed together, only the top three-fifths of the vocal cords would vibrate (the anterior portion), and the sound produced would be ‘brilliant’ or ‘ringing’ (*caractère éclatant*). If the arytenoids did not close completely, then all five-fifths of the vocal lips would vibrate (the full glottal length), including the posterior cartilaginous portion, or the vocal processes of the arytenoids. The sound produced by this type of vibration was ‘dull’ or ‘veiled’ (*caractère sourd*).

... the lips of the glottis can vibrate equally, either when the posterior extremities are put into contact (by the bringing together of the internal processes of the arytenoids), or when these extremities remain separated. In the first case, the sounds are emitted with all the brilliance possible; in the second, the voice takes on a dull character.<sup>38</sup>

García learned that the control of vocal cord closure was the most important thing in singing. And the precise, complete approximation of the vocal cords should begin *before* the onset of the tone.<sup>39</sup>

The *coup de la glotte* or ‘stroke of the glottis’ was the term that García coined to describe the preferred adduction of the vocal cords, in preparation before singing, as well as during singing, and particularly at certain places in the vocal range. In the question–answer format used for his 1894 *Hints on Singing*, García explained the *coup de la glotte*:

- Q. What do you mean by the ‘stroke of the glottis’?
- A. The neat articulation of the glottis that gives a precise and clean start to a sound.
- Q. How do you acquire that articulation?
- A. By imitation, which is the quickest of all; but in the absence of a model, let it be remembered that by slightly coughing we become conscious of the existence and position of the glottis, and also of its shutting and opening action. The stroke of the glottis is somewhat similar to the cough, though differing essentially in that it needs only the delicate action of the lips and not the impulse of air. The lightness of movement is considerably facilitated if it be tried with the mouth shut. Once understood, it may be used

with the mouth open on any vowel. The object of this is that at the start sounds should be free from the defect of slurring up to a note or the noise of breathing.<sup>40</sup>

García cautioned against confusing the *coup de la glotte* with the ‘stroke of the chest’ (*coup de la poitrine*), ‘which causes the loss of a large portion of the breath, and it makes the voice sound aspirated, stifled and uncertain in intonation. The chest has no other function than to nourish the tones with air, and it should not push them or shock [*heurter*] them.’<sup>41</sup> He further noted that especially in low tones, the *coup de la glotte* should not be attacked with force.<sup>42</sup> García gave detailed instructions on how to perform the *coup de la glotte*:

Hold the body straight, quiet, upright on the two legs ... open the mouth, not in the form of the oval O, but by letting the lower jaw fall away from the upper by its own weight, the corners of the mouth drawn back slightly, not quite to the point of a smile. This movement, which holds the lips softly pressed against the teeth, opens the mouth in the correct proportion and gives it an agreeable form. Hold the tongue relaxed and immobile (without lifting it either by its root or by its tip); finally, separate the base of the pillars and soften the entire throat. In this position, inhale slowly and for a long time. After you are thus prepared, and when the lungs are full of air, without stiffening either the phonator or any part of the body, but calmly and easily, attack the tones very distinctly with a light stroke of the glottis on a very clear [a] vowel. That [a] will be taken well at the bottom of the throat, in order that no obstacle may be opposed to the emission of the sound. In these conditions the tone should come out with ring and with roundness.<sup>43</sup>

The *coup de la glotte* was the basis of García’s teaching, and it had to be mastered from the very beginning of instruction, before going on to anything else.<sup>44</sup> García observed that this prephonatory setting of the vocal cords resulted in accuracy at the onset of vibration — precise intonation, without breathiness. The *coup de la glotte* also caused the firm closure of the arytenoid cartilages so that only the anterior three-fifths of the vocal cords vibrated (anterior phonation), and produced what García called the ‘bright’ or ‘ringing’ vocal quality (*caractère éclatant*). A loose adduction of the vocal cords (five-fifths vibration, or full glottal phonation) produced the ‘dull’ or ‘veiled’ quality (*caractère sourd*). ‘Pinching’ the glottis (*pincer la glotte*) during phonation would prevent a dull tone, and the use of the vowel [i] would also aid firm glottal closure.<sup>45</sup> The ‘pinch of the glottis’ also enhanced breath control, along with the tone quality.

It is not necessary that the glottis be hermetically closed after each time it is partially opened; it is enough that it oppose the air with a contraction capable of developing its elasticity. Only the noise of the air escaping through the orifice, which is partly open, will be heard and will give the voice a veiled and sometimes dull quality, a phenomenon which one frequently notices in the falsetto register. Consequently, it is necessary to conclude that the brilliance of the voice results from the

firm closure of the glottis after each pulsation. This procedure also has the advantage of bringing about a great economy of the air ... if the air found a constant outlet, then the largest excursions of the glottis and the strongest expenditure of air would produce precisely the weakest tones. It is necessary to pinch the glottis in proportion to the amount of pressure one gives the air.<sup>46</sup>

Unfortunately, the *coup de la glotte* was subject to widespread misinterpretation, and it became extremely controversial. Undoubtedly, the term itself created a lot of confusion, by suggesting a more aggressive maneuver of the vocal cords than García had intended. Better names have since been suggested, such as the *caresse de la glotte*<sup>47</sup> or 'firm onset'.<sup>48</sup> One of García's contemporaries who was a fierce opponent of the *coup de la glotte* was the prominent baritone, Victor Maurel (1848–1923). At a lecture in London in 1892, Maurel performed exaggerated demonstrations of the *coup de la glotte* and condemned García's technique. García, who was then eighty-seven years old, was present at this lecture, but he merely sat through it without any verbal objection.<sup>49</sup> Also attending the lecture was George Bernard Shaw (1856–1950), who subsequently wrote vehemently against the *coup de la glotte*, and criticised García's physiological basis of instruction: 'You can no more sing on physiological principles than you can fence on anatomical principles, paint on optical principles, or compose on acoustical principles.'<sup>50</sup>

Many more attacks on the *coup de la glotte* followed those of Maurel and Shaw.<sup>51</sup> Henry Holbrook Curtis (1856–1920), a throat specialist who treated singers at the Metropolitan Opera wrote: 'The shock, or *coup de la glotte*, is death to the voice; it is born of ignorance, and to teach or allow its continuance in a crime. We have no words strong enough to properly condemn it.'<sup>52</sup> The Lamperti school,<sup>53</sup> which represented a pedagogical approach that was opposed to García's, likewise condemned the attack.

The stroke of the glottis (violent attack) which many singing teachers advise, is absolutely harmful to the voice, and it is wrong to use it in order to begin a phrase well; one can easily in time develop a harmful or fatal inflammation of the larynx.<sup>54</sup>

Two renowned singers, Luisa Tetrazzini (1871–1940) and Enrico Caruso (1873–1921) both cautioned against the *coup de la glotte*. Tetrazzini proclaimed, 'Sooner or later this attack will ruin the most beautiful voice.'<sup>55</sup> And Caruso said, 'In pronouncing the sound 'ah' one must always attack it in the back part of the throat, taking care ... to have the throat well open; otherwise what is called the 'stroke of the glottis' occurs and the tone formed is hard and disagreeable.'<sup>56</sup> However, the Wagnerian soprano, Kirsten Flagstad (1895–1962), attributed her success to learning how to close her vocal cords. In 1918, when she was twenty-three years old, Flagstad's teacher (Dr. Gillis Bratt, a throat specialist in Stockholm) accused her of having 'a child's voice'. Flagstad later explained: 'Dr. Bratt told me that my vocal chords [*sic*] did not close and that was the reason for my small voice. Air went through

between the vocal chords. What he did was to close my vocal chords. By this means my voice grew in three months to three times its size.'<sup>57</sup>

The *coup de la glotte* remains questionable among voice professionals today. Nonetheless, García must be given credit for being the first to offer detailed advice on how to begin a tone, and to describe the effect of glottal closure; the 'pinch of the glottis' (anterior phonation) on vocal quality. According to James Stark, García regarded the *coup de la glotte* not as an isolated type of vocal cord onset, but as 'the key element in an integrated vocal method'.<sup>58</sup>

### The Glottal Source and Vocal Tract

García established an important principle concerning the distinction between the *glottal source* and the *vocal tract*. He discerned that the vibrator and resonator were separate components of the vocal instrument, each with its individual contribution to overall tone quality. The glottal sound source was responsible for the basic 'bright' or 'veiled' tonal quality, according to the extent of vocal cord approximation (anterior phonation vs. full glottal phonation). The vocal tract in turn produced all the *timbres*, or 'tints' of the voice, depending on laryngeal position and pharyngeal space. García noted that 'When the larynx produces a tone, the pharynx takes possession of it as soon as it is emitted and modifies it.'<sup>59</sup>

In his *Observations on the Human Voice*, presented to the Royal Society of London in 1854–55, García described how the glottis, vocal tract ('tube') and epiglottis affect vocal quality. Various simultaneous causes modify the qualities of the voice:

1. According as the glottis partially or entirely closes the passes between explosions, it produces veiled or brilliant sounds.
2. The tube which surmounts and surrounds it also greatly affects the quality of the voice; by its contractions it gives brilliancy to it and by its widening volume.
3. The epiglottis also plays a very important part, for every time it lowers itself, and nearly closes the orifice of the larynx, the voice gains in brilliancy; and when, on the other hand, it is drawn up, the voice immediately becomes veiled.<sup>60</sup>

### The Timbres

These observations relate to another basic principle: the two opposite *timbres* of the voice. García referred to these as *timbre clair* ('clear', 'bright', 'open') and *timbre sombre* ('dark', 'closed'). He explained the physical properties of the *timbres*:

These two opposite qualities are obtained principally through the agency of the larynx and the soft palate. The movements of these two organs are always in a contrary direction. The larynx rises when the soft palate falls, and when the larynx falls, the soft palate rises. The high vault produces the dark *timbres* and the lower arch the clear ones.

The arch rises when we are in the act of yawning, and falls when we are in the act of swallowing.<sup>61</sup>

García also noted that when the larynx lowers and the soft palate rises, the tongue ‘hollows itself deeply along the mid-line from the posterior part, and the isthmus of the throat presents the shape of an oval. If the velum lowers, the tongue rises and broadens at the base, and these two organs can approach each other to the point of touching’.<sup>62</sup>

García observed that *timbre clair* made the voice ‘supple [*déliée*] and penetrating’, and that it exerted the most action in chest register. ‘One obtains the high tones of the chest register more easily in the clear timbre than in the sombre timbre. The former allows the throat all possible flexibility and freedom.’<sup>63</sup> He preferred to use the clear timbre to ‘open up’ the voice in order to develop it. This was especially applicable to the middle portion of the male chest voice, where he said the pharynx tended to darken the tone. García cautioned against ‘covering’ too much or too soon. On the other hand, exaggerated use of the clear timbre could make the voice ‘shrill [*aigre*], squalling [*criarde*], or yelping [*glapissante*].’<sup>64</sup>

*Timbre sombre* was also most effective in the chest register, which it rendered ‘round, full and sweet’. The sombre timbre allowed for ‘all the volume which the individual can impart to the organ.’<sup>65</sup> García differentiated between the terms ‘volume’ and ‘intensity’: ‘volume’ (‘fullness’) was related to the capacity of the resonator, while ‘intensity’ (‘strength’) depended upon air pressure and the amplitude of the vocal cord vibrations. The volume of the tone always required, whatever the degree of intensity might be, ‘a large pharyngeal capacity and the lowered position of the larynx; that is to say, the conditions of the sombre timbre.’<sup>66</sup> The sombre timbre could be used to enhance the upper portion of the chest voice in both male and female voices, but García was careful to recommend ‘rounding’ the tone, rather than darkening it. He also avoided the designation of *voix mixte* (‘mixed voice’) for the use of the upper chest voice in *timbre sombre*.

The tones included between  $e^{1-b^1}$ , when one sings them with full vigor in the chest register and sombre timbre, acquire, in men and women, a dramatic character which has led to an error in the very appreciation of their nature. In place of recognizing in them the influence of the sombre timbre, joined by intensity, in conditions of effect more favorable than anywhere else, people have seen in these tones an exceptional case, and they have designated them by the name *mixed tones*, or *mixed voice*, darkened [*sombrée*].<sup>67</sup>

This application of *timbre sombre* resulted in ‘an admirable penetration [*mordant*], and was effective ‘in passages of great energy, when the same tones in falsetto would be weak and colorless’.<sup>68</sup> The use of sombre timbre to extend the male chest register had been exploited by the tenor Gilbert-Louis Duprez (1806–1896), who in 1837 stunned Parisian opera audiences by singing the high C in chest voice; the famous ‘*ut de poitrine*’ or ‘*do di petto*’. This feat was possible using firm phonation, along with the lowered larynx and expanded pharynx.<sup>69</sup>

Although the use of the *timbres* was most pronounced in the chest register, García noted that ‘the clear and sombre timbres are suitable to the falsetto when they are pure and free [*franc*]; the first gives it brilliance [*éclat*], the second, body and resonance. The action of the sombre timbre on the head voice is very pronounced, and preferable to that of the clear timbre, but the exaggeration of the same timbre dulls the voice and makes it cottony and hoarse.’<sup>70</sup> In any of the registers, the action of the timbres was less conspicuous in the low portion than in the high portion.<sup>71</sup>

García was primarily interested in using the *timbres* for expressive purposes. In order to master the application of ‘all the tints of the voice’, it was necessary for the student to first comprehend the distinct functions of the vibrator and resonator.

The student should thoroughly understand that the ring or dullness [*sic*] of sound is in effect and mechanism, completely distinct from the open and closed *timbres*. The ringing and dullness are produced in the interior of the larynx, independently of the position, high or low, of this organ, while the open and closed qualities of the voice require the bodily movement of the larynx, and of its antagonist the soft palate. Hence, any *timbre* may be bright or dull. This observation is most important for the expressive qualities of the voice.<sup>72</sup>

The two opposite timbres, *clair* and *sombre*, were the principal ones from which all the other ‘tints’ were derived.

In fact, one observes that the voice can assume some widely varied characters, whether one forms the various vowels and the modifications of which each is susceptible, or one produces the tones under the influence of the emotions. There are not any of these numerous characters which one cannot succeed in reproducing at will after a long practice.<sup>73</sup>

The first objective of the singer, however, was to obtain an overall ‘pure tone’, which García considered to possess both ring (*éclat*) and roundness.<sup>74</sup> This quality of tone was traditionally called *chiaroscuro* (although García did not use this term). He explained that ‘the timbres temper and correct each other by making the pharynx mechanically take that medium conformation between the two extremes which gives to the tone all the qualities which it should combine’.<sup>75</sup> In deference to the old Italian tradition, García recalled that his father often said that ‘the beauty of the voice constituted ninety-nine percent of the commanding power [*puissance*] of a singer’.<sup>76</sup>

### Vocal Registers

Finally, of note are García’s conclusions about vocal registers. Here is his classic definition:

By the word register, we understand a series of consecutive and homogeneous tones going from low to high, produced by the development of the same mechanical principle, and whose nature differs essentially from another series of tones equally consecutive and homogeneous produced by another mechanical principle. All the tones belonging to the same register are consequently of the



same nature, whatever may be the modifications of timbre or of force to which one subjects them.<sup>77</sup>

García's observations with the laryngoscope enabled him to determine vocal registers by separate mechanical principles, which were different laryngeal functions. These distinct functions caused him to describe three registers, instead of the two that had been defined by the old Italian school.<sup>78</sup> García named the registers *chest*, *falseto* (which he also called *medium*) and *head*.

Let us here observe, that three registers of voice are generally admitted: chest, falseto, and head. The first begins lower in a man's voice than in a woman's, the second extends equally in both voices, the third reaches higher in the female voice.<sup>79</sup>

In both male and female voices the same portion of the voice (the interval of a twelfth, from  $g-d^2$ ) could be produced in either the chest or falseto register. The head register did not overlap with the adjacent falseto.<sup>80</sup> The distinctive mechanical properties of the registers were described as follows:

[In the *chest* register] the whole length and breadth of the lips (comprising the anterior prolongation, or process of the arytenoid cartilage and the vocal cord) are engaged in the vibrations. As the sounds rise in the register the tension of the lips increases, and the thickness diminishes. Meanwhile the contact of the inner surfaces of the arytenoids will progress and extend to the end of the vocal processes, thereby shortening the vibratory length of the lips. The *medium* or *falseto* is the result of similar actions, save that the lips come into contact, not through their depth, but merely at their edges. In both registers the glottis has its length diminished from the back, by the arytenoids, which advance their contact till their adhesion is complete. As soon as this takes place, the *falseto* ceases, and the glottis, consisting of the vocal cords alone, produces the *head* register.

The resistance opposed to the air by the large surfaces generates the *chest* register, and the feebler opposition presented by the edges produces the *falseto*.<sup>81</sup>

Thus, the chest and falseto registers were contrasted by two distinct modes of vibration, a large versus a small vibrating mass, via the action of the thyroarytenoid (vocalis) muscles. The head voice was distinct from the falseto by its stronger and more complete glottal closure, via the adduction of the vocal processes of the arytenoids. In both the chest and the falseto/medium register there could be full glottal phonation or anterior phonation. However, in the head voice, vibration was confined to only the anterior portion of the vocal cords. Further observations by García included the following:

The chest voice, which possesses much more brilliance than the falseto, also requires a more vigorous pinching of the glottis. This pinching, which one obtains easily with the vowel [i], is the procedure which one must indicate to women in order to make them find the chest voice. The falseto voice, ordinarily the more veiled of the two, also causes a larger expenditure of air. Both registers, for the low tones, place the entire length of the glottis into vibration; then ... the gradual

rise of the tones gives rise to a more and more extensive contact of the cartilages. When the contact is complete, only the tendons continue to vibrate, and there appears, in tenors, a very distinctive range comprised between  $e^1$  and the  $c^2$ , called by some musicians the mixed voice or half chest [*mezzo petto*], and, in women, the head register, which is placed an octave above. Both are produced exclusively by the vocal tendons.<sup>82</sup>

García described how insufficient closure of the glottis by the arytenoid cartilages could cause problems at the upper *passaggio* in both male and female voices, at the point where the vibration would be confined to the anterior portion of the vocal cords. If the arytenoid cartilages did not maintain firm closure as the vocal cord vibrations increased with ascending pitch, then the tone would be unstable through the transition to the upper register. He recommended 'pinching the glottis' to correct this weakness.

At the moment when the [vocal] tendons are about to circumscribe the glottis by themselves, but when the summits of the [arytenoid] cartilages are still involved [*engagés*] in the vibrations, these summits do not always press against each other as firmly as the vibrations require, and, in the tones between  $b^1$  and  $d\#^2$  in women's voices, or between  $b$  and  $d\#^1$  in men's voices, the instability of the glottis causes the voices to be weak and uncomfortable. But, as soon as the cartilages are no longer vibrating, which happens for women at  $e^2$  and for men at  $e^1$ , the tones become pure and perfectly placed. The very pronounced *pinching* of the glottis will be the remedy for the weakness which we have just pointed out.<sup>83</sup>

García's key to *uniting the registers* was glottal control. 'Pinching the glottis' (using anterior phonation) clarified the falseto/medium register, which tended to be breathy, compared to the chest register. Before beginning to join the registers, García would first fully establish the chest register, especially in female voices, where he noted that it was 'generally denied or rejected by teachers'.

... one can approach the study of this register only with the help of profound knowledge, under the threat of ruining the student's voice ... the blending of this register with that of the falseto can be secured only by a long and ably directed labor. It has therefore been judged simpler and more natural to free oneself from the difficulty of studying it.<sup>84</sup>

The chest voice would be generally be 'opened up' and developed in the clear timbre on the vowel [a], and the vowels [i] and [ae] would prove helpful if the student experienced difficulty producing the register. As soon as the chest register was established, work would begin to unite it with the falseto, which García admitted 'nearly always disheartens the student'.

One will practice passing alternately from one register to the other on the tones [ $d^1$ ,  $eb^1$ ,  $e^{21}$ ,  $f^1$ ] without interruption and without aspirating in that passage between registers. This succession should be practiced on one breath: it should be practiced seldom and performed slowly, firmly bringing out the passage, then the speed and the number of repetitions can be increased. At one time the

student should begin with the chest register tone, at another with that of the falsetto. One must not be afraid of accentuating the kind of hiccup which occurs in the passage from one register to the other; only continued practice can first alleviate it, then make it disappear. The use of chest register tones will stop at *f*<sup>1</sup> ... It is necessary to guard against reducing the brilliance and the strength of the chest tones, just as it is necessary to give to the falsetto all the energy which it can tolerate. One would be tempted to think that it would be better to reduce the power of the strongest to the proportion of the weakest. That is wrong; experience shows us that the use of such a procedure would have the result of impoverishing the voice.<sup>85</sup>

We have already discussed the use of the sombre timbre to extend the upper chest register in male voices, via the combination of firm phonation, low larynx and expanded pharynx. In contrast to this robust vocal production, García described a means of singing lightly in the upper register, which was possible in both timbres. This had commonly been referred to as *voix mixte* ('mixed voice'), a term García maintained was incorrect, since it was physiologically impossible to produce the two separate mechanisms of the chest and falsetto at the same time. However, it was possible to achieve a modification of volume, by using a loose phonation combined with a relaxed pharynx. Without the reinforcement of the pharyngeal muscles, the number of harmonic partials would be reduced, thus giving the impression of a softer tone. Furthermore, the tone could be intensified by moderately increasing the pressure of the air.

One can conceive the immense advantage which the male voice can draw from these observations ... They serve to clarify the relatively high notes ordinarily so thick in basses, baritones, and tenors. They indicate to these latter the mechanism to practice [*suivre*] to increase the range of the chest register; they permit the *piano* and *mezza voce* use of this register in the high tones and thus the dispensation of the excessive use of the falsetto tones; finally, they facilitate the union of the registers, etc.<sup>86</sup>

The *mezza voce* in the upper male register was conducive to the *bel canto* repertoire. García preferred this technique over the more strenuous *ut de poitrine*, which he believed could cause 'exhaustion and paralysis of the organ.'<sup>87</sup>

### First Exercises

After learning to blend the chest and falsetto registers, García's students would continue developing the tone with scales on sustained notes, using the *coup de la glotte*, with careful attention to intonation, steadiness and legato.<sup>88</sup> The use of sustained notes on scales was in the old Italian tradition, but unlike his predecessors (including his father), García did not insist that the *messa di voce* be performed on each note of the scale.<sup>89</sup> He thought that the *messa di voce* was too difficult for beginning students: 'The use of the 'messa di voce' requires a singer to be expert in the control of the



**FIGURE 3**

Drawing of Manuel García by Pauline Viardot, framed with the original laryngoscope.

(Reproduced in Mackinlay (1908), *García: The Centenarian and His Times*).

breath and of *timbres*. At this elementary stage it would only cause fatigue.<sup>90</sup>

Indeed, García cautioned his students against singing too much, advising them to practice only for brief periods — at first, for no more than five minutes at a time. The short periods could be repeated four or five times a day, separated by long intervals, and gradually the time would be increased to a half hour. Even after several months the student should not exceed four half-hour practice periods per day, and always these sessions would be separated by long rests. 'It is necessary, therefore, to practice moderately and to precede the physical work with mental work, in order to avoid the gropings, which, instead of being sources of progress, serve only to fatigue the organ, even the most robust.'<sup>91</sup> García also gave precautions related to the singer's diet, exercise, temperature, climate and the acoustics of the practice room.

García provided a long list of directions for practicing vocal exercises. Students were advised to allow time for a long inhalation, and avoid breaths that were 'hurried, noisy, short and jerky'. The exercises would be sung slowly at first, and accelerated only when the passage was 'pure and correct'. The use of the metronome was recommended, in order to maintain 'a perfect regularity in the time and in the values'. Students were reminded not to avoid the bold and pronounced passage from the chest register to the falsetto register, and *vice versa*: 'It is by approaching that difficulty frankly each time it is presented that one will succeed in making it familiar and in conquering it with ease.'<sup>92</sup>

### Developing the Artistry of the Singer

Scale exercises formed the basis of the singer's technique. These progressed slowly, with scrupulous attention to intonation, absolute steadiness of sound, and beauty of *timbre*.<sup>93</sup> Gradually, the scales were embellished with motives, increasing in complexity along with speed of execution. The singer would learn to master various types of vocalisation (*vocalisation, agilità*): 'portamento' (*port de voix, portamento di voce*), 'slurred' (*vocalisation portée, agilità di portamento*), 'smooth' (*vocalisation liée, agilità legata e granite*), 'marked' (*vocalisation marquée, agilità martellata*), and 'staccato' (*vocalisation piquée, agilità picchetata, staccata*), as well as the rarely used 'aspirated vocalisation' (*vocalisation aspirée*).<sup>94</sup>

Vocal passages would also be performed with 'inflections'. To 'inflect' (*nuancer*) the exercise, García had his students divide it into small groups of notes that were vocalised alternately between *forte* and *piano*. The small groups of notes would be further subdivided until successive single notes would rapidly alternate: *f-p-f-p* (etc.). Different types of articulation (e.g., slurred, staccato) would also be alternated as inflections.<sup>95</sup> Performing passages with inflections demanded considerable laryngeal control, coordination and precision.

García's long series of vocal exercises developed the singer's accuracy and agility, and led to the ability to improvise passages over standard chord progressions. Through his father's teaching, García had been thoroughly indoctrinated in the art of vocal embellishment and improvisation. The elder García was a performer during the time when composers expected singers to enhance their music. One of his most famous students, the tenor Adolphe Nourrit, related how García *père* had berated him during a lesson, for being unable to improvise more than three cadenzas: 'A real singer must be able to improvise ten — or even twenty if he so desires. For the only true singer is the one who is a true musician.'<sup>96</sup> García *fils* certainly expected his students to carry on the tradition of improvisation, and therefore he provided numerous explanations and examples of vocal ornaments, including the *appoggiatura*, *gruppetto*, *acciaccatura*, and trill. Interestingly, García did not advocate the traditional method for learning the trill; that of singing one note after the other and gradually accelerating: 'I urge students to seek the trill through the spontaneous trembling of the throat, and not through the progressive movement of two notes.'<sup>97</sup> He recommended practicing this 'trembling of the throat' on intervals wider than the second.

It is necessary to impart to the larynx a regular oscillatory up and down movement, similar to that of a piston working in the body of a pump, taking place in the pharynx ... . Nightingales offer a striking example of the phenomenon which we have just described.<sup>98</sup>

García also described how cadenzas should be performed at the *point d'orgue* ('organ point'); a suspension point in the music, usually occurring at cadences, and indicated by a fermata sign.

Indeed, García's documentation of vocal performance practice is as significant as were his laryngeal observations. In the second part of his *Traité complet*, he provided numerous examples of arias, with notated ornamentation, and an abundance of expressive suggestions inserted above the staff. There are indications such as 'release the tone with an exclamation', 'surprised', 'desperate', 'noisy exhalation', 'caressing voice', 'agitation of hope', 'outburst of the soul', and so on.<sup>99</sup> García also offered advice on articulation and dramatic style in recitatives, as well as in declamatory singing, where 'the diction should not only be correct [*juste*], but noble, lofty [*élevée*]; the affected, trivial and exaggerated forms are suitable only in parody and in comic caricatures [*buffi caricati*].

In order to excel in the declamatory style, it is necessary to have a soul of fire, a gigantic power; the actor should constantly dominate the singer. But one should be careful to approach this style only with moderation and reserve, for it quickly exhausts the resources of the voice.<sup>100</sup>

The wealth of interpretive advice contained in García's treatises is evidence of the way that he *listened* to music, and the level of artistic expression that he expected from his students.

### Student Testimonies

While García received accolades for inventing the laryngoscope, he would have preferred that his main objective — that of preserving the tradition of singing he had learned from his father — not be overshadowed by it. His wanted his real legacy to be found in his students. Since many of them wrote about their lessons with García, we can gather some impressions of his teaching from first-hand experience.

Undoubtedly García's most famous student was Jenny Lind (1820–1887), the 'Swedish Nightingale'. In 1841, when Jenny Lind first sang for García, her voice was suffering badly from over-exertion, and a lack of a good technique. After hearing her perform some scales, he made the fatal pronouncement: 'Mademoiselle, vous n'avez plus de voix.' He then prescribed six weeks of complete vocal rest, after which they began working together. Jenny Lind saw improvement after five lessons, and wrote:

'I have to begin again, from the beginning; to sing scales, up and down, slowly, and with great care; then to practice the shake [trill] — awfully slowly; and to try to get rid of the hoarseness, if possible. Moreover, he is very particular about the breathing.'<sup>101</sup>

Apparently even Jenny Lind was not exempted from García's basic slow-scale treatment. After seven months of lessons with García (March, 1842) she reported:

'My singing is getting on quite satisfactorily, now. I rejoice heartily in my voice; it is clear, and sonorous, with more firmness, and much greater agility. A great, great deal still remains to be done; but the worst is over. García is satisfied with me.'<sup>102</sup>

For his part, García continued to hold Jenny Lind up as a model to all his subsequent students, claiming

that she never needed any instruction repeated twice: 'Jenny Lind would have cut her throat sooner than have given me reason to say, 'We corrected that fault last time'. He also said that he never heard Jenny Lind sing 'even a hair's breath out of tune, so perfect was her natural ear'.<sup>103</sup>

Mathilde Marchesi (*née* Graumann, 1821–1913) was García's most passionate disciple who, like him, was not herself a great singer, but nonetheless had outstanding attributes as a teacher. In 1844 she sang for Pauline Viardot in Vienna, who declared, 'My dear child, you are not on the right road; you should go to Paris and study with my brother, Manuel García'. Marchesi followed Viardot's advice and went off to meet García. She described her first encounter with him:

My heart beat audibly as I mounted the stairs, for my fate depended upon his opinion, and then the celebrated master tried my voice in every way. I had to sing scales, shakes, cadenzas, also several songs, and finally he made me read at sight. My voice, he said, was not strong, but sympathetic, and of a good compass. Instead of there being a question of completing my studies ... he declared that I should have to begin them afresh, and work for several years. I was thunderstruck!<sup>104</sup>

Nonetheless, Marchesi began lessons the next day and continued studying diligently with García for two years.

... García initiated me into the style of the Italian school, as at that time a florid execution was the principal aim of all good singers ... I was obliged to work away at countless scales, arpeggios, etc., and, what was worse still, with the metronome, which sometimes rendered me almost desperate. I need scarcely mention how García's clear, intelligent, and thorough method furthered my artistic efforts. His ideas on the female voice and its development were a revelation to me, and they were the foundation of my own future career.<sup>105</sup>

García obviously was impressed with Marchesi's pedagogical abilities, for in 1847, when he fell from a horse and broke his arm, he entrusted her with a number of his students. Together with her husband, Salvatore (whom she married in 1852), she established singing schools in Vienna, Cologne, and ultimately settled in Paris in 1881. In 1877, Marchesi published her *Theoretical and Practical Vocal Method*.<sup>106</sup> She taught only female students,<sup>107</sup> however, her daughter, Blanche Marchesi, who continued the family school, did teach men as well.

Julius Stockhausen (1826–1906), the renowned German baritone, began studying with García in Paris in 1848. He was immediately impressed with García's tremendous energy: 'What struck me most at the first meeting were the steadiness of his glance, the swiftness of his movement, and the rhythm of his tread'.<sup>108</sup> Stockhausen eventually brought the García school to Germany and Austria, and in 1884 he produced his own singing method, which was clearly based on that of his teacher.<sup>109</sup> Stockhausen had deep respect and admiration for García, and even named his oldest son Emanuel, in honor of him. One of the important techniques Stockhausen learned from García was the trill.

García taught me a trill, which astonishes everyone, and through a very simple means. One has to copy the beat of the nightingale, whose larynx rises up and down like the tones themselves. To strengthen this movement one practices with intervals of a third, fourth and fifth. This is the only way to produce the trill naturally; I learned it without the slightest fatigue within a month; a half hour daily, interrupted by three periods of silence.<sup>110</sup>

Stockhausen studied *Elijah* and *Don Giovanni* with García, who told him 'If you can sing *Don Giovanni*, you can sing anything!'<sup>111</sup>

The prominent British baritone, Sir Charles Santley (1834–1922), another student, affirmed that García avoided using technical terms during his lessons.

Manuel García is held up as the pioneer of scientific teachers of singing. He was—but he taught singing, not surgery! I was a pupil of his in 1858 and a friend of his while he lived, and in all the conversations I had with him, I never heard him say a word about larynx, or pharynx, glottis or any other organ used in the production and emission of the voice. He was perfectly acquainted with their functions, but he used his knowledge for his own direction; not to make a parade of it before his pupils, as he knew it would only serve to mystify them, and would serve no purpose in acquiring a knowledge of the art of singing.<sup>112</sup>

Hermann Klein (1856–1934), critic for the London *Times*, began studying with García in London around 1875, when Klein was about eighteen years old, and García was seventy. García's studio occupied the ground floor of the same house that Klein's family lived in, so Klein overheard many of the old master's voice lessons. Years later, Klein provided a preface and notes for García's *Hints on Singing*, and wrote in defense of the *coup de la glotte*. Like many others, he was impressed with García's energy, keen perception, and patience.

He had just entered upon his seventieth year, but in appearance and bearing he did not seem much past fifty. He had a light, buoyant step, always walked quickly, and had a keen, observant eye, which when he spoke, would light up with all the fire and animation of youth ... To see and hear García teach was ever a source of unqualified pleasure. Even when annoyed by a pupil's lack of ordinary intelligence, he seldom became abrupt or impatient; and he never worried or confused the student with technicalities not actually essential to the accurate understanding of his method ...

[T]hough his own voice might tremble with sheer weight of years, he never, to my knowledge, brought out a pupil whose tones were marred by the slightest shade of *vibrato*. Nor was he at any time guilty of the sin of 'forcing a voice'. I say so with all possible emphasis, because that untrue assertion has been made on various occasions, and it should be contradicted as a libel upon a teacher whose first rule was ever to repress the breathing power and bring it into proper proportion with the resisting force of the throat and larynx. The contrary proceeding would have been altogether inconsistent with the system of the *old* Italian school, whereof García is the last really great teacher.<sup>113</sup>

Another García student, Antoinette Sterling (1841–1904), was an American contralto who married an Englishman, and based most of her performing career in London. She was the mother of Malcolm Sterling Mackinlay, who wrote the very entertaining biography, *García: the Centenarian and His Time* (1908). Sterling had studied with Mathilde Marchesi in Cologne before she began lessons with García in 1868. He cautioned her about singing soprano roles, which would overwork the top register of her voice.

If you continue as you have been doing, do you know what will happen? Look at this piece of elastic. I take it firmly at the two ends and stretch it. What is the result? It becomes thin in the middle. If I were to continue to do this constantly, it would get weaker and weaker, until finally it would break. It is thus with the human voice. Cultivate an extended range, and keep on singing big notes at both extremes, and the same thing will occur which we have seen with the elastic. Your voice will gradually weaken in the middle.<sup>114</sup>

Antoinette Sterling wisely heeded García's advice and stopped using the top half octave of her voice.

Antoinette Sterling's son, Malcolm Sterling Mackinlay (1876–1952), was among García's most enthusiastic pupils. His affectionate biography of his teacher contains many wonderful stories, including an account of García asking a young woman to leave an audition because she was wearing too tight a corset:

Thank you, Miss Etherington; will you please go home at once, take off that dress, rip off those stays, and let your waist out to at least twenty-five inches! When you have done so you may come back and sing for me, and I will tell you whether you have any voice.<sup>115</sup>

A baritone, Sterling Mackinlay never became as accomplished as his mother, although he did sing Gilbert and Sullivan roles with the D'Oly Carte company. He was nineteen years old when he began taking lessons with García in 1896. Mackinlay's numerous recollections of his sessions with García provide vivid accounts of his teaching.

During the lessons he would remain seated at the piano, undertaking all the accompaniments himself. These would be given quietly, but with a firm, rhythmical precision. In the case of the old Italian *arie*, they would generally be played from memory. His white expressive hands would weave elaborate preludes and harmonies into the music, and as one sang he would sit with closed eyes as though his thoughts were far away. But they were not, they were very much present ...

Though over ninety years old, he was quite equal to showing how he wanted notes taken or an effect given by singing the passage himself. On one memorable occasion he sang two entire octaves, commencing at the low A flat, and ending with a high baritone G sharp. It sounds an almost incredible *tour de force*, but it is an absolute fact. The voice naturally trembled with age, though to a surprisingly slight degree. But the timbre, enunciation, and dramatic power were still there, while every phrase revealed the extraordinary fire of his

Spanish temperament. When he had been singing thus one day he laughed and said:

I cannot sing any more. You see how the voice trembles. That you must not imitate. The tremolo is an abomination — it is execrable. Never allow it to appear, even for a moment, in your voice. It blurs the tone and gives it a false effect.

His method may perhaps be summed up in the doctrine that it was *not* a method — in the sense that he had no hard and fast rules, — his object always being to make each pupil sing in the way most natural and involving the least effort. He was careful to impress on one the fact that any visible effort took away from the charm of the singer. If one gave too free play to the lungs, and sang beyond oneself, he would remark, 'You must not forget the advice my father gave me: 'Do not let anybody see the bottom of your purse; never spend all you possess, nor have it noticed that you are at your last resource.'

At the lessons the maestro did not, as a rule, offer either praise or blame. He was, *h o w e v e r*, always encouraging, and treated pupils according to their individual powers. He seemed to know instinctively what they could manage was what was beyond them.

[García said] 'I only tell you how to sing, what tone is good, what faults are to be avoided, what is artistic, what inartistic. I try to awaken your intelligence, so that you may be able to criticise your own singing as severely as I do ... If you find a difficulty, do not shirk it. Make up your mind to master it. So many singers give up what they find hard.'<sup>116</sup>

### Final Years

García's passion for teaching continued literally until his death. His sister, Pauline Viardot, also enjoyed teaching in her old age, and she frequently wrote to her brother, asking for his advice on how to deal with the vocal problems of her students. In one of his replies to her, García discussed '*le voile de la voix*' ('veiled voice') and an amusing way to correct it.

If the vocal organ is *healthy*, the veil and the lack of bite in the voice, in whatever register it might be, indicate that the lips of the glottis do not press themselves against one other sufficiently. Then a great quantity of soundless air escapes and dulls the vibrations like a smoking lamp that darkens the flame. This lack of energy of the lips is especially striking in the falsetto; that is why it is always in that register that one must begin reviving these vibrating organs. And at first I find there's nothing better to do than to imitate ducks: quack, quack, quack. Do not laugh, ducks are great song masters!<sup>117</sup>

In 1894, García's *Hints on Singing* was published in London. The following year he retired from the Royal Academy of Music, where he had taught for forty-seven years. However, he continued to teach private students at his home, 'Mon Abri', in Cricklewood. García's energy and mental acuity amazed everyone who attended his centenary gala in 1905. According to Sterling Mackinlay, he appeared even more youthful in the months following the event.

It was quite impossible to believe that he was indeed in his one hundred and first year. He actually displayed more vivacity than at the time when I was commencing lessons with him, while even in those days my mother had asserted that he seemed more hale and active than he had been when she in turn was studying under him twenty-five years before. Truly as he grew older he appeared to become younger . . .

He continued to rise early, go to bed late, and enjoy walks, drives, theatres, concerts, and dinners as thoroughly as a man forty years his junior . . . His piano continued to be a favourite friend, and frequently he would play for an hour in the forenoon and again in the evening. The selections would be mostly snatches from old Italian operas — especially Rossini, Meyerbeer, and Mozart, — played from memory.<sup>118</sup>

On March 17, 1906, García entered his one hundredth and second year, celebrating his birthday by singing a Spanish song while accompanying himself on the guitar. On July 1 of the same year he passed away, 'calmly and peacefully'.<sup>119</sup>

### How Is Manuel García Regarded Today?

Looking back from the twenty-first century, it is clear that García was indeed 'a man before his time'. This can be confirmed by examining some of his precepts from a modern perspective.

#### *Prephonatory Setting – Coup de la Glotte*

Although voice teachers today may remain wary of the *coup de la glotte*, modern studies have shown that the setting of the arytenoids cartilages prior to phonation is 'the crucial period during which the entire character of the phonation may be determined'.<sup>120</sup> So, García was quite correct in maintaining that a firm onset is the foundation of vocal technique.

#### *Anterior Phonation – 'Pinch of the Glottis'*

Modern technology has also proven that anterior phonation results in an enhanced tone quality. Increasing glottal closure during phonation causes a sharply slanted or 'spiked' wave form that is abundant in high-energy partials. This type of wave form produces a stronger signal within the vocal tract, resulting in better resonance.<sup>121</sup>

#### *Laryngeal/Pharyngeal Position – Timbre*

Today we know about formants and their contribution to vocal quality. García's observation of the timbres corresponds to formant energy. The sombre timbre, with its lowered larynx, results in lower formants and a 'dark' vocal color. It also contributes to the 'singer's formant', or resonance peak around 2800–3200 Hz — the 'ring' in the voice.

The sombre timbre, with its lowered larynx and expanded pharynx, extends the upper chest register by causing the thyroid cartilage to tilt backwards, a position that facilitates the contraction of the cricothyroid muscle.

This reduces the length of the vocal folds, thereby delaying the register shift and permitting active

longitudinal tension to function beyond its normal limits. The pitch can now be raised by an increase of the internal tensors of the vocalis muscles, thus reducing the effective mass while avoiding the maximal length and tension of the chest register.<sup>122</sup>

#### *Mechanical Principles of Registers*

García's observations of the separate mechanical principles that produce registers — the different configurations of the thyroarytenoid muscles, closure of the glottis by the arytenoids, and laryngeal positions — have all been validated. His remarks about the qualitative differences between registers have also been substantiated. We know that the chest register produces a source spectrum richer in harmonic partials than the falsetto. We also know that the chest register has more subglottal pressure, resulting in greater intensity and less breath flow.<sup>123</sup> García demonstrated this to the Académie des Sciences in 1841, when his students sang sustained notes in both chest and falsetto with the metronome.<sup>124</sup>

#### *Glottal Closure/Laryngeal Position for Uniting Registers*

García's advice to 'pinch the glottis' at register transitions is known to be effective, although it is perhaps more often taught in subtle ways, by using closed vowels, for example. Modern scientists have observed an 'open chink' in the glottis that occurs immediately above the register break, especially in untrained voices. In well trained singers, this chink does not appear, resulting in a less noticeable difference in tone quality after the register transition. By increasing the vocal cord adduction, or 'pinching the glottis', the glottal pulses of each register are more similar.<sup>125</sup> And we know that register transitions are smoother when the 'pinching' of the glottis is combined with a fixed position of the larynx.

#### **Manuel García and the Modern Voice Teacher**

García would be gratified to know that today he is better understood and appreciated. At the same time, he would probably be somewhat amused to see that, despite all the technological advances in voice research, many voice teachers remain confused and generally cautious in their teaching. While García would certainly approve of being *careful* and, especially, *patient*, he nonetheless would undertake his teaching in a way that today we would call 'pro-active'. Studying with García would have been an energetic and powerful kineshetic experience — one that certainly could not be replicated outside his studio.

As challenging as it might be to implement García's method of instruction today, we should still consider the application of his techniques, especially with respect to onset and anterior phonation. And regardless of whether or not we would choose to teach the *coup de la glotte*, the timbres, or use his exercises for uniting the registers, we certainly should take the time to read García's richly detailed advice on performance practice.

Although García's method has been criticised for bringing about the end of the *bel canto* empirical tradition, his intention had been only to analyse, clarify, and especially to *preserve* that very tradition — the 'old Italian method' that he had learned from his father. García was passionate about conveying this wisdom to successive generations of singers. His student, Blanche Marchesi, gratefully acknowledged García's vital role in the preservation of *bel canto*.

It was the knowledge gained from my predecessors that made me what I am. To them, too, I owe the facts which showed me the unshakable truth of this unique singing method, a method practiced uninterruptedly for two hundred and twenty years, crowned by never-failing success ... These two hundred and twenty years of continuous teaching and devotion to the training of students in the same method have proved the value of the discovery of Manuel García, the second of that great name.<sup>126</sup>

The teachings of Manuel García are reflections of a long life dedicated to research and discovery. Even now, in his bicentenary year, Manuel García continues to influence the science and art of singing.

### Endnotes

- 1 *Pall Mall Gazette*, London, March 18, 1905.
- 2 Malcolm Sterling Mackinlay, *García: The Centenarian and His Time*, reprint of the 1908 ed. published by W. Blackwood, Edinburgh (New York: Da Capo Press, 1976), 316.
- 3 *Morning Post*, London, March 18, 1905.
- 4 *Ibid.*
- 5 James Radomski, *Manuel García (1775–1832): Chronicle of the Life of a bel canto tenor at the Dawn of Romanticism* (New York: Oxford University Press, 2000), 133–134.
- 6 *Ibid.*, 303.
- 7 One of Manuel del Pópulo Vicente García's last compositions, *L'isola disabitata*, a salon opera for four characters and piano, has recently been transcribed from the autograph manuscript and edited by Teresa Radomski and James Radomski. The work received its modern premiere at Wake Forest University (April 7–8, 2005), and is being published by A-R Editions, Middleton, WI (USA).
- 8 A charming (but untrue) story was passed down in the family; that Joaquina was destined to become a nun; however, she was swept off her feet by García's singing, and away from the convent. See Mackinlay, *García: The Centenarian and His Time*, 11–12.
- 9 'Although the baptismal certificate indicates that the child was the legitimate son of García and Briones, this could not have been the case for García continued to refer to Morales as his wife up until the time he left Spain.', Radomski, 64.
- 10 María García married Eugène Malibran (1781–1836) in New York City on 23 March 1826. After he lost his fortune, she returned to Paris at the end of 1827. Eventually she secured a divorce from Malibran and married the Belgian violinist Charles de Bériot.
- 11 Mackinlay, 95.
- 12 In his speech at García's funeral, Paulin Richard said: 'Anzani, the last of the offspring of that great school which shone so brightly in the seventeenth and eighteenth centuries; Anzani, whose dangerous

presence the most famous castrati dreaded, affectionately took García and revealed to him the secrets of that teaching which had been for so long the glory of Italy', speech printed in the *Revue musicale*, 12 (1832), quoted in Radomski, 289.

- 13 Mackinlay, 27.
- 14 *Ibid.*, 97–98.
- 15 La Comtesse (María de las Mercedes de Santa Cruz y Montsalvo) Merlin, *Maria Malibran* (Brussels: Société Typographique Belge, 1838), quoted in Radomski, 263.
- 16 Mackinlay, 94.
- 17 In addition to various recordings of her songs, Pauline Viardot García's salon opera, *Le Cendrillon*, is currently available on the *Opera Rara* label (ORR 212, <http://www.opera-rara.com> 2000).
- 18 *The Actors' Art: a practical treatise on stage declamation, public speaking and deportment* (London, 1882); *The Singing Teacher's Note Book, a short synopsis of voice production for teachers of singing and examination candidates* (London, 1910); *A Guide to Solo Singing. Containing full instructions on singing, with a detailed analysis of some well-known works and songs* (London, 1914).
- 19 *García's Treatise on the art of singing; A compendious method of instruction, with examples and exercises for the cultivation of the voice*. Edited by Albert García (London, 1924).
- 20 Robert Dale Owen, *Twenty-Seven Years of Autobiography. Threading My Way* (New York: G.W. Carleton, 1874; repr. New York: Augustus M. Kelley, 1967), 260–263. Quoted in Radomski, 192–193.
- 21 Radomski, 199.
- 22 During this time Lorenzo da Ponte was teaching Italian language and literature at Columbia College, and probably he encouraged the New York premiere performance of *Don Giovanni*, in which García père sang the title role and Manuel Jr. sang Leporello.
- 23 Mackinlay, 64, 85.
- 24 *Ibid.*, 90.
- 25 *La Revue musicale*, 4 (1829), 282: 'We advise this young man, who is otherwise interesting in several ways, to follow another career.' Quoted in Radomski, 244.
- 26 Mackinlay, 100.
- 27 Speech of M. Castil-Blaze, *La Revue musicale*, 12 (1832), 158–160. Quoted in Radomski, 291–292.
- 28 Speech of Paulin Richard, *La Revue musicale*, 12 (1832), 158–160. Quoted in Radomski, 289–290.
- 29 *Traité complet de l'art du chant* (Paris, 1840–1841).
- 30 Manuel García, *Complete Treatise on the Art of Singing: Part One*, translated and edited by Donald Paschke (New York, Da Capo Press, 1984), xvii.
- 31 Mackinlay, 204.
- 32 *Ibid.*
- 33 *Ibid.*
- 34 'Observations physiologiques sur la voix humaine' (Paris, 1861).
- 35 Margaret Kennedy-Dygas, 'Historical Perspectives on the 'Science' of Teaching Singing, Part III: Manuel García II (1805–1906) and the Science of Singing in the Nineteenth Century', *Journal of Singing*, 56/4 (2000), 23–30.
- 36 Mackinlay, 205.

- 37 Manuel García, *Hints on Singing*, translated from the French by Beata García; new and revised edition by Hermann Klein (London: E. Ascherberg, 1984), 5.
- 38 Manuel García, *Complete Treatise on the Art of Singing: Part Two*, translated and edited by Donald Paschke (New York, Da Capo Press, 1975), 152.
- 39 For a detailed explanation of the physiology and acoustics of García's theories of vocal cord closure, timbres, and registers, read the following:  
James A. Stark, *Bel canto: A History of Vocal Pedagogy* (Toronto: University of Toronto Press, 1999)  
James A. Stark, 'García in Perspective: His *Traité* after 150 Years', *Journal of Research in Singing*, 15/1 (1991), 2–55.
- 40 García, *Hints on Singing*, 13–14.
- 41 García, *Complete Treatise on the Art of Singing: Part One*, 42.
- 42 Ibid., 44.
- 43 Ibid., 41–42.
- 44 Ibid., 44.
- 45 Ibid., 39.
- 46 Ibid., 27.
- 47 'As [Franklyn] Kelsey said, 'if Manuel García had only hit upon the idea of calling the *coup de la glotte* the *caresse de la glotte*, a great deal of subsequent misunderstanding might have been averted'. Quoted in Stark, 'García in Perspective: His *Traité* after 150 Years', 11.
- 48 Ibid., 13. Stark prefers the term 'firm onset', 'which relates to both the prephonatory glottal setting and the glottal setting during phonation'.
- 49 Hermann Klein (1856–1934), a student of García, who was a critic for the London *TIMES*, and editor of the 1894 edition of *Hints on Singing*, attended Maurel's lecture with García. He later persuaded García to write in defense of the *coup de la glotte*.
- 50 George Bernard Shaw, *Music in London, 1890–94, Criticisms contributed week by week to the world, in three volumes*, Volume II (London: Constable & Co., 1932; reprint New York: Vienna House, 1973), 198.
- 51 For discussions of the controversy over the *coup de la glotte*, read the following:  
Stephen F. Austin, 'The Attack on the *coup de la glotte*', *Journal of Singing*, 61/5 (2005), 525–529.  
Donald V. Paschke, 'Manuel García: Method and Controversy, Part II: the Controversy', *Journal of Research in Singing*, XI/2, (1987), 51–55.  
Craig Timberlake, 'The Case of Manuel García, II', *The NATS Journal*, 46/2 (1989), 19–22.
- 52 Henry Holbrook Curtis, *Voice Building and Tone Placing: Showing a New Method of Relieving Injured Vocal Cords by Tone Exercises* (London: J. Curwen & Sons, 1909), 159.
- 53 Francesco Lamperti (1813–1892) and his son, Giovanni Battista Lamperti (1839–1910).
- 54 William Earl Brown, *Vocal Wisdom: Maxims of Giovanni Battista Lamperti* (New York: Taplinger Publishing Company, 1957, 1931), 6.
- 55 Enrico Caruso and Luisa Tetrazzini, *Caruso and Tetrazzini on the Art of Singing* (New York: Dover Publications, Inc., 1975, originally published by New York: Metropolitan Company Publishers, 1909), 23.
- 56 Ibid., 53.
- 57 Louis Biancolli, *The Flagstad Manuscript* (New York: G.P. Putnam's Sons, 1949), 20–22.
- 58 Stark, 'García in Perspective: His *Traité* after 150 Years', 28.
- 59 García, *Complete Treatise on the Art of Singing: Part One*, 1.
- 60 Manuel García, 'Observations on the Human Voice.' *Proceedings of the Royal Society* 3: 399–408. Reprinted in John Large, ed., *Contributions of Voice Research to Singing* (Houston: College Hill Press, 1980), 132.
- 61 García, *Hints on Singing*, 11.
- 62 García, *Complete Treatise on the Art of Singing: Part One*, lvii.
- 63 Ibid., 30.
- 64 Ibid.
- 65 Ibid., 31.
- 66 Ibid., lxiv.
- 67 Ibid., lii–liii.
- 68 Ibid., 31.
- 69 Ibid., xxix–xxxii. The technique used by Duprez was described to the Académie des Sciences by the French biologists Diday and Pétrequin in 1840, seven months before García's 'Mémoire sur la voix humaine' was submitted, and therefore they received credit for observations that García had already made. However, a letter that was later read to the Académie stated: 'Mr. García established that the lowered and fixed position of the larynx has been known to him since 1832, and that since that time he has not stopped propagating that fact by teaching it to all his students.'
- 70 Ibid., 31–32.
- 71 Ibid., lii.
- 72 García, *Hints on Singing*, 12.
- 73 García, *Complete Treatise on the Art of Singing: Part One*, lx.
- 74 Ibid., 37.
- 75 Ibid., 32.
- 76 Ibid., 36.
- 77 Ibid., xli.
- 78 Tosi (1743) and Mancini (1774) had described two registers; *voce di petto* and *voce di testa*. Before his observations with the laryngoscope, García discussed two registers in the *Mémoire sur la voix humaine* (1841): the chest (*registre de poitrine*) and falsetto-head (*registre de fausset-tête*).
- 79 García (ed. Large), 'Observations on the Human Voice', 133.
- 80 García, *Complete Treatise on the Art of Singing: Part One*, xliii.
- 81 García, *Hints on Singing*, 8.
- 82 García, *Complete Treatise on the Art of Singing: Part One*, 25.
- 83 Ibid., 25–26.
- 84 Ibid., 50.
- 85 Ibid., 50–51.
- 86 García, *Complete Treatise on the Art of Singing: Part Two*, 161–162. See also Stark, *Bel canto: A History of Vocal Pedagogy*, 73–75.
- 87 Ibid., 163.



- 88 García, *Complete Treatise on the Art of Singing: Part One*, 12–13.
- 89 One can compare the methods of the two Garcías; *père* vs. *fiis*. The *Exercises and Method for Singing* (London, 1824) by Manuel del Pópulo Vicente García begin with a series of diatonic scales on sustained notes, each clearly marked with a *messa di voce*. Similar exercises in the treatises of García *fiis* omit these markings.
- 90 García, *Hints on Singing*, 14.
- 91 García, *Complete Treatise on the Art of Singing: Part One*, 6–9.
- 92 *Ibid.*, 12–14.
- 93 García, *Hints on Singing*, 14. The principal qualities of a good tone: perfect intonation, absolute steadiness of sound, and beauty of *timbre* were considered as ‘the tripod of voice production.’
- 94 García, *Complete Treatise on the Art of Singing: Part One*, 54–62.
- 95 *Ibid.*, 106–112.
- 96 Ernest Legouvé, *Soixante ans de souvenirs* (Paris: J. Hetzel, 1886), i. 241–242. Quoted in Radomski, 266–267.
- 97 García, *Complete Treatise on the Art of Singing: Part One*, 163.
- 98 *Ibid.*, 160, 162.
- 99 García, *A Complete Treatise on the Art of Singing: Part Two*, 217–235.
- 100 *Ibid.*, 163, 200–201.
- 101 Henry Scott Holland and W.S. Rockstro, *Memoir of Madame Jenny Lind-Goldschmidt: 1820–1851* (New York: Charles Scribner’s Sons, 1891), 115–116.
- 102 *Ibid.* 116–117. Mackinlay, 148, 288.
- 103 Mathilde Graumann Marchesi, *Marchesi and Music: Passages from the life of a famous singing-teacher* (New York and London: Harper & Brothers, 1897), 22–23.
- 104 *Ibid.*, 24–25.
- 105 The Marchesi vocal method exercises began with sustained notes on an ascending chromatic scale, each with ‘a resolute articulation or ‘stroke of the glottis’. Mathilde Graumann Marchesi, *Theoretical and Practical Vocal Method*. Reprint of 1877 edition (New York: Dover, 1970), 1.
- 106 Among Marchesi’s famous students were Dame Nellie Melba (1861–1931), Emma Eames (1865–1952), and Emma Calvé (1858–1942).
- 107 Mackinlay, 167.
- 108 Julius Stockhausen, *A Method of Singing*, transl. by Sophie Löwe (London: Novello and Company, 1884). On page 28 of Stockhausen’s method, there are exercises entitled ‘Shocks of the Glottis with a Fixed Larynx’. Unlike García, Stockhausen did advise the use of the *messa di voce* at the beginning of study (Chapter I, p. 15), which had been the practice of García *père*, and the old Italian school.
- 109 Julia Wirtz, *Julius Stockhausen* (Frankfurt am Main: Verlag Englert und Schlosser, 1927), quoted in Craig Timberlake, ‘The Quintessential Lieder Singer Julius Stockhausen (1826–1906)’, *The NATS Journal*, 46/4 (1990), 19.
- 110 *Ibid.*
- 111 Sir Charles Santley, *The Art of Singing* (London: Macmillan, 1908), 24. Quoted in Craig Timberlake, ‘The Past as Prologue’ *The NATS Journal*, 46/1 (1989), 21.
- 112 Hermann Klein, *Thirty Years of Musical Life in London, 1870–1900* (New York: The Century Co., 1903), 34–37.
- 113 Mackinlay, 220–221.
- 114 *Ibid.*, 247–248.
- 115 *Ibid.*, 280–286.
- 116 Letter from Manuel García to Pauline Viardot (no date, ca. 1900?), Papiers VIARDOT. Tome I, Lettres adressées à Pauline Viardot, Bibliothèque nationale, BnF fol.158.
- 117 Mackinlay, 320–321.
- 118 *Ibid.*, 322, 324.
- 119 Wilber J. Gould and Hiroshi Okamura, ‘Inter-Relationships Between Voice and Laryngeal Mucosal Reflexes’, *Ventilatory and Phonatory Control Systems*, ed. Barry D. Wyke (London: Oxford University Press, 1974), 359. Quoted in Stark, ‘García in Perspective: His *Traité* after 150 Years’, 13.
- 120 Stark, ‘García in Perspective: His *Traité* after 150 Years’, 25.
- 121 *Ibid.*, 26.
- 122 *Ibid.*, 19.
- 123 Manuel García, ‘Memoire sur la voix humaine’, *Comptes-rendus des séances de l’Académie des sciences* (April 12, 1841). Transl. by Donald Paschke, in García, *Complete Treatise on the Art of Singing: Part One*, xxviii–xxix.
- 124 Stark, ‘García in Perspective: His *Traité* after 150 Years’, 21.
- 125 Blanche Marchesi, *The Singer’s Catechism and Creed* (London: J.M. Dent & Sons, 1932), viii–ix.

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Teresa Radomski and her brother James Radomski have completed a critical edition of *L'isola disabitata*, a salon opera by Manuel del Pópulo Vicente García (1775–1832), which is being published by A-R Editions (Middleton, Wisconsin). Ms. Radomski recently presented this bicentenary tribute to Manuel Patricio Rodríguez García (1805–1906) at the International Congress of Voice Teachers 6th Conference in Vancouver, British Columbia.