Tuning the Mind
Connecting Aesthetics to Cognitive Science

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Tuning the Mind
In Memory of Carl Dahlhaus (1928-1989)
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>ix</td>
</tr>
<tr>
<td>1. Moving the Passions of the Mind:</td>
<td>1</td>
</tr>
<tr>
<td>The Ascendance of a Query</td>
<td></td>
</tr>
<tr>
<td>2. From Harmony of the Spheres to the</td>
<td>39</td>
</tr>
<tr>
<td>Atmosphere of Music: Trends in Seventeenth-</td>
<td></td>
</tr>
<tr>
<td>and Eighteenth-Century Art</td>
<td></td>
</tr>
<tr>
<td>3. Music’s Begotten Illusion</td>
<td>85</td>
</tr>
<tr>
<td>4. Signs as Cognitive Tools</td>
<td>159</td>
</tr>
<tr>
<td>5. Sense, Sensibility and Commonsense</td>
<td>183</td>
</tr>
<tr>
<td>6. The French and German Scene</td>
<td>243</td>
</tr>
<tr>
<td>7. Postscript: Sense and Meaning Interlocked</td>
<td>275</td>
</tr>
</tbody>
</table>

Bibliography                                                            287

Name Index                                                               307

Subject Index                                                            315
Preface

This book grew out of an insight that the cognitive studies that have become so central to contemporary discourse owe an unacknowledged debt to eighteenth-century deliberations on how art, and especially music, is processed by the mind. We realized from the outset that to explore this intellectual turn would require an interdisciplinary effort to mobilize the entire cultural spectrum that affected these deliberations. We soon discovered that what came to fruition towards the end of the eighteenth century had started as far back as the end of the sixteenth century, and was not fully recognized by the initiators themselves. Indeed, it is only with hindsight, once modern art no longer needs justification and cognitive studies are thriving that the position of these deliberations in intellectual history can be properly assessed.

It began in the late Renaissance with the attempt to render art more expressive. In music, with which we are most familiar, it involved the quest for the lost formulae of the Greeks who allegedly knew how to use music to heighten the power of words. Whether real or feigned archaeologists, those engaged in the quest identified new declamatory forms for effective song speech, from which dramatic music and related forms have emerged. This, of course, was not rediscovery, but invention, from which a semantics of musical expression gradually sprouted. Over a period then, the systematic marriage of words and music branded music with meaning, while music endowed words with affective specificity. This had consequences for “pure” instrumental music.

What had taken place in music, we came to realize, had occurred in painting and poetry as well, although in less conspicuous ways. This is why music, in fact, became more and more emblematic for the arts in general, for it best exemplified what they all tried to achieve. It is explicated in the tale which narrates how musica replaced pictura in the Horatian paradigm of ut pictura poesis.
Whereas modern science in the early seventeenth century affected all of the arts, it revealed central epistemological difficulties in music that concern art in general. The new scientific discoveries, as is well known, displaced music from the honored place it had occupied in the quadrivium; this, however, was only symptomatic of a broader change that had taken place in the theory of knowledge. It is not that music’s numerology was no longer believed to contain artistic truth, but that music was no longer considered able to disclose the secrets of world harmony. The Platonic conception which maintained that “a sameness of idea” pervaded all spheres of creation from the spiritual to the material and from the rational to the sensual, had become suspect. The recognition that only what is commensurable can be part of scientific theory, delegitimized old connections between the physical and the metaphysical, or in the case of music, between acoustic quantities and emotional qualities. At the same time, however, this skepticism brought about more careful differentiations between varied mental faculties. Thus, the crisis that could have devastated the arts, and especially music, gave rise to new insights concerning the intricate processing of mental qualities.

By the eighteenth century, writers could examine anew the role of the arts within a general theory of knowledge. This was made possible not only because the phenomena to be observed had by then come into being but also because new conceptions dealing with mental incommensurabilities had been refined. In this state of affairs, those equipped with the philosophical tools forged by both rationalists and empiricists, could treat the old aesthetic queries with new rigor.

Tracing this development, the first chapter of the book deals with the ascendance of epistemological queries concerning artistic qualities and tries to isolate their historical moment. We emphasize that questions were asked in all of the arts, and that they were equally related to the rise of expression as an artistic desideratum and to recognition that the immediacy achieved through artistic illusion is neither quantifiable, nor self-understood.

Awareness that the artist is the creator of artistic expression and the one who guarantees its immediacy emerged at the same time. This is the stage at which rhetoric joined poetics in presenting new ways of creating and of understanding the arts. In this new conceptual space Descartes’s analysis of the habitual vs. innate elements in
emotional behaviour looms large. Many later theories of art took the lead from Descartes. However, Marin Mersenne, Descartes’s contemporary and friend, made the first modern attempt to connect artistic expression and metaphorical activation, and more specifically, musical movement with emotional behaviour.

Whereas the first chapter concentrates primarily on new aesthetic conceptions in the field of music, the second chapter attempts to show that in painting and literature as well, a new agenda was being formulated in the course of the seventeenth century. There was a decline in preoccupation with content—the ideas or objects represented by the work of art—which had assured its communicative value and standing until that time. Gradually it became clear that the power of art does not reside in the objects it represents or imitates, but rather in the creative modalities specific to each artistic medium, which influences its messages. The main part of this chapter explains how these new ideas connect with different modes of “musicalization.”

The third chapter discusses the conditions which made music a paradigm for the other arts. Of course, from the point of view of mimesis, music was always problematic. In order to fathom its peculiar cognitive nature, it had to be connected, paradoxically, to meanings existing outside its own precincts. The primary and most important step in this direction involved an understanding of the potential for turning musical messages into “fictive” ones, namely, into messages occurring within a fictional space, operatic or otherwise. It was realized that music lacks a simple referent; it creates a new world of signifieds, which are well articulated and correlated. This fictive world of expression came into being with the creation of a hierarchical musical grammar—the grammar of tonal harmony—which served as a frame of reference for musical coherence. In the course of its formulation, musical language appropriated meanings by attaching them to well-defined musical components. Once these connections had become established, there emerged the possibility of their elaboration and manipulation in ways unique to music. On this basis, the development of instrumental music, liberated from the need for textual explication, was made possible. With the elaboration of the so-called classical style, music’s “possible world” was further enriched by a new resource: musical time became entangled with narrative time, to create a unique temporal experience.
How does such a symbolic system, which defies translation of any kind, act cognitively? It is instructive to note that while musical language was coming into being ways of thinking had developed which could deal with this question philosophically. Thus it happened that music, among other "natural languages," became the testing ground for plausible hypotheses concerning the working of the mind. The fourth chapter discusses the major outlines of this development, from Descartes to Condillac and Vico.

A group of British thinkers of the eighteenth century looms large in our book, because they perceived these phenomena in all their complexity. Moreover, they developed methods to address those components of consciousness, which are relevant to the processing of art-symbols in a manner enabling further developments along similar lines. By combining the Aristotelian conception of art as a kind of "making," with the Platonic conception of coherence as a primary aesthetic criterion, the British thinkers, we argue in the fifth chapter, created a new space for discussion where the "qualities" of consciousness and the "modalities" of the artistic media (to use Cassirer's terminology) could be examined in their interrelationship.

According to this group of British men of letters, the reciprocal relationship between "qualities" and "modalities," though dependent on their inherent dictates, initiate a continuous process of metaphorical exchange. The full comprehension of this process, they argued, must take into account cultural conditions and the changes they undergo. The medium does not forever remain bound to its initial message, nor is a given message forever limited to one medium only, as Lessing had argued. If we are in the position to move beyond the thoughts of individual thinkers to the intellectual coherence of the British group as a whole it is because from our vantage point we observe how their ideas have been transformed, nowadays, into a unified conceptual system, which highlights the contribution of the arts and in particular music to theories of knowledge. Like Gadamer, who enables us to become fully aware of the basic premises of our consciousness, we learn from Gadamer, that we are in a position to fully appreciate the significance of earlier historical moments that fostered the consciousness which we are endowed.
However, as is well known, there are many ways of being part of a given historical moment, depending on different cultural codes, and on formulated as well as covert desiderata. The sixth chapter shows how the French and the Germans dealt differently with the questions that preoccupied the British, each nation in accordance with its own past tradition and tendencies. Rather than deny the value of their contributions to the analysis of the problems which emerged, it is perhaps their contributions, especially that of the Germans, that explain why the British contribution has been hidden for so long.

The concluding chapter repeats the main thesis adumbrated in earlier chapters, according to which the discussions dealt with in the book were necessary for the emergence of abstract art on the one hand, and of basic hypotheses concerning the mind, on the other. Thus, a basic problem which was clarified in the British deliberations on art concerned the relationship between process and coherence as related to construction or representation, which is influenced by that which is being processed, that is, by concrete sensual elements. This involves the question of modes of symbolization, which carry along their own systems of meaning and decoding, leaving a basic theoretical question pertaining to the relationship between perception and cognition still unresolved.

So much for Tuning the Mind. In The Arts in Mind, which we consider as a companion to this volume, we introduce a selection from the writings of the British thinkers, from Shaftesbury to Smith, in a manner easier for the modern reader to understand. The texts are accompanied by our interpretative annotations. Until now the British thinkers have not gained the honor they fully deserve, and their theories have only been partially discussed from the point of view of their inner coherence. Hopefully, our notes will enable the modern reader to follow the line of argumentation of these writers as well as to examine the rigor of our own arguments in the first part of the book.

*   *   *

Our whole-hearted thanks go to all those who have made this book possible, on all its levels. Some scholars mentioned in our book contributed to specific points, others to more general ones, and all together they created the arena of our discussion. As is inevitable in constituting intellectual history, the reader will not fail to
notice that alongside works by modern scholars, we have also consulted canonical works of the past, which are still fresh. Some serve as a basis for both our own discussion and those of others, and some, which have not been sufficiently appreciated to this very day, are treated as if they were recent contributions. Our reference to Bukofzer’s almost forgotten argument concerning musical meaning is a case in point. Gombrich, a more prominent representative of the Warburg Institute, is also referred to in this book, both for his contribution to the understanding of the activities involved in the construction of symbolic systems as well as for his research concerning their necessary conditions. We are no less indebted to the classical works of Hagstrum and Hollander in literature, Panofsky and Alpers in art history, E.T. Cone and C. Palisca in musicology, Max Black and Umberto Eco and many others in philosophy, semiotics, history, and in the various histories of the arts; they are all included in our bibliography. Above all we are indebted to Cassirer’s work, whose presence in this book is keenly felt.

We dedicate the book to Carl Dahlhaus, who was a rare musicologist. His thinking in music was comprehensive, including many worlds of discourse, to whose interaction with music he was always sensitive. Dahlhaus insisted that one must be well versed in the musical material itself, but that it could not be self-explanatory. To our delight we had his blessing for this project and enjoyed the years through which he accompanied us, offering encouragement that we succeed in solving a problem, which he considered central.
1

Moving the Passions of the Mind: The Ascendance of a Query

This book promises to deal with a crucial moment in the deliberations on art in which interest in cognitive processes became prominent. That art involves the senses and the mind was always part and parcel of the assumptions that accompanied artistic activity, but art theory touched these issues mainly from a practical point of view, or in broad and universal terms. Even a complicated phenomenon like that of illusion did not stimulate an analysis of its necessary conditions. What then were the issues and problems that underlay the process of dispelling this “innocence”?

A review of the issues that gave rise to a new inquisitive orientation is necessary for the understanding of the deliberations on the arts that prefigured what may be called the cognitive turn. Such a review will also highlight the role of music in the elucidation of key factors in the working of the mind. The following pages will examine some of these issues and factors, and the theoretical reframing of the problems inhering in the relations between the senses and the mind which they instigated. In the course of this process, the relationship between Art and Nature underwent a fundamental change, as did the relationship among the arts, giving rise to new theories. It will become evident, nonetheless, that the new theories attempted to salvage whatever possible from old habits of thoughts—previously taken for granted—as they formulated novel frames of reference that were able to contain new concerns and artistic desiderata. Paradigmatic shifts, apparently, are the end products of prolonged processes of adjustments, inventions, and readjustments affecting each other in intricate ways. In this particular case, it involved no less
than a reconfiguration of the seven liberal arts, which amounted to a renewed emphasis on those concerning language (the *trivium*), at the expense of the mathematical ones (the *quadirivium*). More particularly, it resurrected rhetoric as a mode of thought, highlighting the affinity between the future sister arts—painting, poetry, music.

**Between Nature and Art: Relations Redefined**

Among the many issues that invited clarification was the relationship between nature and the arts. Renaissance attempts to resuscitate the classical world involved the reinvention of old techniques, accompanied by the artistic conceptions that lent them support. Merging these ancient legacies with medieval ones required, however, new conceptual vessels. These inherited and reinvented legacies pertained mainly to poetry, painting, and music, to their relationship to nature, and to the relations among them. Foremost among what was inherited from antiquity, following Horace, were the premises that underlined the so-called *ut pictura poesis* (“as is painting, so is poetry”) tradition\(^1\) that aimed to emphasize the similarity between painting and poetry, stressing their common mimetic nature. Poets, accordingly, conjure up what is described through words, while painters depict *the same* through forms and colors. Poetry, however, throughout the Middle Ages, was part of the established educational curriculum, an art with a theory of its own, whereas painting was considered a mere craft. The *ut pictura poesis* dictum, and some related notions, constituted the attempt during the Renaissance to confer on painting the status held by poetry. Since the object described by painting is directly presented before the eyes of the beholder, it was believed by some that painting could even claim superiority over poetry, for its special ability to achieve the goal of re-presentation more directly (Summers 1987: 32-41; 125-7; 137-143). This was related, of course, to the classical origin of the dictum, which, as Gombrich indicated, imposed on painting the ideal achieved by Homeric poetry, that is, the rendering of historical events and mythological adventures as though taking place before the eyes of the spectator.\(^2\) The *ut pictura* tradition thus imparted a double message: On the one hand, it set up as its goal the presentation of reality as *experienced*, granting *enargeia* (*ἐνάργεια*)—pictorial vividness—central place in art theory. On the other hand, by adopting
an artistic model rather than reality itself, it implied the recognition of the powers of art to create artificial worlds that we experience as real. Imitation in that sense became likewise the goal in the Renaissance, leading to new visual and literary languages. Artistic norms were determined more and more by perceptual constraints, taking into account the ability of a beholder and a reader to conjure up “reality” out of pigments and words, emphasizing the ability of art to induce sensual and psychological imagery experienced as real.

Such a change in artistic goals is inconceivable, however, without societal transformations that give rise to new cultural desiderata. Indeed, the socioeconomic changes that accompanied the waning of the Middle Ages and beyond, were linked, as Katz argued, with the emergence of the new understanding of art. Briefly: the urbane commercial economy, which began to take shape in the late Middle Ages, led to the political and cultural emancipation of the middle class, and ultimately to its intellectual predominance. The allegiance to region and locality that accompanied this process clashed with the universalistic striving of the church and its attempt to maintain a uniformity of culture. It was the insistence on differentiation—of collectivity from collectivity, of individual from collectivity and individual from individual—that spans the period from the late Middle Ages to the Baroque. These changed conditions gave rise to the ethic of free competition granting recognition to those who “made it.” In art, individual achievements were linked with the break down of the guilds, emphasizing the creative and expressive power of the individual artist, at the expense of shared artistic technique. Artistic desiderata thus appeared more transient, diminishing the power of entrenched ideals and established norms. Yet what it is that art tries to create and express, and how it proceeds to attain these goals, became hence issues that gained in saliency.

The Musicalization of Poetry and Painting

All of the arts partook in the above developments, but unlike poetry and painting, music, despite Aristotle’s attempts, was not generally considered among the imitative arts. The Platonic tradition, which attacked the imitative tendencies in art, had apparently the upper hand as far as music was concerned. Considering its mathematical and physical components, music was related to world har-
mony as a static system, ignoring the fact that music is experienced as unfolding and developing in time. The basic Pythagorean conception, however, remained entrenched during most of the Renaissance, despite the Aristoxenian challenge, because Christian thought reinforced a harmonistic conception of the world, finding it compatible with its needs.\textsuperscript{5}

Infused with Christianity, an important change did take place in this tradition, with repercussions not only for music, but for poetry and painting as well. Already in Plato's cosmology, harmonic relations unified all the parts that constitute the world, small and large, physical and spiritual. The church fathers adopted this metaphysical approach, but in line with the Scriptures. The combination of the cosmic order and the \textit{anima mundi} gave rise to the Christian ideas of love and \textit{caritas}, rendering the transition from external order to internal spiritual harmony natural. Adding “soul” to “harmony” infused otherworldliness to the worldly, unifying the act of creation. This tendency, however, found two distinct expressions, as Spitzer (1963) explicated—in the hymnology of St. Ambros and the writings of St. Augustine. The former tended to emphasize the spatial aspects of world harmony while the latter its temporal aspects; in both cases the sensuous element, so central in the pagan world, lost some of its standing. Thus, the spatial combined with the spiritual found vent in metaphorical language, for Ambros, while the temporal combined with the spiritual, emphasized, the dynamics of a narrative, for Augustine. If Ambros stressed simultaneity and an ever-present revelation, immediate and available at all times, Augustine emphasized change and process culminating in redemption. The latter, as a consequence, became more closely related to the “perfectibility of man” than the former, creating a greater awareness in man of his own actions (Spitzer 1963; Passmore 1972).\textsuperscript{6}

Indeed “harmony” and its derivatives penetrated language and all of its by-products, so that they labored within an atmosphere thus “tuned,” as we learn from Spitzer. This went, however, beyond Pythagorean notions. As far as the arts are concerned, the musicalization of painting is of special interest, for it enabled the eventual unification of the fine arts. While poetry and painting were related through \textit{ut pictura poesis} practices—mainly through the genres of historical painting and exphratic and descriptive poetry—poetry and music were correlated through text-music relationships.
These were symbolized by the various practices of the muses, of which four had particular responsibility for genres of vocal music. The bridge between painting and music could thus be erected either by making music into a more imitative art, or by leading the other arts to acquire some of its abstract harmonic conditions. Historically, music became more imitative, but only after the other arts, especially painting, underwent a certain kind of musicalization.

The process started already in the Middle ages, when painters were no longer merely interested in the accurate rendering of sensual objects and tried, instead, to concretize that which is invisible, conceiving the visual image as an “introduction of the unseen—the supernatural—into the material” (Hagstrum 1958: 48-51). New interest in color and light—especially in Byzantine art—replaced the classic procedures of foreshortening and modeling in light and shade, that were developed in antiquity, to produce trompe l’oeil (Gombrich 1977: 108). The concentration on color continued during the Renaissance, in spite of the avowed aesthetics that hailed the classical ideals, which went hand in hand with the shift of emphasis from the beauty of form to the beauty of light. In this process “atmospheric painting” was born, especially in Venice, concentrating on inner reality rather than on natural form. In characterizing the fifteenth century the school of the Venetian Giorgione, Walter Pater, toward the end of the nineteenth century, made this hidden trend salient and saw fit to assess it as “meeting the condition of music.”

This trend found expression also in the “mainstream” painting of the Renaissance, as attested by the new language theorists employed in relation to its main achievements. Vasari (1568), for one, described the changes that took place in the visual arts from the early to the high Renaissance as a transition from techné to expression. Expression, he maintained, was the accomplishment of this third age (etá), which added “grace” and “air” to beauty, overcoming the “dryness” of the former periods. He might have learned from Castilgone (1527) that “Grace” stands in contrast to “affectation,” and insisted that it should strike us through the “softness” or the “sweetness” inherent in the work.

The new class of predicates that was attributed to works of art became gradually part of the discussion of the aesthetic experience, comprising one of its underlying dichotomies, that between “affect”—the quality of the experience—and “expression”—its mani-
Tuning the Mind

festation in the work of art. The first, concerning the “subjective” aspects of art, would later be dealt with in psychological terms, whereas the second, concerning its more objective aspects, pertained to physiognomic accounts. Renaissance art, as part of its iconographic tendencies, already developed physiognomies as a symbolic language; what had begun fortuitously, crystallized in the course of the Renaissance into recognized general moods and strains of particular sentiments that became associated with particular shapes and images. The laws of decorum—related to genres and subgenres—guaranteed intersections of ranges of meaning, excluding ambiguities and vagueness as far as deciphering was concerned, as Gombrich explained. A young woman’s head slightly bent and lit, eyes downcast and lips closed on the verge of a smile, one hand spread out as for blessing, the other firmly holding a reclining baby (in a painting like Leonardo’s Madonna of the Rocks), this, even without iconic halos, was immediately correlated with the expression of transcendental, religious bliss. Immediacy of this kind rested not only on conventions and habits, but also on certain psychological factors that guaranteed the inseparability of interpretation and observation. Later generations would recognize the combination of these factors as the very definition of this particular style.

Unpredicated Signs in Search of Meaning

Music entered into more theoretical relations with her sister arts precisely when the interest in “expression” increased. Expression was from the start attributed to music, a fact that even Plato could not overlook. For Aristotle, as well as for a pseudo-Aristotle, this made music an imitative art, assisting poetry in modes of characterization, while for Plato it gave rise to a rigid theory of ethos. According to Plato, certain musical configurations, related to mode, rhythm, instrument, corresponded with certain designated dispositions, of which Plato allowed (in his ideal state), only those encouraging soberness, courage, and liberality. The Aristotelian legacy was no less significant for future aesthetic approaches to music than was Platonism, looming large, however, only in the seventeenth and eighteenth centuries. In the meantime, what occupied musicians in the Middle Ages and the greater part of the Renaissance was neither the first version of expressionism nor the second, but rather the attempt
Moving the Passions of the Mind

Moving the Passions of the Mind

to rid music of some of its extramusical connections. Making music an autonomous art involved conscious choices concerning the formation of its basic building blocks. This process entailed the isolation and organization of musical parameters, the crystallization of modal frameworks, notational clarifications and, above all, conscious attempts to gain control over the flow of musical time (Katz 1991).

By the end of the Middle Ages, music was still wedded to text outwardly but it no longer needed its support. Composers in the Renaissance continued the process; they elaborated the polyphonic techniques to the highest degree of perfection. The vertical as well as the horizontal dimensions of music were increasingly controlled; so was the construction of the work as a whole. But only when the final touches of contrapuntal devices were being accomplished did attempts to invest music’s unpredicated signs with meaning gain saliency. Text and music were now beginning to be creatively intertwined, not merely carefully juxtaposed. Moreover, musical settings gradually ceased to be “a vehicle for the poem,” and became, instead, “an independent creation that usurped the poem’s message” (Palisca 1985: 371), as illustrated in Cipriano de Rore’s madrigal quoted in example 3c below.

By the end of the sixteenth century, the new relationship between music and text became an explicit desideratum. Instead of music embellishing the text, words were now enlisted to pinpoint music’s own signification. Despite the overinsistence on the importance of the text by members of the Florentine camerata, it was the recognition of the unique “message” of music which accompanied the development of opera, the cantata, and accompanied monody. Paradoxically, it was the process of realizing the ideas of the Florentines that brought music’s own signification to the fore. Vincenzo Galilei (c. 1533-1591), one of their leading members, seems to have been aware of the nature of the new orientation—why else would he replace the “imitation of words” by the imitation of the concetti (conceits) of the mind? Lorenzo Giacomini (in 1576), Francesco Patrizi (in 1571), and other musical humanists spoke in similar terms. Nonetheless, the process of acquiring meaning in music achieved coherence only toward the end of the seventeenth century, once music had evolved an independent coinage for expressing the passions, that was embedded within a new tonal and rhetorical language.
Thus, while the visual arts had already appropriated rich semantics, the process of acquiring meaning in music was still in its infancy. Not that music was considered devoid of significance. On the contrary, due to its affiliation with Pythagorean theories, music and the powers ascribed to it were still closely related to the very structure of the universe in ways unequaled by the other arts. However, when Aristotelianism was reintroduced into musical thought, it encountered Platonic ideas that had already been affected by certain empirical touches. Already with Petrarch, transcendental expression was to be sought in Man, indicates Spitzer, and not in the dwellers on high (Spitzer 1963: 61-2). With Marsilio Ficino (1433-1499), a new attempt was made to understand the way in which the emotional reaction of the individual was linked to the “harmonious structures.” Passions were awakened by musical means, which were still indebted to transcendental forms, while their actual configurations were increasingly determined by that which successfully “operates” on the hearer (Walker 1958; Katz 1986, Katz and Dahlhaus 1987 i: 75-93; Tomlinson 1993).

Ficino’s speculations remained on the level characteristic of the Pythagorean tradition; they still accounted for the special ontological standing of music, rather than for its specific expressive contents. Yet experiments of the kind he made regarding the powers of music have gradually come to dominate the musical scene, overpowering its preestablished patterns. Whether magical or otherwise, such theories and experiments contributed to the crafting of effective musical means, resulting in the invasion of speculative thinking by practical considerations, themselves aspiring to a philosophical standing. This amounted to an increasing demythologization of music’s ontological supremacy, which went hand in hand with the new attempts to invest music with specific meanings.

The Interpenetration of Rhetoric and Poetics

All of the interrelated changes discussed above reveal a growing awareness of the communicative potency of the arts. Yet this awareness was largely related to normative and practical aspects of art in the making, and not to their theoretical implications. Typical of this situation is the fact that the arts, which in spirit became closer to each other, were still located at their previous moorings. In the wan-
ing of the Middle Ages, painting, as already mentioned, was consid-
ered largely as a craft, and was thus held less than an art; music, by
contrast, enjoyed a privileged place, on behalf of its Pythagorean
standing in the *quadrivium*, thereby considered more than an art.
Among the three arts, poetry was the only one to have theoretically
benefited from its affiliation with logic, grammar, and especially
rhetoric—the branches of the *Trivium*. In addition to that, it could
directly profit from the recently translated *Poetics* by Aristotle, which
reinforced its anchorage in a philosophical framework emphasizing
poetry’s power to create meaning and explicating the ways it goes
about it. Poetry, hence, became the model dominating the entire
scene, guiding painting as well as music in their attempts to extri-
cate themselves from their confined surroundings. The turn to the
very environment of poetry was thus achieved not only by actual
alignments with literary sources but more importantly, by means of
an associations with the branches that lend poetry its theoretical stand-
ing—classical rhetoric and poetics.

Poetics, since Aristotle, highlighted ways and means of imitation,
introducing classifications among genres, and submitting them all
to questions concerning verisimilitude and their purifying effect.
Rhetoric, on the other hand, dealt with ways and means meant to
affect the consumer in a direction desired. Each determined a differ-
ent set of categories for criticism, directing the artist towards diverse
goals (Abrams 1953: 1-29). Nevertheless, the two traditions were
often intermingled. It was through the eyes of Horace, whose *ars
poetica* was primarily dominated by the rhetorical outlook, that Re-
naisance scholars viewed the Aristotelian theory of imitation. Inter-
ested in Man and his moral and intellectual improvement, the Re-
naisance clung to the *prodesse delectare* (instruction and delight)
dictum at the expense of issues related to “imitation,” that is, focusing
on artistic import rather than on the ways via which it is achieved
(Weinberg 1961 i).

Rhetoric, however, had its own prescriptive tradition, applicable
to discourse. In the Greek tradition, particularly in its culmination in
the writings of Aristotle, rhetoric was conceived as a counterpart of
dialectics, operating in the realm of non-demonstrative arguments.
As an effective tool, adding validity and substantiality to forensic,
political and other kinds of speeches, rhetoric was regarded as hold-
ing some truth-value. Not even Aristotle disqualified the speaker
who exploited the emotions of the audience in order to achieve his purpose. Yet it is only with the Romans, primarily with Cicero, that rhetoric first came into prominence. Cicero was the first to establish the main parts of the art of discourse and to enumerate figures of speech and of thought as factors in causing pleasure and holding the attention and tension of the audience. Following Cicero, Roman rhetorical writings reveal an awareness of the ways of building and fulfilling expectations, taking into account the dictates of taste and propriety.

As a distinct body of knowledge, rhetoric became a cornerstone of the basic curriculum throughout the entire Roman Empire, partaking in the formation of a stylized culture for which lucidity, ornateness, and appropriate diction became central values. It is all the more surprising, as Murphy points out, that the ancient world, “so productive of artes rhetoricae, should have produced so very few prescriptive documents in the realm of imaginative literature” (Murphy 1974: 27). Indeed, attempts to deal with literature from a rhetorical point of view were quite rare in antiquity, since this branch of knowledge was confined to the grammarians.

The Italian theorists of the sixteenth century differed from their predecessors, ancient as well as medieval. As Weinberg put it, their theoretical undertakings were directed to the transformation of the ars poetica and other non-poetical rhetorical writings, into a “total poetics” (Weinberg 1961 i: 109). Based on the “fairly fluid organization of the material” in Horace’s treatise and the Ciceronian sources, they attempted to construct a more solid and substantial set of rules for the creation of a greater variety of poetical and literary writings. The attitude was partly pragmatic; as such it paralleled contemporary manuals for painters and sculptors, though it was more imbued with theoretical considerations.

Painters could thus turn to rhetoric and poetics in order to gain insights into their own craft (Alpers 1961; Summers 1987). Alberti may serve as an example, for he argued in 1436 that painting, like linguistic expression, aims to persuade and to evoke feelings, calling the artist to plan his work and all of its details like a speaker (Spencer 1957). Pictures were now “telling,” “presenting,” and “creating” a feigned reality no less convincingly than poetic works, and via their new theoretical underpinning, painters could convince the skeptics of the advantages of their art. Indeed, many theoretical at-
tempts of the period were directed towards that goal. Leonardo’s *Paragone* may serve as an example of the attempt to prove even the supremacy of painting over poetry, by associating painting with “natural philosophy,” that is, with science. Later in the century, however, it was agreed that calculations of proportions and the like may assist painting, but did not provide the theoretical foundation of the art (Panofsky 1968: 73-9). The intellect of the artist, wrote Federico Zuccaro in his *L’idea de’ pittori, scultori e architetti* (1607), “must not only be clear but also free, and his spirit unfettered, and not thus restrained in mechanical servitude of such [mathematical] rules” (Panofsky 1968: 78). Towards the end of the sixteenth century, when science began to contradict “commonsense experience,” as Ackerman maintained, and art, at least in Italy, was no longer interested in meticulous observations of nature, it was gradually understood that art and science must go their own ways (Ackerman 1961: 65; Summers 1987: 322-327). Poetics, consequently, thus maintained its unchallenged authority; it seemed, at the time, capable to provide more satisfactory answers to the problems that were raised.

**The Rhetorization of Music**

Compared with its sister arts, music availed itself of rhetoric seriously only at a later date, at the beginning of the sixteenth century. Since musicians and music theorists went through the same curriculum as did their fellow artists, one cannot account for their relatively late interest in the subject on the basis of the spread of the humanistic tradition alone (Vickers 1988). It is, rather, the special state of music at that moment—the accomplishments achieved in the art of counterpoint and the initial attempts to invest music with meaning—that gave rise to a renewed interest in rhetoric. The ancient art was now enlisted not only to explain what had been achieved, but also to define new artistic goals, suggesting means for their attainment.

The transfer of a conceptual system from one artistic realm to another is complicated, but even spontaneous analogies, like fresh metaphors, help to “select, interpret and systematize” the “facts of art” in ways which bring to light hidden facets and qualities (Abrams 1953: 31). In this respect, music theorists of the sixteenth century may be regarded as having suggested new perspectives. Rematching
music with rhetoric, however, did not require a radical break, for the two were never really separated. Rhetoric, to begin with, deals, at least in part, with the musical parameters of language. “It is by the raising, lowering, or inflection of the voice,” writes Quintilian in his famous *Institutio*, “that the orator stirs the emotions of his hearers, and the measure... of voice and phrase differs according as we wish to rouse the indignation or the pity of the judge.” Music, in turn, according to the rhetorical tradition, is vested with emotional power precisely through its natural relation to affected eloquence: “Even by the various musical instruments, which are incapable of reproducing speech, different emotions are roused,” Quintilian tells his readers (Quintilian 1983 i. 10 , 22-7; quoted in Vickers 1988: 372).

What is it then that music theorists and music practitioners tried to reclaim through professing anew music’s relations with rhetoric? Were they seeking to reemploy the links with effective eloquence in order to gain reassurance with regard to the “powers” of music? If so, the gain would have been achieved at a heavy price, that is, the loss of music’s acquired independence. Quintilian ascribed emotional power to instrumental music only because of its association with the musical qualities of speech! Moreover, unlike logic, which imposes upon language its own structures (as far as truthful utterances are concerned), and grammar, which determines its forms (guaranteeing “correctness”) the third branch of the *trivium* presupposes the existence of language and thus of logic and grammar as well, enlisting them all for the art of persuasion. Did squinting in the direction of rhetoric reveal a longing for the revival of the old relation at the expense of music’s hard-earned independence?

Ironically, it was linguistic models, together with grammar, which, in fact, assisted music in its emancipation into autonomy. It was not for the sake of likening music to language that medieval theorists used linguistic terms and concepts in their discussion of music. Rather, it was for the sake of elucidating music’s own structures that theorists applied terms like “phrase,” for example, to sound phenomena other than language. Once the segments of music were named and conceived of in some hierarchical fashion, they could lend themselves to further organizations, operations, and manipulations. Rhetoric, thus, became more relevant to compositional techniques, although it is not clear to what degree and in what way it penetrated Renaissance compositional practices. At any rate, the re-
lations between rhetoric and music, including the actual transfer of
terms and techniques, were not intended to undermine the autonomy
music had gained. The infusion of “linguistic” traits into music con-
tributed, in fact, to its distinctness.

Up to the sixteenth century, the interest in rhetoric was primarily
directed towards practical goals. From there on, musicians turned to
its theoretical premises as well, in the search for an overall new
conceptual framework for their art. Cicero’s model of communica-
tion as the union of *cor* and *lingua* was the main concern of the
humanist musicians, as Vickers (1988) pointed out. According to
Cicero, *lingua* related to the explicit contents of the text, while *cor*
stood for the implicit mood it created. Creating proper moods or
dispositions was the role of rhetoric, Cicero argued; for Calvin and
others in the sixteenth century, it was music that primarily played
this role. According to Calvin, no one can “be edified by the things
which one sees without knowing what they mean and to what end
they tend.” Yet the word of God, he proceeded, finds its way to the
soul not only through the literal message but also through song: for
we know by experience “that song has great force and vigor to move
and inflame the hearts of men to invoke and praise God with a more
vehement and ardent zeal” (Strunk 1981 iii: 156).

The idea that music creates dispositions was not entirely new, as
we have already seen. Since the days of the Greeks, when the “well-
tempered” state was “tuned” by the “harmonious proportions,” mu-
sic was regarded as the appropriate art for the tuning of the soul as
well. But this idea that was elaborated upon in the course of the
Christian millennium was largely stripped of its metaphysical aspi-
rations by the seventeenth century. Deprived of its transcendental
base, music might have lost its rational and moral standing and have
turned into a mere sensual trifle. It was thanks to the rhetorical tradi-
tion that the secularized “tuning of the soul” did not lose its claim to
reason. Like texts, it was believed, music too involves mental opera-
tions, yet while text relates to “knowing,” its rhetorical or musical
component finds its way to the mind through the act of “moving.”
“The word of God,” writes Thomas East in 1592, “delighteth those
which are spiritually minded; the art of music recreateth such as are
not sensually affected; where zeal in the one and skill in the other do
meet, the whole man is revived.”17 Justifying music on either aes-
thetic or moral grounds, musicians, theorists, and religious reform-
ers could avail themselves of these or similar arguments. That the “affections of the mind” constitute the province of music, became, in the course of the sixteenth century, almost a commonplace, though it carried along old philosophical underpinning, employed in novel ways. Vincenzo Galilei, for example, who shared Plato’s distrust of the senses, attacked modern counterpoint for numbing the affections of the mind, that is for its lack of respect for the text and its affective message. Ironically, the cornerstone of Platonic thought—the weaving of consonances into a harmonious whole—was regarded by him as no more than the “tickling of the ear.” Concurrently, the Aristotelian concept of “imitation of the conceptions that are derived from the words” assumed an almost religious status (Strunk iii: 122-125). In the long run, even this concept of imitation will be demythologized and the intricate links between “knowing,” “moving,” and “imitation of the affections” will be analyzed and explained in cognitive, psychological terms.

In the late Renaissance, however, the distinction between “knowing” and “moving” did not entail an adequate explanation of the nature of either. But unlike “knowing” which was thought of in abstract terms, “moving” was treated metaphorically as well as literally. Paradoxically, the fact that literal explications rested on physical terms, as exemplified by Ficino’s theory, highlighted “moving” as a process, calling for speculations concerning its elements and nature. In any case, the concept of moving the affections, from classical times to the eighteenth century and beyond, presupposed sympathetic relationships between the moving object and that which it moves. It has been claimed, that magical practices in the Renaissance, including those involving music, rested to a large extent on such a notion of sympathy (Foucault 1972, Freedberg 1989, Tomlinson 1993). To these presuppositions, the notion of the willingness to be moved, on the part of the recipient, was sometimes added. Still, as we shall try to show, there is a crucial difference between physical and metaphoric accounts of “moving.”

Rhetoric, in any case, supported the turn from physical to metaphorical “moving.” While the sky was being “untuned,” depriving mind and music of their transcendental harmonious relations, rhetoric created an alternative frame for dealing with musical import, secular yet dignified in character, conceiving of dispositions as distinct mental entities. It granted aura and atmosphere aesthetic recogni-
tion, encouraging the search for their correlative artistic representations. Instead of the simple submission to text requirements, or primitive notions about music’s power, musical means were developed to emphasize the independent expressive potential of sounds and their logical combinations, as will be shown in chapter 3. Though texts were still considered crucial for “knowing,” the reason had significantly changed, since words were less and less considered as competing with music in their joint adventure. Rather, it became evident that via the designations that texts lend to musical contents they can help clinch the latter’s meaning.

The designative aspect of words, we shall see, will concern the late eighteenth century writers. Their reflections will be expressed largely in connection with two basic approaches to the rhetorization of music, which developed during the Baroque, that is, the recitative and the aria. The recitative—molding melody and rhythm in accordance with the “inflections and accents that serve us in our grief, in our joy, and in similar states” dealt, in fact, with “delivery,” that branch of rhetoric which itself exploits musical parameters. With the accomplishment of that which was eventually subsumed by the Baroque aria, however, musicians and theorists became more and more engaged with dispositio, with rhetoric’s accrued notions concerning the unfolding of orations and soliloquies. Aspects such as the holding of attention and of tension, the building and fulfillment of expectations, and the creation of unified wholes became central issues. No less relevant for the aria and related genres were the rhetorical figures and tropes that served to name, classify, and even develop distinct musical contents and procedures. All of these participated in the endeavor to lend music a sense of affective meaning. Still, during the sixteenth century the association of music and rhetoric remained mostly on the level of attitudes and beliefs, it rarely considered the transfer of the actual contents of one art to the other via prescriptions of structure, style, figures, and genres.

The Ascendance of a Query

Towards the end of the sixteenth century one can discern a new theoretical orientation in theories of art. Whereas previous theories took the relation between subject and object for granted, theories now had to grapple with the question of “how it was at all possible
for the mind to form a notion that cannot simply be obtained from nature, yet must not originate in man alone” (Panofsky 1968: 82). The idea that the notion conceived by the artist is identical with that which the beholder effortlessly perceives through the work of art, that is, the “immediacy” so gloriously achieved during the Renaissance, now called attention to that which makes it possible.\(^{21}\) Indeed, the insistence on the ability of the spectator to understand a combination of truth and fiction “without undue mental effort” became a subject of inquiry (Lee 1967: 39). The readoption of the *ut pictura poesis* tradition likewise evoked interest in the underpinnings of “communication,” that is, interest in the vehicle transmitting artistic intentions to various sets of sensations and images. The borrowing of poetical principles such as “instruction and delight” reflects a similar concern with communication. Artistic representation thus turned also into a philosophical problem, focusing on what is re-presented and how, and by what means it succeeds to refer to its object. However, the fact that theorists treated painting in poetical terms, and quite often, both through certain theological notions, created certain misunderstandings, which were hard to absolve. Transferring indiscriminately concepts and ideas from one art to another revealed disregard for the difference in artistic procedures unique to each of the arts.

This was partially an outcome of a metatheory established when neo-Platonic ideas, mingled with certain Aristotelian notions regarding “common sense” gained momentum, and managed to bestow upon beauty “sublime” value.\(^{22}\) Beauty was said to be revealed to the artist by an act of emanation and to be perceived in the artifact through innate intuition. Influenced by prevailing poetic thought, theories of painting—such as those of the neo-Platonist’s Giovanni Paolo Lomazzo—tended to regard artistic ideas as transcendental a priori forms. Imperfectly reflected in the physical world, Nature, it was believed, could be realized in its ideal form only through works of art.\(^{23}\) Since such forms were considered innate, eternal, and of universal standing, questions regarding their actual formation in the mind were limited to order and merit. As Platonic forms, or even as Aristotelian ideas charged with medieval scholasticism, their sensual content was of relatively negligible value. As such they seemed to have blocked serious attempts to come to grips with the individual arts or with relevant historical and sociological factors re-
lated to their formation, though some awareness of unique stylistic imports can be discerned at the time. Poet and artist, it was implied, are both guided by the same basic ideas embodied in different materials. Accordingly, the differences among the arts touch only upon their appearances, while their essences are shared.

Still, the insistence on “ideal forms” reveals an awareness of the role archetypes played in artistic understanding. Likewise, artistic ideas more akin to Aristotelian thought—embodied in specific sensory means and modes (for example, Michelangelo’s concept of the concetto)—opened up theoretical options in the course of the sixteenth century, together with other Aristotelian notions, related to judgment, pleasure, memory, and common sense. These, according to Summers, were systematically investigated, prefiguring, as such, modern aesthetic theory. Summers himself admits, however, that they did not yet involve an aesthetic-cognitive query into specific forms and experience of art. Even Zuccaro, who related all thought to mental pictures, and all ideas to created, rather than ideal forms, presupposed a pre-established conformity between Nature, Divine Spirit, and the intellective mind (Summers 1987: 281-308). His view of the intellect as a “tabula rasa, a spacious smooth canvas prepared by us painters to receive all those figures that will be painted upon it, but in itself retaining no form, or shadow of form,” despite its modern look, was actually an attempt of conceive of artistic design in naturalistic terms, of a general and universalistic bent characterizing concurrent neo-Platonic theories. By the eighteenth century, when perception is brought into aesthetic theory as a factor to reckon with, the legitimacy of simple comparison among the different arts, and generalizations thereof, will have been called into question. Yet the linking of perceptual processes to understanding of abstractions made it, paradoxically, still possible for comparisons among the arts to continue. In fact, substituting musica for pictura in the ut pictura poesis was a consequence of this linkage, highlighting both common and distinct processes that are involved in experiencing the various arts.

**Expressive Music: In the Wake of the New Science**

Theories explicating the relationships among the arts and their affiliation to mental processes did not depend solely on understand-
Tuning the Mind

ing perception; they had to link perception to cultural forms and norms. The growing interest in expression emphasized the interdependence between the two. Music was central to this development, since the process of acquiring meaning in music was a more conscious one and its actual achievements more conspicuous than in other artistic domains, as it will subsequently become clear. Yet understanding the nature of this process in music had to wait until the process itself was completed.

Early seventeenth-century attempts to deal with the semantics of music faithfully reflect the intellectual ferment of the period. Still some thoughts that had crystallized in the course of the sixteenth century and before, survived into the eighteenth century and beyond. Revolutionary as the seventeenth century may have been with regard to the world of knowledge, it retained, nonetheless, some stifling archaic and ambiguous modes of discourse. Nevertheless, several persistent problems could now be approached with a different frame of mind, assumed by the new science, with new orientation and tools allowing for a “more accurate separation of the true from the false,” as Descartes put it.

The pressure of organizing the ever-increasing theoretical body of knowledge in music came to the fore as early as the second half of the sixteenth century, as evidenced in the work of Zarlino. Marin Mersenne (1588-1648) and Athanasius Kircher (1602-1680) continued the enterprise, but unlike Zarlino’s, and despite their antiquarian tendency, especially as far as Kircher is concerned, their works were thoroughly influenced by the “new method” which called for a new kind of integration. Like physics, music was virtually cut off from the discourse of metaphysics, reserving the transcendental for the “prime cause.” In the sky as elsewhere, Greek animism was dead. Vague analogies, the applications of which were unlimited and whose inferences unconstrained, were no longer tenable as a base on which sound knowledge could be constructed. In music, the process of disconnecting mythologies from concrete practical considerations culminated in an increasing disregard of that order that once served to link music with the universe. As a subject of learning, music no longer functioned as another “book of knowledge” from which such inferences could be drawn. It became an object inviting definitions of its own, relevant only to its potential and actuality.
What kinds of definition did music invite as an autonomous field? What were the positive aspects of the new scientific outlook as far as music was concerned? Kepler’s *Harmonia mundi*, though still related to the harmony of the spheres, provided one kind of answer. Kepler, as is well known, dealt with the universe in terms of matter moving in space. Like his renowned contemporaries, he resorted to common denominators anchored in measurable units, employed not only in the definition of the objects but also in the formulation of the regularity of their appearance. Music in his model could retain its former privileged status in the *quadirivium*, since it could be quantified just like the other physical phenomena. Consequently, the limits of the consonant series could be explained and justified by Kepler astronomically, while astronomy could be illustrated through musical facts. In less outstanding ways, the new outlook gave rise to inquiries concerning the phenomenon of sound, in relation to both instruments and the sense of hearing that were eventually relegated to the field of acoustics. In fact, almost all those who were interested in music at the time, whether from a philosophical, scientific, or moral point of view, contributed to this branch of physics. Descartes, Mersenne, Kircher, Huygens, and John Wallis exemplify the many that plunged into this fascinating field, soon reaching important results (Palisca 1961; Cohen 1984).

But the mathematical mode was not the only way to deal with music “scientifically.” What distinguished the New Science was, above all, its unique combination of observation and experimentation. Combining observation with experimentation also affected musical circles; it determined, most of all, the thinking and activity that accompanied the rise of opera. The theoretical and the experimental were there combined, to bring about an effective relationship between music and text. Accompanied monody, opera, and cantata were the products of that “problem solving,” serving as a kind of laboratory for the “powers” of music (Katz 1986). As a consequence, the aesthetics of music underwent a crucial transformation, functioning in a double capacity—it controlled the artistic production while serving, at the same time, as its conceptual tool. A new paradigm was thus ushered in, determining artistic and theoretical activities for more than three hundred years. Still, the theoretical clarification which accompanied the “revolutionary stage”—in which the discussions of the Florentines were the most central—