Rameau and the Rhetoric of Music Theory

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Rameau e a retórica da Teoria da Música

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Abstract

By arguing that Jean Phillippe Rameau's (1683-1764) rethrocial resources and cartesian devices cannot be disentangled from the language and cultural milieu by which his discourse is articulated, the author argues that, as for the music theorists nowadays, the discipline depends on a culturally resonant language for its effectiveness and communication.

Keywords: Rameau, music theory, rhetoric

Resumo

Ao discutir a linguagem utilizada e o conteúdo cartesiano, o autor argumenta que o teórico e musicista francês Jean Phillippe Rameau (1683-1764) utiliza recursos da retórica de modo tão contextualizado e culturamente inserido na sua época tanto quanto os teóricos da atualidade. Em várias instâncias, demonstra como a não neutralidade do discurso adotado por Rameau ressoa o ambiente cultural de sua época e atribui, a este fato, a perenidade dos seus pressupostos teóricos.

Palavras-chave: Rameau, retórica, Teoria da Música

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We have all learned that language is a precarious thing. Words do not have invariant and stable meanings that ensure transparent communication; rather, they possess an infuriating tendency to turn back upon themselves and obscure or alter what we mean for them to say. As the vaunted linguistic turn in humanistic studies over the last three decades has made us so aware, language cannot be a neutral conveyer of thought in as much as it seems itself so a part of thought. Put another way, it is difficult if not impossible to disentangle ideas from the language by which we articulate them. It is little wonder, then, that with our post-modernist anxieties, scholars in virtually every field have found themselves pressed to ponder the implications of the language they use.[1]

Few musicologists, though, have dared take the linguistic turn with any ardor. This is somewhat ironic, for not only is the discourse of musicologists – historians and theorists alike – susceptible to the same kinds of critical analysis, semiotic decoding, and perhaps even deconstruction and rupture as in other disciplines, but musicologists occupy a special field in which they grapple with an art form that is itself rich with semantic ambiguity. The nature of musical meaning

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constitutes a fundamental ontological problem that has lain at the heart of musical aesthetics since at least the 18th century.

Music theorists find themselves in a particularly delicate situation in regard to the kinds of language they use. Historically, no branch of musicology has been more intimately allied to the natural sciences and hence tended to ape its methods and language more closely. This is of course because we have perceived scientific discourse as paradigmatically neutral, one that ensures a scientist's observations, experiments, and calculations are objectively conveyed with the highest degree of verisimilitude. Music theorists have thus traditionally sought to find an analogous value-free discourse that was also empirically objective and apodictic.

But the languages of science are not neutral. In our post-Kuhnian age, we know that the claims of objectivity, observational veracity, logical coherence, falsification, or other such foundationalist norms to which proponents of the so-called scientific method have paid allegiance can no longer be accepted at face value. The activities of scientists and the language they use are susceptible to much of the same interpretative scrutiny as are practitioners in the other human and social disciplines. Scientific discourse, even of the most rigorously empirical and quantitative kind, is unavoidably constrained by cultural and perceptual parameters. I do not mean to say by this that all languages are relative to one another, that any statement, whether scientific or not, is as good as another; rather, I hold with Richard Rorty that there are a multitude of potential discourses we can use to express ourselves, and the choices of which discourse we use is conditioned by a complex nexus of localized sociological, psychological, and aesthetic values.[2] There can be very good reasons for a scientist to chose a particular mode of presentation and vocabulary different from that of the poet, literary critic, or music historian. And within such parameters, adherents to a particular discourse can establish quite specific internal mechanisms by which to evaluate related truth statements. But we should not confuse this with an idealized transparent and universal language. Such a language, envisioned over three hundred years ago by Descartes, and formally pursued in the twentieth century by the circle of Viennese logical positivists, has foundered on both logical as well as anthropological reefs.

Now music theorists have not been entirely oblivious to the problems of language. While a disconcertingly large number of us continue to work quite contentedly without too much reflection upon the language we use, a number of

others have worried quite deeply about the matter. I find it particularly ironic – although in retrospect it is perfectly understandable – that many of those theorists today most discontent with the kinds of languages we employ in traditional music theory are those who at one time were closely allied with the most conservative schools of logical-positivist thought. If we look at the evolution of prose in the pages of one particularly prominent American journal of contemporary music, *Perspectives of New Music*, we cannot be but struck by the profound changes. From the austere scientistic language of the early 1960s characteristic of Milton Babbitt and his students at Princeton, we find some two decades later in many writers an epistemological about face. Rather than a vocabulary of observational statements, correspondence predicates and set symbols, we find the most self-conscious subjective word play replete with puns, poetry, picture games, and the like.[3]

Recognizing difficulties in articulating how we audiate and conceptualize musical phenomenon, many other scholars have looked to fields such as cognitive linguistics, semiotics, and phenomenology for enlightenment. Some other theorists, coming from Marxist traditions, have offered penetrating critiques of the political and sociological motivations underpinning music-theoretical discourse, and from still others, analyses of the hegemonic gender biases in the traditional language of music theory. From all sides, it seems, simple observational statements of music turn out to be far from simple.

Now I suspect few of you have ever imagined the literature of music theory to make a very savory field for rewarding linguistic analysis. Indeed, no segment of the musicological literature probably has such a dreary reputation for the stodginess, tedium, and prolixity of its prose. Nonetheless, even the most antiseptic theoretical treatise possesses its own linguistic style, and this style can be scrutinized to reveal much about the theory itself. The many ways we talk about music – our styles of argument, form, heuristics, descriptions, metaphors, models, allusions, in other words, the totality of our rhetoric – all of these resonate and reflect back on the theory itself. I don't mean by this to suggest that we all go out now and deconstruct Schenker. Nor do I mean to sound any note of either suspicion or hostility in calling for closer examination of the languages into which theories are cast. I endorse a linguistic turn in theory not because I hope to weaken and perhaps even confute the foundationalist claims of its more conservative practitioners, rather, because I think an understanding of the language we use

can only enhance and enrich our chances of communication.[4] In displacing the illusory pretensions of neutral theoretical discourse with a culturally hermeneutic discourse, I would like to think we are in fact humanizing and broadening our discipline – not debilitating – it. But I shall defer until the end of my talk elaborating upon this humanistic potential.

I want to return to the original question I raised by reconsidering a bit more deeply the role of rhetoric in music theory. Historically, rhetoric has played a far more critical part in theoretical discourse than in music history. This is because music theory has always had a propadeutic component to it.[5] Theory is necessarily part teaching and persuasion. We use music theory to teach students how to hear music better, and perhaps to perform or compose it, too. Music analysis – the real *praxis* of the theoretical enterprise – is itself a quintessentially rhetorical activity. What is an analysis, after all, than one's conceptualization of a piece of music and consequently the attempt to persuade others of the soundness of such a hearing? In order to communicate these thoughts – in other words, in order to teach and persuade – theorists have recourse to rhetoric.

Now for many of us today, rhetoric has somewhat a pejorative ring to it, implying coercion, appeals to irrational intuitions, and even deception; it constitutes an artificial embellishment of speech by which one attempts to sway listeners through oratorical manipulation. Rhetoric is associated with unscrupulous politicians, intolerant preachers, and cunning lawyers to bamboozle us using sophistry, linguistic tricks, and disingenuous emotional appeals. Since at least the 17th century, rhetoric has stood at the opposite end of a spectrum occupied on the other end by reasoned, dispassionate and logical argument. As one example of this new sobriety, we might note that in 1663, members of the Royal Society in London were enjoined to avoid all "prefaces, apologies, and rhetorical flourishes" in their reports. Rhetoric, as John Locke so rhetorically put it, was the "perfect cheat". Even if we do not impute the sinister qualities that many 17th-century British philosophers did, most of us still conceive rhetoric as a surface embellishment of some deeper underlying thought that it serves to convey, and potentially obscure.[6]

Yet if we look at rhetoric from a Hellenic viewpoint, we find that it was conceived far more broadly and more benignly. Aristotle offered this simple definition of rhetoric: "the faculty of discovering the possible means of persuasion in reference to any subject whatsoever" For Aristotle and his Peripatetic followers, this involved

five essential parts: invention, disposition, style, memory, and delivery. Now each of these components of classical rhetoric are familiar to students of Baroque music. Music theorists and composers of the 17th and 18th centuries conceived a broad taxonomy of music roughly following the outlines of the classical rhetorical program. *Inventio* was equated with "topics" – the identification and selection of affections and the corresponding musical devices to express and convey them. Once a composer had selected certain *topoi* to be presented, he had to arrange them in a composition according to certain prescribed rules – the *dispositio*. Here Quintillian's famous 5-part division of oratory found favor among 17th-century theorists such as Burmeister and Bernhard: *Exordium, narratio, argumentum, egressio*, and *peroratio*. Rhetorical style was determined by the differing occasions for which the oratory, or in our case the music, was to be presented. Baroque musicians distinguished three basic styles, again drawing upon classical rhetorical theory: high, middle and low styles, or as one said in the 17th century (after Marco Scachi), the church, chamber and theatrical styles. Each of these styles was associated with a rich assortment of figures and tropes that the musician could call upon to sustain appropriate affects. If there was no consensus as to the exact number and meaning of these figures among theorists – and we must keep in mind that the number of figures could run in many rhetorical texts to the hundreds – there was no disputing that figures did have affective power and were essential components to any proper discourse, including music.[7]

Memory and delivery – *elocutio* – while perhaps less directly related to *musica theorica*, had important roles in the practical texts of *musica attiva* wherein a student was taught techniques and refinements of performance, whether for the voice or an instrument.

Now what I want to draw out from this brief overview of Classic rhetorical theory is how much more comprehensive rhetoric was considered to be as a subject than it came to be in modern times. Not only did rhetoric concern itself with how a text is delivered, but it concerned its very content and composition. If post-positivist critiques of language are correct, then the distinction made between language and meaning – that is, between form and content – is a problematic one. We cannot easily separate an idea from the language by which it is expressed. And here rhetoric emerges as a key linking idea. It would make no more sense to call rhetoric "mere" embellishment of some underlying idea which can be exposed and perhaps more clearly displayed by the removal of that rhetoric than it would

to take a Madrigal by Monteverdi – or at least one written after the Fifth book of Madrigals – and remove all theatrical dissonance associated with the *seconda pratica* and claim the resulting notes were what the music was really about. Christoph Bernhard never claimed, contrary to the claims of many Schenkerian exegetes, that music in the *stylus theatralus* can be composed as an artificial elaboration of some fictive species counterpoint line idealized in the prima pratica. This point, incidentally, suggests one of the fundamental reasons why it has proven so difficult to disentangle Schenker's theory from the philosophical language in which it is embedded. Those formalists who have attempted to axiomatize the theoretical principles of Schenker's theory in some neutral, value-free discourse separate from the Goethian vitalism, biological metaphors, Kantian idealism, and just plain German chauvinism that we find in Schenker's writings fail to see how integral these rhetorics are to the very substance of that theory.[8] Schenker's theory simply cannot be stripped of its language and recast in another language without substantial loss of meaning. All we are thereby doing is substituting one kind of rhetoric for another – and doing it disingenuously with anti-rhetorical rhetoric.

But it is not my intention to investigate further Schenkerian rhetoric, nor its odd reception history in American academia, as fascinating a story as that may be. I want to consider rhetoric in a more positive, constructive role in music theory. I will do this by considering how a theorist's choice of rhetoric serves to not only indelibly frame the boundaries of a particular discourse, but helps to constitute in an essential way that very theory. The specific test case I will consider involves the music theorist with whom I have expended much energy and thought studying over the last few years – Jean-Philippe Rameau.

Now Rameau has traditionally been considered to be the founder of modern harmonic theory. Since the appearance of his *Traité de l'harmonie* in 1722, both the conceptualization and pedagogy of tonal music has been profoundly altered. With his system of the *basse fondamentale* (the "fundamental bass"), Rameau was able to clarify the harmonic practice of his contemporaries with unparalleled concision, and in turn, radically simplify the pedagogy of the composition and the thorough bass. Through Rameau's pioneering efforts, the study of harmonic coherence assumed a central position in the program of music theory, a position it has retained relatively unchallenged to this day.[9]

Despite his acknowledged position as the founder of tonal harmonic theory,

Rameau's accomplishments have proven resistant to any uniform historical assessment.[10] Rameau never succinctly summarized his theory, or at least not without further revision in later writings. Over the course of some 40 years and a dozen major publications, Rameau was constantly working out his system of harmony, seeking out and testing new and ever-changing theoretical arguments. Many of these theoretical arguments were inspired by contemporaneous science. In virtually all of his theoretical writings, Rameau attempted to apply the methods, evidence, and language of science as he understood it – but with distinctly mixed results. For all of the composer's profound and sensitive insights into the nature of tonal harmony, his scientific arguments could be filled with embarrassing errors of empirical observation and gaffes in reasoning. The mathematical "demonstrations" and acoustical "experiments" he offered to establish his principle of harmony seem inept and naive, and indeed, were often condemned as just that by scientists of his own day. Compounding the problem is Rameau's turgid and repetitious prose, which is as uninviting in the original French as it is in any translation. The result is a difficult and unwieldy body of literature that has frustrated redaction by even the most sympathetic of Rameau's readers, both past and present.

Historians of music theory have thus found themselves facing an unhappy choice. On the one hand, they could try to wade intrepidly through the maze of Rameau's writings, chronicle the many twists and turns of his thought, and bear as patiently as possible his scientific pretensions. On the other hand, they might attempt to extract an essential theoretical "core" from his writings, and do what the composer himself never seemed to be able to do: settle upon a single, consistent, and coherent doctrine, distilled of all extraneous scientific rhetoric.

As you can obviously guess, I believe both these historiographical methods to be gravely flawed. For in neither one is a really comfortable place found for Rameau's "science". At best, his scientific rhetoric is patronizingly seen as a capitulation to trendy ideas clumsily applied by the untutored composer, but ultimately unrelated to his real musical thought. At worst, it is sinisterly viewed as a pernicious obfuscation that should be excised from any consideration of his theory; it is the deplorable product of the vain composer's desire to secure credibility and approbation from his peers through unnecessary and ultimately disingenuous intellectual posturing.

But if the role of rhetoric I described earlier is a valid one, then far from being

either fashion or obfuscation, Rameau's scientific arguments were critical to the conception, evolution, and ontology of his theory, and consequently indispensable for our own understanding of it. Eighteenth-century science provided not only the essential epistemic models and language by which Rameau articulated his ideas, but they in turn helped to constitute that theory in quite fundamental ways. To pretend, then, that his so-called "scientific rhetoric" can be somehow separated from that theory without distortion is deeply naive and misguided. We must take into serious and sympathetic consideration the variegated scientific rhetorics of Rameau's theoretical arguments, however strange or incongruous they may appear to us today, or however discordant they may seem to be with one another.

To show you what I mean by this, I would like to now turn to Rameau's writings and consider illustrations drawn from two of his earlier publications: the *Traité de l'harmonie* of 1722, and the *Génération harmonique* of 1737. While I obviously cannot analyze either of these works in depth here, I would like to consider two different instances in which Rameau's rhetoric impinges upon his empirical theoretical formulations of the fundamental bass.

Let us consider first of all the *Traité*, the first and most well known of Rameau's writings.

Now the *Traité* has always been considered to be a quintessentially Cartesian work, one in which Rameau's Cartesian credentials seem to be irrefutably certified. We all know that famous passage in the Preface in which he announces that "music is a science which should have certain rules; these rules should be drawn from an evident principle; and this principle cannot really be known to us without the aid of mathematics". In good Cartesian fashion, Rameau proceeds to show how a single monochord string provides such a principle for music by deducing from it in quasi-Euclidean fashion the entire chord vocabulary and syntactic rules of tonal practice. The monochord serves as the clear and distinct Cartesian first principle from which we can proceed mathematically to discover new truths. Indeed, the entire structure of the *Traité* reflects on a macro-level the Cartesian ideal; from the abstract chord generations of Part 1, Rameau moves on methodically to consider how these chords connect via the fundamental bass in Part 2, how a composer can utilize and elaborate upon this knowledge in Part 3 for his craft, and finally how an accompanist and keyboardist can profit from this knowledge in Part 4. In both its local claims as well as its larger organization, Rameau casts his treatise in a most explicit and self-conscious Cartesian rhetoric.

Yet as anyone who has read parts of the *Traité* can readily testify, the logical chain of mathematical deductions that characterize the idealized Cartesian method are difficult to find in this work. Scarcely has Rameau announced his principle of string divisions then he starts to stumble badly in justifying the generative root of the minor sixth, the axiom of octave equivalence, and the origins of the minor triad and dissonant seventh. Later on he gets into even deeper water in trying to justify root motions that seem to violate his established rules for the fundamental bass.

Now I will not, you may be relieved to know, review here all of these many problems and inconsistencies. As I have said, these have been more than amply explicated in the secondary literature.[11] The point I want to make is that there seems to be a real discrepancy between what Rameau claims to have done in the *Traité* and what he actually seems to have accomplished. Or perhaps more accurately I should say there is a discrepancy between the way Rameau conceived and structured his theory and the result we read in the text itself. The Cartesian orthodoxies he invoked with such piety at the beginning of the treatise seem more a ruse to sway innocent readers and secure intellectual credibility than any actual description of method he applied – it is, in other words, pure rhetoric. What we need to do, according to some older historians, is get underneath this rhetoric in order to see what the theory really is about.

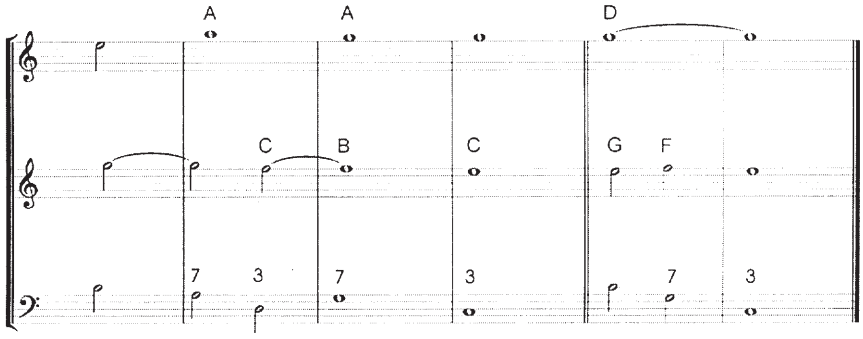
But as I have already said, Rameau's Cartesianism, as any kind of rhetoric, is not something one slips on and off like an overcoat depending upon the weather or changes of taste in fashion. While there are individual instances in which Rameau may well have been posturing disingenuously with his prose, there are many more instances in which the rhetorical presentation of his theory penetrated deeply, and affected the very structure and content of his theory. To see how this is so with the Cartesianism in Rameau's *Traité*, allow me to recall to your memory another distinguishing aspect of Cartesian metaphysics in the 17th century: mechanistic materialism.

Descartes, as we learn from any basic history of 17th-century science, described nature as consisting of infinite space occupied by matter existing in one of two basic states: inertia or motion. In Descartes view, all appreciable phenomena can be reduced to a mechanistic equation of matter impacting upon matter. To be sure, a mechanistic interpretation of nature was not the discovery of Descartes; But the philosophers of Descartes's generation provided a radically new

itself " and "A hard body which strikes an immovable body will be reflected together with all its motion". Both of these propositions were widely-accepted axioms of seventeenth-century kinematics. What is new here is the analogy Rameau draws between the physical behavior of colliding bodies and the behavior of prepared and unprepared dissonances in music. Here is Rameau's analysis:

> In order to judge the effect in question, we need only notice that in dissonance B is at rest when consonance A strikes it. Immediately after the collision, the consonance becomes immobile and obliges the dissonance to pass to C. This is effectively the place to which the consonance itself could have passed but can no longer do so, since the dissonance has taken its place. The consonance seems to have given all its motion to the dissonance. Consonance D, however, which seems to be immobile, after having collided with dissonance F obliges it to return to G, from where it started. The dissonance here seems to be reflected with all its motion, after having struck an immovable consonance.[12]

Rameau, Traité de l'harmonic (1722), Supplement, p.7



The analogy Rameau draws is obviously imperfect, and raises a host of philosophical problems that are left unresolved or unaddressed. Still, the image of musical pitches as moving and colliding objects was appealing to a mechanistically-inclined mind like Rameau's, and one that would suggest to him a number of fruitful insights into the behavior of tonal music.

Undoubtedly the most striking consequence he drew from this is that the seventh is the single necessary motivating dissonance in tonal music. The percussive effect of the dissonant seventh is the necessary impelling force driving all chords onwards to their final resolution at the tonic – the one consonant chord in music. This is one reason why Rameau was so insistent that the seventh was the single source of dissonance – even for chords of supposition or the suspension, and

of the *Traité*, cannot be so simply excised from his theory. The deeper Newtonian influences I refer to concern Rameau's maturing ideas concerning mode and modulation.

In the *Génération harmonique*, Rameau radically changed his views of mode. The most substantive change was the addition of the subdominant to his tonal universe. He now defined mode, not in the older sense of octave species, procedure, and semitone placement within a scale, rather, as a fully harmonic nexus of relationships with a central tonic triad complemented by two conjoining dominants: the regular dominant and the lower subdominant. Each of these two dominants carried its own indigenous dissonance (a minor seventh for the upper dominant, a "sixte ajouté" for the subdominant function), and both reciprocally and symmetrically served to define the tonic and together constitute a mode.

Now what is interesting about Rameau's revision of mode in his theory is how it corresponds to certain Newtonian ideas involving mechanics and gravitation. Newton, as you know, proposed the theory of gravitational attraction to account for planetary orbits. This stands opposed to the Cartesian idea of vortices, which although manifestly mechanistic in conception, had no empirical basis in fact. Of course gravity was not something that could be empirically proven, either. But its effects were clear to be seen. A celestial body could be shown to act at a distance and draw by some unknown force smaller celestial objects towards its center.

I believe that Rameau's reformulation of his theory of mode came about partly through his absorption of Newtonian ideas. Above all, there is a heightened sensitivity by Rameau to the general question of "modulation" entailing the functional relation of individual harmonies to the tonic. This constitutes a far less mechanical way of thinking about harmonic relations. No more is the dissonant seventh described as a collision of sounds resolving by the fundamental progression of a falling fifth to a consonant triad as in the *Traité*. Instead, we have a more dynamic and hierarchic notion of tonality in which a central tonic chord is modified by two symmetrical dominant poles that are less impelled towards the tonic by mechanical force than drawn by a kind of mutual attraction. Rameau's description of this process in the *Génération harmonique* is much more entelechic in flavor, with notions of a non-tonic harmony returning to its source, with dominant functions drawing each towards the center, and so forth. Consider

during his lifetime must be attributed in no small part to the fact that Rameau was able to tap so successfully into culturally-resonant modes of discourse. Rameau showed an uncanny genius for casting his theory in a rich assortment of intellectual metaphors and models that enjoyed high prestige value among his readers. Of course he was not uniformly successful in this regard. Not all of Rameau's models could be so easily reconciled with one another. Nor were they all equally convincing to his readers. We should not conclude from this, though, that the answer is to strip away Rameau's rhetoric in order to expose some purportedly underlying and uncontaminated empirical core. The folly of trying to disentangle Rameau's theory from the language with which it is expressed was clearly shown in the case of d'Alembert, who threw out what he perceived to be bogus scientific and metaphysical trappings of Rameau's theory, and not only produced an emaciated picture of this "theory", but thereby exposed his own unmistakable – if unarticulated – biases.[16]

The dependence of music theory – or really any kind of theory – upon rhetorical factors may strike some readers as a baleful situation, one the theorist ought strive to mitigate as much as possible. I would argue, on the contrary, that such a dependence can be a virtue. Only to the degree music theory responds to questions of pressing import of its time in a culturally-resonant language, does it accrue vitality. Music theory for someone like Rameau was a discipline standing not outside of his culture, but intrinsically a part of it. And rhetoric is one of the vehicles by which music – and discourse about music – connects to the wider culture, in our day no less than in Rameau's.

Notes

[1] The "linguistic turn" to which I refer concerns a general trend in humanistic disciplines beginning in the 1960s to focus upon the language and rhetoric of scholarly communication (as opposed solely to the arguments or "content" of that discourse). Among the most famous – or perhaps infamous – examples of such linguistic focus are the writings of the so-called "deconstructionist" school of literary criticism led by Jacques Derrida and Paul De Mann. But a related rhetorical impulse can be seen in a host of interwined post-structuralist developments in philosophy, linguistics, psychology, political

science, and aesthetics. For a collection of diverse essays addressing this issue, see *The Linguistic Turn: Essays in Philosophical Method*, edited by Richard M. Rorty (Chicago, 1992).

[2] See Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago, 1962; revised edition, 1996); and Richard Rorty, *Objectivity, Relativism, and Truth* (Cambridge, 1991).

[3] I am referring in particular to the writings of Benjamin Boretz and James K. Randal, two of Babbitt's most prominent students (and in Randal's case, eventual colleague). The evolution of their writings can be traced easily by perusing consecutive volumes of *Perspectives* through the 1970s and 80s.

[4] In fact, since I have written this essay, several new English-language books have appeared that consider precisely this question of language and discourse in music theory. Kevin Korsyn looks at the rhetoric of much contemporary *music theory* in *Decentering Music: A Critique of Contemporary Musical Research* (Oxford, 2003); while Michael Spitzer (*Metaphor and Musical Thought* [Chicago 2004]) and Jairo Moreno (*Musical Representations, Subjects, and Objects: The Construction of Musical Thought in Zarlino, Descartes, Rameau and Weber* [Bloomington, 2004] look at the languages used in music theory from a historical perspective. Moreno's book is perhaps most relevant to the themes I raise in this essay, where one may find a revealing commentary on Rameau's use of language that complements my own views (85-127).

[5] For a good historical survey of rhetorical models applied to *musical analysis*, see Patrick McCrelless's entry of "Rhetoric" in the *Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge, 2002), 847-79.

[6] For a useful general survey that chronicles the changing fashions and reception of rhetoric in the West, see George A. Kennedy, *Classical rhetoric & its Christian & secular tradition from ancient to modern times*, 2nd ed., rev. and enl. (Chapel Hill, 1999).

[7] See Dietrich Bartel, *Musica poetica: musical-rhetorical figures in German Baroque music* (Lincoln, 1997).

[8] The debate here concerns a number of theorists (mainly active in Princeton University) who in the 1960s attempted to axiomatize Schenkerian theory within a closed, structural system of logical predicates in much the same way Milton Babbitt had attempted to axiomatize twelve-tone serialism.

[9] Incidentally, lest I be accused of disingenuously placing my own discourse above rhetoric – a position I believe to be an impossibility – let me acknowledge that the above encomium of Rameau is a model example of the third branch of Ciceronian rhetoric – the epideictic or panegryic, in which the speak – me – ceremonially offers formal praise and approbation of some perceived virtue or deed before the civic *polis* – you, the reader.

[10] I have attempted an analysis of Rameau's writings by embedding them deeply with contemporaneous scientific and philosophical thought current in the French Enlightenment: Thomas Christensen, *Rameau and Musical Thought in the Englightenment* (Cambridge University Press, 1993).

[11] For example in my book, Chapters 4 and 5 (pp. 71-132). A more succinct but still valuable analysis of Rameau's theory can be found in Joel Lester, *Compositional Theory in the Eighteenth Century* (Cambridge Mass., 1992), especially pp. 90-157.

[12] *Traité*, Supplement, p. 7. "Pour bien juger de l´effet dont il s´agit; il n´y a qu´à remarquer dans cet Exemple, que la Dissonance B, est en repos, pendant que la Consonance A, vient la frapper, & qu´incontinent après le choc, cette Consonance demeurant immobile, oblige cette Dissonance de passer à C, qui est effectivement le lieu où la Consonance A, auroit pû passer; mais elle ne le peut plus dès que la Dissonance prend sa place; de sorte qu´il semble que pour lors la Consonance lui donne tout son mouvement. Ensuite la Consonance D, qui paroît inébranlable, après avoir reçu le choc de la Dissonance F, l´oblige de retourner à G, d´où elle étoit partie: de sorte qu´il semble encore ici que la Dissonance se réflechisse avec tout son mouvement, après avoir frappé fur la Consonance inébranlable."

[13] I have analyzed this question more deeply in my book, *Rameau and Musical Thought*, especially in Chapter 6, pp. 137-68.

[14] Génération harmonique (Paris, 1737), p. 109. "...on doit d´ailleurs le regarder comme le centre du Mode, auquel tendent tous nos souhaits; il y est effectivement le terme moïen de la proportion, auquel les extrêmes sont tellement liés, qu´ils ne peuvent s´en éloigner un moment; s´il passe à l´un d´eux, celui-ci doit y retourner sur le champ..."

[15] *Ibid.*, p. 112. "Ce secours mutuel que se prêtent la Dominante & la Soudominante, lès lient pour lors tellement au Son principal, qu´elles ne peuvent plus s´en éloigner; le Son Harmonique de l´une, dont elle a déja déterminé la succession Diatonique, oblige l´autre à s´y soumettre, & par conséquent à retourner au Son principal: il ne peut plus

[9] Incidentally, lest I be accused of disingenuously placing my own discourse above rhetoric – a position I believe to be an impossibility – let me acknowledge that the above encomium of Rameau is a model example of the third branch of Ciceronian rhetoric – the epideictic or panegryic, in which the speak – me – ceremonially offers formal praise and approbation of some perceived virtue or deed before the civic *polis* – you, the reader.

[10] I have attempted an analysis of Rameau's writings by embedding them deeply with contemporaneous scientific and philosophical thought current in the French Enlightenment: Thomas Christensen, *Rameau and Musical Thought in the Englightenment* (Cambridge University Press, 1993).

[11] For example in my book, Chapters 4 and 5 (pp. 71-132). A more succinct but still valuable analysis of Rameau's theory can be found in Joel Lester, *Compositional Theory in the Eighteenth Century* (Cambridge Mass., 1992), especially pp. 90-157.

[12] *Traité*, Supplement, p. 7. "Pour bien juger de l'effet dont il s'agit; il n'y a qu'à remarquer dans cet Exemple, que la Dissonance B, est en repos, pendant que la Consonance A, vient la frapper, & qu'incontinent après le choc, cette Consonance demeurant immobile, oblige cette Dissonance de passer à C, qui est effectivement le lieu où la Consonance A, auroit pû passer; mais elle ne le peut plus dès que la Dissonance prend sa place; de sorte qu'il semble que pour lors la Consonance lui donne tout son mouvement. Ensuite la Consonance D, qui paroît inébranlable, après avoir reçu le choc de la Dissonance F, l'oblige de retourner à G, d'où elle étoit partie: de sorte qu'il semble encore ici que la Dissonance se réflechisse avec tout son mouvement, après avoir frappé fur la Consonance inébranlable."

[13] I have analyzed this question more deeply in my book, *Rameau and Musical Thought*, especially in Chapter 6, pp. 137-68.

[14] Génération harmonique (Paris, 1737), p. 109. "...on doit d'ailleurs le regarder comme le centre du Mode, auquel tendent tous nos souhaits; il y est effectivement le terme moïen de la proportion, auquel les extrêmes sont tellement liés, qu'ils ne peuvent s'en éloigner un moment; s'il passe à l'un d'eux, celui-ci doit y retourner sur le champ..."

[15] *Ibid.*, p. 112. "Ce secours mutuel que se prêtent la Dominante & la Soudominante, lès lient pour lors tellement au Son principal, qu'elles ne peuvent plus s'en éloigner; le Son Harmonique de l'une, dont elle a déja déterminé la succession Diatonique, oblige l'autre à s'y soumettre, & par conséquent à retourner au Son principal: il ne peut plus

y avoir d´arbitraire; le droit de l´Harmonie naturelle, & de fa succession l´emporte partout."

[16] The work in question is d'Alembert's *Elémens de musique théorique et pratique suivant les principes de M. Rameau* published first in 1751. I have analyzed d'Alembert's problematic redaction in my book, *Rameau and Musical Thought*, pp. 252-90.