

Part I

Cultural and philosophical frameworks



Chapter One

The mechanics of sensation and the construction of the Romantic musical experience

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It comes as no surprise to find a clear statement of the intellectual disposition of the early nineteenth century in a contemporary work of fiction. Consider the following excerpts from a well-known Romantic thriller:

The untaught peasant beheld the elements around him and was acquainted with their practical uses. The most learned philosopher knew little more. He had partially unveiled the face of Nature, but her immortal lineaments were still a wonder and a mystery. He might dissect, anatomize, and give names; but, not to speak of a final cause, causes in their secondary and tertiary grades were utterly unknown to him. . .

By one of those caprices of the mind which we are perhaps most subject to in early youth, I at once gave up my former occupations, set down natural history and all its progeny as a deformed and abortive creation, and entertained the greatest disdain for a would-be science which could never even step within the threshold of real knowledge. . .

"The modern masters promise very little; they know that metals cannot be transmuted and that the elixir of life is a chimera. But these philosophers, whose hands seem only made to dabble in dirt, and their eyes to pore over the microscope or crucible, have indeed performed miracles. They penetrate into the recesses of Nature and show how she works in her hiding places. They ascend into the heavens; they have discovered how the blood circulates, and the nature of the air we breathe. They have acquired new and almost unlimited powers; they can command the thunders of heaven, mimic the earthquake, and even mock the invisible world with its own shadows."

Such were the professor's words – rather let me say such the words of the fate – enounced to destroy me. As he went on I felt as if my soul were grappling with a palpable enemy; one by one the various keys were touched which formed the mechanism of my being; chord after chord was sounded, and soon my mind was filled with one thought, one conception, one purpose. So much has been done, exclaimed the soul of Frankenstein – more, far more, will I achieve; treading in the steps already marked, I will pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation. ¹

¹ Mary Shelley, Frankenstein; or, The Modern Prometheus, 3 vols. (London: Lackington, Hughes, Harding, Mavor, and Jones, 1818; New York: Bantam, 1991), pp. 25, 27, 33.



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Mary Shelley's protagonist, in these few passages, historically situates the new sciences of the Romantics. The first and second excerpts frame these sciences against the various natural philosophies of the eighteenth century, with their endless namings and orderings, their endless tabulations and taxonomies. The third excerpt speaks of a new science at once more empirical than that of the eighteenth-century empiricist and more systematic than that of the rationalist, a science of opaque surfaces and reconstructible depths, and most importantly one given the ability both to put its discoveries into play in the world and to establish itself concretely in a technology, and at the same time to conceive itself in terms of a deep and mystical bond with the arts.

A second character in the novel speaks likewise of learning and of knowledge, but with a very different voice. (I choose the passages that are musically relevant.)

It is with considerable difficulty that I remember the original era of my being; all the events of that period appear confused and indistinct. A strange multiplicity of sensations seized me, and I saw, felt, heard, and smelt at the same time; and it was, indeed, a long time before I learned to distinguish between the operations of my various senses . . .

No distinct ideas occupied my mind; all was confused. I felt light, and hunger, and thirst, and darkness; innumerable sounds rang in my ears, and on all sides various scents saluted me; the only object that I could distinguish was the bright moon, and I fixed my eyes on that with pleasure. . .

Several changes of day and night passed, and the orb of night had greatly lessened, when I began to distinguish my sensations from each other ... I was delighted when I first discovered that a pleasant sound, which often saluted my ears, proceeded from the throats of the little winged animals who had often intercepted the light from my eyes... Sometimes I tried to imitate the pleasant songs of the birds but was unable. Sometimes I wished to express my sensations in my own mode, but the uncouth and inarticulate sounds which broke from me frightened me into silence again...

My sensations had by this time become distinct, and my mind received every day additional ideas. My eyes became accustomed to the light and to perceive objects in their right forms; I distinguished the insect from the herb, and by degrees, one herb from another. I found that the sparrow uttered none but harsh notes, whilst those of the blackbird and thrush were sweet and enticing. . .

The young girl was occupied in arranging the cottage; but presently she took something out of a drawer, which employed her hands, and she sat down beside the old man, who, taking up an instrument, began to play and to produce sounds sweeter than the voice of the thrush or the nightingale ... He played a sweet mournful air which I perceived drew tears from the eyes of his amiable companion, of which the old man took no notice, until she sobbed audibly; he then pronounced a few sounds, and the fair creature, leaving her work, knelt at his feet ... I felt sensations of a peculiar and overpowering nature; they were a mixture of pain and pleasure, such as I had never before experienced, either from hunger or cold, warmth or food; and I withdrew from the window, unable to bear these emotions. . .

... the youth began, not to play, but to utter sounds that were monotonous, and neither resembling the harmony of the old man's instrument nor the songs of the birds; I since



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found that he read aloud, but at that time I knew no notion of the science of words or of letters.²

Frankenstein's creation speaks (for a good part of the novel) coolly and rationally, with a slight admixture of sentimentality. Unlike his creator, he is never transported or overpowered by his emotions. In fact, the tone of his voice alerts us that there is something hidden here, and it is with a sense of pleasurable irony that we realize that this creature, a product (within the story) of the early nineteenth-century technology and (without the story) of the Romantic ideology, is in truth far older than the tale claims him to be.

Mary Shelley's monster is, in fact, around seventy years old at the time when she pens her tale. He first comes to life in the Traité des sensations of the French philosopher Étienne Bonnot de Condillac.³ In this work, Condillac expands upon the theory (derived from the epistemology of John Locke) that all knowledge and thought is constituted of transformed sensation and association which he had put forward in the slightly earlier Essai sur l'origine des connoissances humaines. 4The Essai first treats the origin of knowledge in simple sensation, extrapolating the means through which sensation gives rise to perception, consciousness, attention, memory, imagination, reflection, abstraction, comparison, composition, analysis, judgment, reason, and ideas (both simple and complex). It then most famously demonstrates this analysis through an extended hypothetical account of the origins of language, music, the arts, and society. The Traité redemonstrates this thesis by hypothesizing a marble statue, having the mental potentials of a human, which is gifted with the least important of the five senses, the sense of smell. From this single source of sensation, the statue develops (successively) a capacity for attention, an ability to feel pleasure and pain, a memory, a capacity for comparison and judgment, an imagination, feelings, ideas, and personality. Condillac then awards his statue (in order) hearing, taste, and sight, recording all the while an ever richer process of association and ideation.

While Mary Shelley's creature is Condillac's statue given literary flesh, and the passages we read in *Frankenstein* take on a certain charge when we read them as the statue's own report of the account in the *Traité*, the observations contained therein about sound and music reflect the analysis of a later sensationalist. The opening essay in Archibald Alison's *Essays on the Nature and Principles of Taste* (1790) locates aesthetic perception in the way in which received sensations put the imagination into play, forming trains of thought in which ideas arise by analogy and association with the characters of objects or events perceived.⁵ Aesthetic

² *Ibid.*, pp. 87, 88–89, 92–93, 94.

³ Étienne Bonnot de Condillac, Traité des sensations (Paris: de Buré l'aîné, 1754).

⁴ Étienne Bonnot de Condillac, Essai sur l'origine des connoissances humaines, 2 vols. (Amsterdam: Pierre Mortier, 1746).

Archibald Alison, Essays on the Nature and Principles of Taste, vol. 1 (Edinburgh: J. J. G. and G. Robinson, 1790; 5th edn Edinburgh: A. Constable, 1817), Essay I "Of the Nature of the Emotions of Sublimity and Beauty," pp. 1–174.



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perceptions distinguish themselves as a class in that each constituent of the associational chain encapsulates an emotion, and the aggregate of these emotions combines to create a complex sensation that is commonly termed "beauty" or "sublimity." It is untenable, however, to maintain (as is commonly done) that material objects or events have in themselves intrinsic aesthetic qualities. Attributions of beauty or sublimity are inconstant, unstable, and individually particular. Objects or events trigger the aesthetic imagination in some people and not in others. They lose their aesthetic fascination in repetition or over time. Aesthetic perception is conditioned by fashion or nationality. Given these realities, what in particular privileges artistic objects as such? An answer can only be contingent: Artistic objects are unique in that they are not subject to the mischances of nature which mar the casual objects of nature and hence interrupt the subsuming progression of emotional states which give rise to the sensation of beauty.

In a succeeding essay, Alison takes a different tack. 6 The investigation of beauty and sublimity in painting can only be taken as a special case of the general investigation of sight, and the investigation of music as a special case of that of hearing. Thus, we move to music (as does the creature) from simple sounds, through the sounds of inanimate nature, the calls of animals, and the tones of the human voice. The mechanism whereby musical objects or events acquire an imaginary emotional correspondence or aesthetic signification is association. The sound of a storm (particularly the low rumble of an approaching storm) is sublime in that the mind associates it with power and danger, the sound of dripping water in a large vault in that the mind associates it with melancholy, the evening bell with tranquillity and peace. Association, though, is contextual. The individual who has never heard a bell is likely to find the sound disconcerting rather than sublime, and the sound of a clock striking the hour is indifferent at noon, sublime at midnight. Associations made early in life acquire a particular permanence. The aesthetic perception of composed sound likewise depends on associations. The succession of lawful consonances is governed by key and a regularity of rhythm. These function as a grammar, the key in particular standing as an idea that governs a passage, and thus they exclude natural mischance. Yet the succession of composed sounds would leave us indifferent if it did not give rise to associations (in the vulgar, the "passions" of music). These associations are the products of various causes, some from the equation of emotional states and tempi, some from the variation of simple and complex or notably sonorous sounds. Many associations have become conventional. Some national musics or styles have associations for certain people. The educated musician associates particular emotions with the perception of skill, novelty, learning, and invention.

To hold Mary Shelley in abeyance for the moment, we get the sense from even a brief rehearsal of Alison's argument of how promising and also how subversive the doctrines of the sensationalists would have appeared to the musical discourse

⁶ Ibid., Essay II "Of the Sublimity and Beauty of the Material World," pp. 175-288.



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proper of the later eighteenth century. In addressing the semantics of music, the epistemology of sensation seems to promise a way of analyzing or decomposing the nominative functions of affect and of rhetoric current to the eighteenth-century discourse. It almost promises a means whereby a definitive table or taxonomy or mechanics of the passions and rhetoric of music might be constructed. At the same time, however, its radical subjectivity undercuts the received conception of affect as an intrinsic quality of the musical object. Of course, in Alison's argument the notion of an innateness of music survives in the syntactic domain, Alison (quite properly, as a non-professional) according harmony a place within his system as a grammatical guarantee that the musical text is an aesthetic object. Yet it is conceivable that even this validation, this sequestering of music theory from the scrutiny of a sensationalist analysis, might come under question from more capable quarters.

Thus the world of the Romantic musical discourse is preceded by a period in which a powerful philosophic system calls into question the entire basis of the eighteenth-century musical discourse without truly providing a means of remedying that discourse. This situation is in itself less severe than I make it sound. Ways of speaking about music have their own internal validations and their own timing. The engagement between the philosophic and musical discourses is often circuitous or oblique, with more powerful extra-musical formulations resisting any simple transposition into musical terms. Portions of the sensationalist doctrine do in fact infiltrate the musical discourse quite easily. Condillac's account of the origin of music in the Essai is most famously parroted (or pirated) by Rousseau, quickly becoming a standard topos in meta-musical writings. His definitions of speech and music as the languages respectively of analysis and of feeling likewise becomes a truism. Rameau, whose harmonic theory is sold (particularly by D'Alembert) as a Newtonian calculus, is quite willing to make some sort of accommodation with Condillac's doctrine in order to safeguard his conception of the corps sonore.7

Yet it would not be too far from the truth to assert that in some way the epistemology of sensation and association holds the musical discourse in suspension in the latter part of the eighteenth century, and that this suspension must, at some point, occasion a substantive response. It need not, however, be a predictable or obvious response or take the form of a direct appropriation. We recall that at the close of the eighteenth century Immanuel Kant quite effectively disposes of English idealism and the epistemology of sensation (and, in fact, the whole notion of doing epistemology for a space of about sixty years) in his system of transcendental ideals. The musical discourse of the German Romantics does likewise in its own domain. E. T. A. Hoffmann's critical analysis of Beethoven's Fifth Symphony can be read in several ways: as the product of a suitable Romantic

⁷ See Thomas Christensen, Rameau and Musical Thought in the Enlightenment (Cambridge: Cambridge University Press, 1993), pp. 215–18.



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mistrust of strict methodologies in favor of an intuitive subjectivity, as a contextually validated marriage of literary fancy and technical hubris, or most productively as a prototypical hermeneutics. 8 These readings are all correct, yet it also must be noted that at the most basic level Hoffmann approaches the musical text through a radical analysis of sensation and association. In fact, his (and the Romantics') reification of instrumental music at the expense of texted music is a move that forces sensation out from any imitative or representative concealment and moves it to the foreground, placing it, in effect, on the microscope slide or the dissecting table. Of course, Hoffmann's sensationalism is not that of Condillac or Alison. It in fact counters this sensationalism in two ways. First, his analysis is not general and systemic but specific and asystemic. It speaks not of mind in the abstract but of the immediacy of experience. Thus he is free to appropriate both the grand metaphors and the latest in technical terms from music theory. Thus also, though, the report of sensations and associations is always contingent, always a means to an end rather than something which is itself subject to analysis. Hoffmann will not (in terms of an interpretative stance) hold still long enough for such an analysis of his report of his experience to come into play. Second, he gets around the radical subjectivity of the Enlightenment sensationalist by bringing into play the notion of the charismatic composer and the transcendental work. This latter agent he can blame for his constant interpretative shifts and for frustrating any epistemological decomposition of his experience.

If Hoffmann's discourse comes into being as a heuristic means of countering a potential sensationalist reading of music, the musical writings of the critical idealists such as Hegel and Schopenhauer accomplish the same purpose systematically. Schopenhauer in particular turns the epistemology of sensation and association on end by attributing a transcendental presence not to some charismatic composer or work but to the musical sensation itself. Where Alison (whom we allow to speak for all of the sensationalists) would specify that in music the simple sensations of the tones are transformed (upward, as it were, on a scale of complexity) by association into a string of internal sensations (feelings) which through some mechanism of comparison and judgment give rise to a combinatory sensation of "beauty" or "sublimity," and in their combination of harmonies in a key form, in effect, an idea which governs a passage; Schopenhauer works from the level of sensation downwards, claiming that music, as an exercise in pure sensation, provides the sole representation of the transcendental working of the will uncontaminated by the mediation of ideas.

^{8 &}quot;Review: Beethoven's Symphony No. 5 in C minor" (1810), trans. Martyn Clarke, in Music Analysis in the Nineteenth Century, ed. Ian Bent, vol. 2: Hermeneutic Approaches (Cambridge: Cambridge University Press, 1994), pp. 145–60. Bent's introduction to this translation (pp. 141–44) contains an interesting close reading of Hoffmann's hermeneutics, and his essay in the present volume carries that reading further (see pp. 115–19 below).

This representation is of course contained in Die Welt als Wille und Vorstellung (1819).



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Let us return to Mary Shelley. If we are to see at least two of the major figures of the German musical culture of the early nineteenth century as creating counterdiscourses to some potential sensationalist discourse, the notion that the sensationalist doctrine in some way disappears with the dismantling of its epistemological claims cannot be given too much weight. Frankenstein's creation will not be dissuaded from his nefarious ways by pointing out that his autobiography has been invalidated by Kant's construction of the transcendental a priori. More seriously, when Mary Shelley has her monster tell his story in terms of the classical theory of sensation and association, she does not intend him to sound outlandish. The essential conflict of her tale is substantiated through the juxtaposition of two vastly different but plausible discourses, and the horror of the monster's depiction is heightened by having endowed him with an undeniable rationality and eloquence. If anything, it is the very clarity and lucidity of his discourse that earns him a certain distrust. (When in the course of confessing his remorse at the end of the novel he rationalizes his string of murders through a recycling of Rousseau's indictment of civilization, this seems almost a signal for the audience to distrust his confession.¹⁰) Likewise, the discourse of the music critic and the critical philosopher becomes all the more interesting if we presume it to be set not against a failed eighteenth-century philosophy of musical experience but rather against some (perhaps monstrous) part of the early nineteenth-century musical discourse which in a fundamental and effective way preserves the assumptions of the epistemology of sensation and association.

To this end, we note that the doctrine of sensation and association survives in the nineteenth century to some extent by shedding its epistemological claims and renaming itself as a psychology. One thinks particularly of Herbart, with his theories of association and the apperceptive mass, and of education and development. Along these lines, we might also remark on a curious pedagogical treatise composed by a Bordeaux schoolmaster named Pierre Galin. His Exposition d'une nouvelle méthode pour l'enseignement de la musique (1818) combines Rousseau's numerical remedy for the irrationality of musical notation with Condillac's epistemology to construct a pedagogical program and a theory of musical

[&]quot;No sympathy may I ever find. When I first sought it, it was the love of virtue, the feelings of happiness and affection with which my whole being overflowed, that I wished to be participated ... Once I falsely hoped to meet with beings who, pardoning my outward form, would love me for the excellent qualities which I was capable of unfolding. I was nourished with high thoughts of honor and devotion ... still I desired love and fellowship, and I was still spurned. Was there no injustice in this? Am I to be thought the only criminal, when all humankind sinned against me? Why do you not hate Felix, who drove his friend from his door with contumely? Why do you not execrate the rustic who sought to destroy the savior of his child? Nay, these are virtuous and immaculate beings! I, the miserable and the abandoned, am an abortion, to be spurned at, and kicked, and trampled upon." Shelley, Frankenstein, pp. 203–04.



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acquisition.¹¹ He argues that the conception of musical notation as a mechanical representation ("this symbol means depress this key") does not accord with the actual thinking of the musician, and is thus a pedagogical hindrance. To introduce notation to children at the beginning of their musical education is to teach them to read before they can speak. Children sing on their own. The way to notation is to substitute solfège syllables for the texts of a body of familiar songs, and to allow the process of association to develop the faculty of abstraction. The subsequent representation of these syllables in Rousseau's numerical notation furthers this process, without hindering it through the notion of fixed pitch inherent in the normal system of musical representation. When this process is mastered, the student can move on.

Galin's project is too explicit in its allegiances and too marginal to function as the monster in our scenario. It directs us, though, towards a promising area, towards pedagogy. It also prompts us to remember that Frankenstein is not a critical philosopher but almost a sort of biological engineer, and that although his creation speaks with the voice of the eighteenth-century *philosophe*, it is in fact a technological product of the new era.

Louis Adam's *Méthode de piano du Conservatoire* (1805) was accepted as the standard method for the Paris Conservatory by a committee that included (besides himself) Gossec, Méhul, Cherubini, Catel, Gobert, Jadin, and Eler. ¹² In the introduction to this method, Adam pays homage to his pedagogic predecessors, particularly in regard to the value of teaching the simple theoretic elements of music simultaneously with the mechanics of playing the piano. Yet in all regards Adam's method breaks strikingly with the pedagogy of the eighteenth century. (Trivially, it is one of the first didactic texts treating the pianoforte.) Adam lays out his method formally in twelve articles: the knowledge of the keyboard, the positioning of the body, the placement of the hands, the fingering of scales, the fingering of passages, touch, articulation, the trill and ornamentation, rhythm and tempo, pedaling, the technique of accompaniment, and style. Apart from the absence of a treatment of thoroughbass and the introduction of the article on pedaling (unnecessary for the old clavier pedagogy), this distribution of topics is

Pierre Galin, Exposition d'une nouvelle méthode pour l'enseignement de la musique (Paris: Rey et Gravier, 1818; trans. Bernarr Rainbow, Kilkenny: Boethius Press, 1983). Galin's proposals make for one of the more interesting chapters in the history of the insular world of French solfège. A posthumous Traité élémentaire appeared in 1824 along with Berneval's La musique apprise sans maître, this followed in 1825 by De Geslin's Cours analytique de musique. Berneval's book was the origin of the American shape-note tradition. Two of Galin's students published their own method in 1838, and the now-named "Galin-Paris-Chevé" method became a standard part of the curriculum in French schools until the turn of the century.

Louis Adam, Méthode de piano du Conservatoire (Paris: Ozi, 1805; rpt. Geneva: Minkoff, 1974). Adam's method is part of a general series of texts adopted by the National Conservatory just after the turn of the century on the recommendation of various committees. These include five books of solfège, Catel's harmony treatise, singing and plainchant methods, and methods for violin, cello, flute, bassoon, horn, and serpent. A catalogue is found at the opening of Baillot, Levasseur, Catel, and Baudiot's Méthode de violoncelle et de basse d'accompagnement (Paris: Magasin de musique du Conservatoire royal, 1804; rpt. Geneva: Minkoff, 1974).



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not far removed from that of its eighteenth-century counterpart. In actuality, though, the substance of the text subverts this plan. Two features in effect capture the text. First, a major portion of Adam's method is devoted to what previously had been the minor problem of fingering. Where the treatment of ornament occupies three pages, the fingering of scales occupies twenty-four, and the extended treatment of fingering (in total) fifty. This expansion of the treatment of fingering at the expense of the treatment of more traditional topics is accomplished through the use of a new (or newly important) device: the exercise. 13 Adam's use of the exercise is carefully gauged. Each exercise is given both right- and lefthand fingerings. The student moves from diatonic scales to passages within the gamut of the octave initiated on different pitches, from contrary scales in each hand to the interpolation of scalework in short passages to chromatic scales, from thumb-under motions to finger-repetitions of various sorts, to changes of hand position, to arpeggiations, and finally to successions of parallel consonances through the octave. Second, in another departure from the eighteenth-century treatise, there is an extensive interpolation of music into Adam's text. Midway through his method he includes fifty "lessons," each a short and relatively simple piece of music (some drawn from Mozart, Gluck, and Haydn), and eighty more difficult passages illustrating fingerings (including one from Beethoven). At the close he appends a sampling of various movements (by Mozart, Clementi, Domenico Scarlatti, J. S. Bach, C. P. E. Bach, Handel, and of course the pedagogue himself).

Adam's method is but the first of more than one hundred such methods for the piano that appear over the next four decades, and the exercise is but one tool in a newly developed pedagogical arsenal that comes to include all manner of didactic musics. Over the next four decades, such major figures as Cramer,

¹³ This is not to include the compositional exercise. There are passages that we might think of as exercises in the eighteenth-century instrumental manual. Leopold Mozart, for example, gives a scattering of short passages in his treatise in order to expose the student to problems of bowing, position, and articulation (claiming that "the more distasteful they are the more am I pleased, for that is what I intended to make them."). See Versuch einer gründlichen Violinschule (Augsburg: J. J. Lotte, 1756), trans. Editha Knocker as A Treatise on the Fundamental Principles of Violin Playing (London: Oxford University Press, 1948), p. 88. C. P. E. Bach's Versuch contains several passages in the chapter on fingering. Quantz likewise in his flute treatise includes several passages which may stand as exercises in the section on tonguing. Within the eighteenth-century treatise, however, we speak more accurately of examples rather than exercises, and we find nothing even remotely approaching the scope of Adam. Neither, though, is the exercise as fully exploited early in the century on other instruments. Baillot, Rode, and Kreutzer's Méthode de violon (Paris: Magasin de musique du Conservatoire royal, 1802) lays out a series of exercises (accompanied by a keyboard line) in each of the positions, yet they are for the most part very simple and scalar. It is most $likely that the \, exercise \, develops \, from \, the \, eighteenth-century \, Italian \, \textit{solfegietti}, \, unwritten \, exercises \, for \, the \, exercise \, develops \, from \, the \, eighteenth-century \, Italian \, \textit{solfegietti}, \, unwritten \, exercises \, for \, the \, exercise \, develops \, from \, the \, eighteenth-century \, exercise \, develops \, from \, the \, eighteenth-century \, exercise \, for \, the \, exercise \, e$ voice. In fact, the most interesting later examples of non-pianistic exercises are found in Manuel del Popolo Vincente García's Exercices pour la voix (Paris: C. Boieldieu, 1819-22), which are incorporated into Manuel Patricio Rodriguez García's (his son's) expansive Traité complet de l'art du chant (Paris: author, 1840; rpt. Geneva: Minkoff, 1985), trans. Donald Paschke as A Complete Treatise on the Art of Singing (New York: Da Capo, 1984) - this translation contains material from an expanded 1872 edition of the work, so it is problematic historically. Interestingly enough, this treatise of García (II) contains perhaps the first substantive analysis of registers and of closed and open voices.