

## Introduction: Of Modern Operatic Mythologies and Technologies

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On the rising garden plot of flowery banks, a flock of birds . . . [were] whetting their beaks and pluming their feathers . . . Lord Ewald had scarcely taken a step or two when the whole flock turned their heads toward him, stared at him at first in silence, and then burst all at once into a cackle of laughter, within which both male and female voices were heard.

Lord Ewald looked once more on the Android [*l'Andréide*]. Under Hadaly's peaceful breathing the pale silver of her breast rose and fell. Suddenly [a] piano began to play the rich harmonies of a prelude, the keys moving by themselves as if under pressure from invisible fingers. And the gentle voice of the Android began to sing to this accompaniment, her voice coming from beneath the veil with intonations of supernatural voluptuousness.

Then, on the flower-crowded slopes, there began a kind of witches' sabbath . . . Frightful squawking noises, as of random visitors, poured from the throats of the birds; there were cries of admiration, questions either banal or preposterous, canned laughter and applause, occasional deafening snorts as of noses being blown, offers of money.

Suddenly the pure voice of a nightingale rang through the shadows . . . The flow of delicious melody terminated in a ripple of melancholy notes. This voice, coming straight from nature and recalling the forests, the skies, and the immensity of space, seemed strange indeed in this place.<sup>1</sup>

This unusual passage is one of the most important climaxes in *L'Ève future*, or “Tomorrow's Eve” – a novel that the French writer Auguste Villiers de l'Isle-Adam began working on not long after the invention of sound recording, in 1877, and which he continued to work on as sound recording itself was being developed. As the passage suggests, the novel centers on the relationship between two figures: a lovelorn British aristocrat called Lord Celian Ewald and a beautiful, beautifully voiced, though also mechanical woman called Hadaly – though not the first representation of an artificial human, *L'Ève future* makes one of the first literary uses of the word “android,” a word Villiers uses in a feminine form, “l'andréide.” Hadaly is the creation of none other than the American inventor Thomas Edison, who is the third important figure in the novel and whose New Jersey home Villiers imagines as a palace of technological marvels. The futuristic devices with which Edison is surrounded include not only telegraphs, phonographs, and various forms of electric light – the three main inventions with which the real Edison was associated – but also flash photography, an early form of cinema, a radio telescope, a fax, and even what is effectively a computer. In this climactic scene, the inventor takes Lord Ewald, a friend and investor, to an “underground Eden” (*Éden sous terre*) beneath

his estate where he keeps the most advanced and provocative of his creations. In a setting of lush but artificial exotic flora and fauna, to the accompaniment of a mechanical (or “player”) piano, and after having been introduced by a chorus of raucously voiced mechanical birds, Hadaly sings an aria for them.<sup>2</sup>

Villiers’ *L’Ève future*, which makes few references to actual historical singers, and which was completed before sound recording began to be exploited for opera – which would not be until the later 1890s, twenty years after the phonograph was first invented<sup>3</sup> – might seem an unlikely starting point for this collection of essays, in which the authors uncover and explore some of the relationships between the operatic soprano and technology from the Romantic era to the present. It might also seem a far from reassuring one. Even more than his colleagues in the literary and artistic movement with which he was associated, French Symbolism, Villiers had misogynistic tendencies, a suspicion and even horror of women that are expressed in both the content and the imagery of the novel. This includes *L’Ève future’s* plot, which hinges on Edison’s decision to offer Hadaly to Lord Ewald as a more perfect, “ideal” version of the talented but spiritually bankrupt small-time opera singer, Miss Alicia Clary, with whom the aristocrat has been having a relationship. Ewald accepts Edison’s offer, and though the arrangement is shortlived, it is accompanied by all kinds of musings about the limitations of living, flesh-and-blood women.<sup>4</sup> And yet for all its obscurities and questionable moral qualities, *L’Ève future* can serve as an introduction to some of the subjects and issues that the authors explore in this collection. The first of these is the tendency to imagine the most powerful and successful of opera’s female singers in a larger-than-life form: that of the “diva.”

The word “diva,” as is well known, comes from the Italian and for the first five hundred years of its history meant “goddess,” particularly the many female deities of the classical tradition. With the rise of opera, which in the seventeenth and eighteenth centuries drew heavily on classical mythology and featured gods and goddesses on its stage, the word began to acquire an operatic usage. A particularly important period was the one that this book takes as a starting point, the heyday of European Romanticism in the 1820s and 1830s. Although the words “diva” and “divine” were used to refer to singers before this, it was only in the 1820s and 1830s that “diva” began to be used to evoke a female opera singer of extraordinary and even otherworldly vocal power and beauty. It was also only in the 1820s and 1830s that “diva” began to be associated with the extraordinary and even otherworldly effect of hearing or simply being in the presence of such a singer. Dating from half a century afterward, Villiers’ description of Hadaly’s performance in Edison’s part-exotic, part-mechanical underworld is exactly in this mode. Hadaly sings her aria, a dark and forceful warning about her attractions, in a voice that Villiers describes in the passage and elsewhere as “deliciously grave,” “supernatural[ly] voluptuous,” “sensitive and . . . exquisite,” and even simply “*the Voice*” (la Voix). And on

hearing her, Lord Ewald finds himself “overcome by a kind of stupefying amazement” (*envahi . . . par une sorte de surprise terrible*).<sup>5</sup>

In the 1820s and 1830s, this new operatic meaning was primarily explored by journalists, particularly journalists writing about the highly voice-centered operatic genre of bel canto – Rossini, Bellini, and Donizetti – and about star bel canto sopranos such as Giuditta Pasta and Maria Malibran. As James Davies has shown, Paris as much as the major Italian operatic centers of Milan, Venice, and Naples was an important setting for such explorations. Davies has written about the repeated use of “diva” by a young generation of French critics responding to performances by Pasta and others at Paris’s famed Italian opera house, the Théâtre-Italien. He has also written about the first uses of the word in literature, which are thought to have been made by the French writer and critic Théophile Gautier.<sup>6</sup> In Gautier’s poem “Albertus” (1831), which includes one of the earliest of such uses, the protagonist falls in love with a local beauty who, though not a professional singer, is described as a diva and in particular as a kind of amalgam of the radiance and sweet-voicedness of Malibran and of one of Malibran’s contemporaries, the Prussian soprano Henriette Sontag. That this diva’s charms are superficial, and that she is in fact a diabolically transformed witch, is only one of the first and more extreme examples of what will turn out to be an important dimension to the diva in her operatic form, which is to say her association with some profoundly negative qualities.<sup>7</sup> The most well known of these qualities is what another French writer, the twentieth-century psychoanalytically inclined commentator Michel Poizat, has described as the diva’s “mad law”: her association with difficult and temperamental behavior, whether egotism, extreme vanity, competitiveness, unpredictability, and even cruelty and spite.<sup>8</sup>

I begin with Villiers’ *L’Ève future* and with some of the negative as well as the positive qualities associated with the diva because, as I hope will be becoming clear, there was a good deal more at stake in the emergence of the idea than the enthusiasms of some young French critics writing about a group of world-renowned Italian (or Italian-trained) sopranos. As Davies, Susan Leonardi and Rebecca Pope, Elisabeth Bronfen and Barbara Straumann, and others have pointed out, the idea or figure of the diva has since Gautier’s time been one of the most important ways in which first a European, then an American, and now an increasingly international, globalized culture has dealt imaginatively with the threat and promise of women singing, and singing powerfully, creatively, and in public. The diva has also been one of the most important ways in which these cultures have dealt with a host of related circumstances and ideas, including the very existence of female subjectivity and female self-expression, the allure of the female voice and female voices and bodies in performance, the allure of *music* and musical performance, vocal and other forms of beauty, human identity and identification, listening and community, sexuality, celebrity, and even life, death, and the afterlife (or the lack

of one).<sup>9</sup> The operatic soprano in her mythologized form has, in other words, for the last two hundred years enjoyed an extraordinarily wide-ranging significance, and the authors in this collection seek to address the full range of this significance, including the stories, imagery, and clichés generated by a sense of threat. In doing so, and like many feminist and feminist-minded scholars before them, they challenge these clichés' truth value and diminish their force. But the authors here also celebrate the other side of what Leonardi and Pope have described as the "politics" of the diva.<sup>10</sup> This is the idea or figure of the diva neither as witch-like nor as merely neutrally extraordinary (if such a thing as "neutral extraordinariness" is possible), but rather as capable of serving as a symbol for women's empowerment.<sup>11</sup>

This more positive way of thinking about the diva also had its origins in the nineteenth century and in literature, this time in the middle of the century and the work of novelists such as George Sand and George Eliot. In their novels *Consuelo* and *Daniel Deronda*, Sand and Eliot rejected the idea of the successful female opera singer as – to borrow from Eliot – somehow a "monster," but rather imagined her as a woman who chooses to live "a large life," one filled with "excitement," "spiritual intoxication," "genius," "will," and "freedom."<sup>12</sup> As with Gautier, and with many representations of the diva that would follow, Sand and Eliot were inspired by a case of real-life operatic extraordinariness. This was not a generation of singers, but the more unusual figure of the French mezzo-soprano (and Malibran's younger sister) Pauline Viardot. Based for most of her life in Paris, Viardot created the role of Fidès in Giacomo Meyerbeer's *Le Prophète* (1849) and was also important on a larger cultural level, influencing the work of several generations of writers, composers, and musicians.<sup>13</sup>

As my discussion of Villiers' *L'Ève future* may already have suggested, by the end of the nineteenth century this more positive and indeed celebratory approach to the diva had waned, at least in literature.<sup>14</sup> However, the diva herself as an idea or figure had begun to appear in other settings, and as she did the positive approach continued to be explored. In the second half of the century, the diva appeared in spoken theater (including in the form of the "divette," or "little diva," a word coined to refer to the stars of popular theater and musical hall).<sup>15</sup> In the early twentieth century, she appeared in cinema. Indeed, the first female stars of cinema, when film was still silent, were not only often characterized as divas, but were sometimes in fact opera singers themselves.<sup>16</sup> From this point, the appearances would only proliferate. By the middle of the twentieth century the word had begun to be used in popular music, to refer to the female stars of jazz, rock, and then R&B, pop, and hip-hop. And by the end of the century female performers had begun to engage with the idea, in songs, albums, and creative styles.<sup>17</sup> As Leonardi and Pope have pointed out, by our early twenty-first century the idea of the diva has become so "omnipresent" as to be "mundane," appearing or being referenced in a range of settings, from performance art to nail salons.<sup>18</sup> So too has Sand and Eliot's

conception of her – and now not only as a symbol of empowerment for women, but for a variety of marginalized and disenfranchised groups (the gay community, women of color, those struggling with gender and body issues, and others).<sup>19</sup>

Although the essays in this collection focus on opera, they are very much informed by the diva's omnipresence and mundaneness: by her seeming all-pervasiveness in twenty-first century cultural life. They are also informed by a number of academic trends and developments that, beginning in the 1990s, brought about a kind of scholarly version of Sand and Eliot's reimagining, the idea or figure of the diva becoming for a while central to academic writing on opera, and a version of her that was symbolic and empowering. In her book *Unsung Voices*, for example, Carolyn Abbate took the powerful operatic soprano understood phenomenologically – as sheer voice and “resonating intelligence” – and made her the focus what is still a highly influential way of thinking about opera.<sup>20</sup> Writers such as Wayne Koestenbaum and Terry Castle explored the diva's long-standing fascination for gay and lesbian opera lovers, and some of their ideas became the basis for a flourishing queer studies of opera.<sup>21</sup>

As the original reviews of Abbate and Koestenbaum suggested, there were limitations as well as a thought-provoking richness to these academic reimaginings of the diva, most obviously the fact that they tended to neglect or even simply ignore the subject of real sopranos and the struggles and professionalism that seem always to lie behind the myth-making.<sup>22</sup> And when it comes to the diva's omnipresence in twenty-first century culture, there are of course also limitations, beginning with the fact that the diva seems partly to be omnipresent today because of what could be described as her late capitalist, neo-liberal, post-feminist potential. To put it another way: the powerful aesthetic allure that the diva has always had, and the feminist and other empowering messages with which she has become associated, have in the twenty-first century been transformed into what is too often little more than a way of selling us things.<sup>23</sup> For these and other reasons, though the authors here celebrate the positive side of the diva, they do so cautiously, with reservations, and above all by introducing a new term or category to the discussion. This term or category is the second most important subject in this collection, and one that brings me back to *L'Ève future*: technology and technological innovation.

Technology and technological innovation are subjects that dominate Villiers' *L'Ève future*, most obviously in the figure of Hadaly, the mechanical woman created by the fictional Edison who is gifted not only with great beauty, but also with a beautiful and operatically trained voice. In terms of machines and techniques, *L'Ève future* is dominated by the technology of sound recording, in the form of the many phonographs and phonograph-like devices that appear throughout the novel. This dominance extends to Hadaly herself, for as we find out several chapters after the scene of her underground performance, she is effectively a phonograph in female form.

As Edison explains in a long section of the novel dedicated to her construction, the different mechanisms of which Hadaly consists include, at her center, a pair of phonographs made of “virgin gold.” These phonographs pass between them metal plates (*feuilles métalliques*) on which Edison has had recorded the words and expressions of some of the most important thinkers and writers of the period. These plates in turn form part of a larger “sympathetic nervous center” (*le grand sympathique*) in the android’s core. This “nervous center” includes a pair of steel needles, which reproduce the words and expressions in a voice of one’s choice, and a cylinder that Edison likens to a barrel organ, which is responsible for the production of her “*gestures . . . bearing . . . facial expressions . . . [and] attitudes.*”<sup>24</sup> In imagining Hadaly in this way, not merely as an operating android but in particular as a kind of phonograph, Villiers achieved an important first, becoming one of the first writers to imagine a future for sound recording that would centrally involve opera. Not only that, but in imagining Hadaly as an unusual kind of phonograph, one that is capable of recording and reproducing not only sound but also gestures and movement, Villiers produced a strange Symbolist premonition of what would happen to the relationship between sound recording and opera over the following one hundred and thirty years. What would happen is that the relationship would become ever more close and involved, to the extent that, at least since the 1950s, if not earlier, opera and operatic expression have primarily circulated in the form of sound recordings (rather than in the form of live, in-the-theater performance). The relationship would also come to involve other technologies and media, the most important of them capable of circulating not only opera’s sounds but also its physical and visual aspect. These include film, television, and video in the twentieth century and our early twenty-first century’s high definition simulcasts and YouTube clips.<sup>25</sup>

As scholars have noted, the conclusions that *L’Ève future* draws about technology are ultimately negative. Villiers revels in descriptions of machines and gadgetry, and his version of Edison argues for the ability of his inventions to provide an alternative to “mediocre . . . Reality,” putting these arguments into practice in his substitution of Hadaly for his friend Lord Ewald’s lover.<sup>26</sup> However, the inventor is also depicted as troublingly emotionally detached, and though Ewald and Hadaly enjoy a brief moment of happiness, it ends when Hadaly is destroyed during the journey back to Ewald’s British estate. Ewald is left inconsolable and in the final paragraph of the novel Edison looks up with a shiver to the heavens, whose powers, Villiers implies, he has attempted to usurp.<sup>27</sup> So far as technology and opera is concerned, the conclusions that *L’Ève future* draws are also negative. This is already suggested in the passage with which I began, the scene of Hadaly’s performance in Edison’s part-exotic, part-mechanical underworld (see the quotation above).

Hadaly’s singing in the scene is characterized as extraordinary and diva-like, but it provokes nothing more than noisy squawking – indeed, a “witches’ sabbath” – from the mechanical birds that surround her. This cacophony is followed by an even more



significant avian reaction, a “flow of delicious melody” from the “pure voice” of what seems to be the only living thing in the place, a nightingale. The opposition that is very clearly set up is between Hadaly’s and the birds’ artificially produced singing; and, from the nightingale, what we would today describe as “live” and technologically unmediated vocal expression. The opposition is also between artificially produced singing as beautiful but limited in the aesthetic and musical impact it is capable of having – Ewald is deeply moved, but the birds are capable of no more than noisy squawking; and live and technologically unmediated vocal expression as pure, natural, beautiful, and even, as Villiers puts it a page later in the novel, “the work of God” (*l’oeuvre de Dieu*).<sup>28</sup> And in setting up these oppositions, Villiers achieved another important first, becoming one of the first writers to express a particular kind of negativity about technology and opera. With his image of the lone, sweetly voiced nightingale, that is, he produced a premonition of the way in which, even as it became more involved with technology, the operatic world would become oriented around the idea that the identity and essence of the art was live and technologically unmediated song.<sup>29</sup>

The authors in this collection in effect uncover what Villiers foresaw: in chapters that focus on stagecraft and theatrical lighting, journalism, the telephone, sound recording, and visual media from the painted portrait to the high definition simulcast, they explore the ever more close and involved relationship that opera has had with technology from the Romantic era to the present. The authors of course take as their starting point the period fifty years before Villiers was writing, the heyday of Romanticism in the 1820s and 1830s. This is a period that turns out to be as important for technology as it is for opera and singing, for the 1820s and 1830s have long been thought to represent an important turning point in the history of technology, and even when “technology” in the modern sense first emerged.

As historians of technology have long argued, the invention of sound recording in 1877 was an important breakthrough, but it was only one in a series of developments in the creation of devices that could mechanically store and reproduce data, one of the first of which was the photographic camera, which dates from the 1820s.<sup>30</sup> These devices in turn formed part of a larger proliferation of mechanical and machine-related activity that had been taking place since the end of the previous century and that is associated with the industrial revolution and the rise of capitalism.<sup>31</sup> By the 1880s and the time of *L’Ève future*, this activity and the machines and techniques associated with it had begun to be powered by electricity, leading some to speak of the years from around 1880 to the First World War as a “second,” electrical industrial revolution.<sup>32</sup> The 1900s, 1910s, and 1920s saw the rise of electronics-based technologies, including the creation of the “new media” of radio and television.<sup>33</sup> And the first developments in our “digital age” took place as early as the 1940s, though this age is usually dated from the 1980s and 1990s. The 1980s and 1990s have also been spoken of as ushering in a “third” industrial revolution, one that is characterized not only by the dominance of digital technologies, but also

by the fact that our relationships with technology have become ever more socially and culturally all-pervasive and defining.<sup>34</sup> As this brief summary will hopefully suggest, in other words, the 1820s and 1830s were not only an important turning point, but also the beginning of a period that is thought to have a major consistency and significance in the history of technology. By starting in these decades, the authors are able to relate the changes taking place in opera to this larger history.

But the authors in this collection not only uncover what Villiers foresaw as regards opera and technology. They also in effect challenge and critique his negativity. For, as I have already argued, Villiers was ultimately very negative about technology and opera, and in particular about technology's involvement in the vocal domain. And, in this, he foresaw the extent to which the operatic world would also develop what I would like to suggest is a fundamentally negative – or at least profoundly ambivalent – attitude toward technology. This negativity has been expressed in a number of ways over the last two hundred years.<sup>35</sup> I would like to suggest that it is expressed most clearly in the commitment that the operatic world has developed to the idea that the identity and essence of the art is live and technologically unmediated song. I should immediately rephrase this using the terms in which this commitment has been expressed in the last *twenty* years, during debates about the use, beginning in the 1990s, of sound amplification in some major opera houses. According to these debates, the “real thing” of opera, its “magic” and its “essence,” is live and unmediated singing, and this “reality” needs be protected from the “fakery,” “electronic intrusion” and vocal “hoarseness, tremulousness and rasp” that risks being introduced into the art if the use of amplification continues to grow.<sup>36</sup>

The authors here have no agenda so far as the controversial issue of amplification in opera is concerned – and, if they did, it would probably be highly traditional. Nor are they naive about the ways in which technological and media developments in opera in the last twenty, two hundred, or even four hundred years (that is, from the beginnings of the art form) have been related to and often a direct result of commercial pressures. A technophobic (or “techno-ambivalent”) stance has been and continues to be a way of expressing resistance to those pressures. The authors are nonetheless keen to pursue alternatives to negativity, and they do so not only by making technology a subject of sustained enquiry, but also by exploring the potential for opera of some of the approaches to technology that have been developed in other disciplines. One of the most important of these is the idea that technology may concern the material and the inorganic – according to the simplest definition, the concept means “tools and their uses” – but it is also profoundly human and the product of human minds and bodies. It therefore cannot be set up in any straightforward way in opposition to “art” or “singing” (though many, including Villiers, have tried).<sup>37</sup> An equally important idea is that technologies and media are creative as well as technical phenomena. They therefore have aesthetic effects and raise aesthetic questions and issues as much as opera itself.<sup>38</sup>



What, then, is gained by introducing the subject of technology to a study of the diva? What do the authors argue? Where do their chapters lead in terms of future research and thinking? Perhaps the most important argument that *Technology and the Diva* as a whole makes is that the emergence of the diva and of modern technology in the same period, and their rise to prominence over the following two hundred years, have been more than a coincidence. The chapters suggest rather that the soprano in her mythologized form has often – perhaps always – been created and sustained by modern technology. Modern machines and techniques were even at the origins of the idea, and they continue to be an important way in which the diva as an idea or figure circulates.

One can see this as early as Gautier's poem "Albertus," whose diabolical witch, before turning into a woman of soprano-like radiance, is imagined in her hut surrounded by concoctions and scientific instruments. Indeed, it is because of these instruments that she is able to transform herself into a Malibran- and Sontag-like goddess in the first place.<sup>39</sup> In the essays that follow, the mythologizing similarly involves technology, though the machines and techniques exploited, the points at which they intersect with opera and the operatic experience, and the aesthetic and musical effects that result, are different in each case. In the opening chapter by Isabelle Moindrot, for example, which is about the figure of the diva as she was imagined in plays and other works of theater in France in the nineteenth century, the printed word is important, and the printed word as it was used to describe, judge, and fantasize about performance and other in-the-theater activities. In the concluding chapter, on the other hand, a partly playful and ironic piece by Clemens Risi about the "making" of the twenty-first-century star soprano Anna Netrebko, visual technologies are primarily at issue. And these technologies are being exploited at some remove from and even in a way that is fundamentally irrelevant to in-the-theater performance – our experience of which, Risi argues, is nonetheless profoundly altered.

The close connection between the diva and technology that the authors uncover serves to underline an aspect of the diva that has already been emphasized by commentators such as Leonardi and Pope. This is that the diva is not an essence or an identity, but rather a creation and a fantasy. She is a fantasy that seems always to begin with fact, or to have a basis in what Elisabeth Bronfen has called the "physical and psychological substance" of real sopranos.<sup>40</sup> However, the fantasy is based not on singers alone, nor, as previous theorists of the diva have emphasized, on the interaction of various real-life performers and voices with the desires and dreams of audience members.<sup>41</sup> Rather, the authors suggest, it is produced when sopranos, audience members, and one or more technologies and media come together. Perhaps above all, the authors suggest, the diva is a fantasy of modernity: of the preoccupation with individuality; with the unique and the striking; with art as the opposite of and yet also an important complement to scientific and commercial endeavor; and with the search for new and alternative gods and

forms of enchantment that we now associate with the modern – and post-modern – nineteenth, twentieth, and twenty-first centuries.<sup>42</sup> And in that sense it is perhaps not surprising that many of the chapters here focus on visual as well as vocal matters – for, as scholars have long argued, a preoccupation with the visual and a tendency to engage with the world through various forms of visual knowledge has been a central feature of the modern condition.<sup>43</sup>

The visual component to the idea or figure of the diva is explored in my chapter, which is about the relationship between the late nineteenth-century French composer Jules Massenet and the much-photographed soprano Sibyl Sanderson (see Chapter 3). It is also explored by Heather Hadlock, who uses a 1991 film by István Szabó about a production of Wagner's *Tannhäuser* to consider a range of visual media (see Chapter 8). These include opera staging and production itself as well as film, television, and the live simulcast. In the past, the role played by the visual in these and other case studies might have been seen as problematic, and in particular a sign that the “diva worship” they involve is contrived and inauthentic – “true” divas being produced not by visual or other extra-musical means but rather by the “pure” power of the voice and vocal expression. The conclusions of mine, Hadlock's, and several of the other chapters suggest that we need to rethink this definition of divadom and add a significant visual element to the way we conceive of the idea – one that, after all, has its origins in female metaphysical entities worshipped on earth by means of imagery and icons.

The extraordinary, God-like operatic voice – to return one final time to Villiers' *L'Ève future*, the song of the nightingale in Edison's strange underworld – is nonetheless at the center of all of the chapters. And having returned to *L'Ève future*, I should provide a clarification about this nightingale and its singing, for they are not the pure, natural, and technologically unmediated phenomena that they are initially presented as being. In an understated passage that follows the scene of Hadaly's performance (see again the quotation), Edison explains that the bird is in fact partly one of his inventions. It had once been alive, and he had appreciated its singing so much that he had had it recorded. This recording was now being played by a phonograph at a remote location and transmitted by telephone to one of the exotic flowers – an orchid (*une orchidée factice*) – in the subterranean dwelling. The process generates a small amount of heat so that, as the inventor helpfully concludes, as you are listening to this unusual kind of flower-speaker you can light your cigar on it.<sup>44</sup> These revelations are of course deeply disturbing, and in their own treatment of God-like and mythologized voices the authors here do not seek to disorient and shock. However, they, too, are able to unsettle some assumptions about the voice, vocal transcendence, and technological mediation.

For one thing, by approaching the diva from the perspective of technology, even technology relatively narrowly defined, the authors are able to raise the issue of the voice and operatic singing as forms of technology. In doing so, they bring to mind the pre-modern definition of the word, for before the end of the eighteenth century