PREFACE

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With the passing of Pierre Boulez, it is impossible to avoid the impression of the end of an era, that of the 'heroic' age of post-war musical modernism and all of its aesthetic and political struggles. As perhaps the last prominent avatar of the European post-war avant-garde, Boulez's death closed another link in a chain of influential composers whom he outlived (such as Luigi Nono in 1990, John Cage in 1992, Karel Goeyvaerts in 1993, Iannis Xenakis in 2001, Luciano Berio in 2003, György Ligeti in 2006, Karlheinz Stockhausen in 2007, Henri Pousseur in 2009, and Elliott Carter in 2012), and his was followed by the deaths of such prominent composers of the same generation as Peter Maxwell Davies and Pauline Oliveros, both in 2016. Inevitably, journalistic tributes to the famed composer and conductor announced 'a truly final full-stop for the twentieth-century musical avant-garde which he had notably helped to shape', no doubt owing to the fact that the successive phases of Boulez's artistic development mirrored those of the better part of a generation of composers, and took him from a 'parametric' Post-Webernian phase to electroacoustic experiments, from 'mobile' aleatoric works to real-time electronic sound processing, from neo-expressionist miniatures to a return to large-scale form.

One of the characteristics of Boulez's cohort is their inclination towards theorizing, their tendency to formulate overarching principles. While some might sceptically view this as the expression of an 'imperialistic' impulse—an attempt to set the boundaries within which art can take place, or a modernistic tendency to impose constraints on others' fields of activity—others may also be able to admire and learn from a generation's ability and will to think clearly about music—sometimes in a provocative, manifesto-like style. In fact, the expression, odd in English, 'to 'think' music', a reference to the title of Boulez's first monograph, Penser la musique aujourd'hui, leaves out any mediating preposition between the thinking and the music, as if to do so would imply a distance which is barred from Boulez's aesthetic program, and the same could be said of several of his contemporaries. Given this will to think music in all-encompassing terms, one is not surprised to find seventeen (partly posthumous) volumes of Stockhausen's Texte zur Musik (still mostly untranslated), as well as slimmer but no less rich volumes of writings by Pousseur, Berio or Elliott Carter, not to mention the many thousands of pages of Boulez's writings collected in the Points de repère collection.² In the case of Boulez, the impulse to write is particularly intense and productive: one does not hesitate to call him a writer in addition to his many other laurels (composer, conductor, founder of musical institutions). Nor is one surprised to discover that several of Boulez's earliest texts ('Current Investigations' (1954), 'Corruption in the Censers' (1956), 'Alea' (1957)) were published in a literary journal, La Nouvelle revue

¹ '...un point véritablement final au XX^e siècle musical avant-gardiste qu'il avait notablement contribué à façonner', Renaud Machart, 'Mort de Pierre Boulez, symbole d'un XXe siècle musical avant-gardiste', *Le Monde*, 6 January 2016,

http://www.lemonde.fr/disparitions/article/2016/01/06/mort-du-compositeur-et-chef-d-orchestre-pierre-boulez 4842501 3382.html

² Points de repère (Paris, Bourgois, 1981; 1985), Points de repères I. Imaginer (Paris: Bourgois 1995), Regards sur autrui. Points de repère II (Paris: Bourgois, 1995) and Leçons de musique. Points de repère III (Paris: Bourgois, 2005).

française (NRF).³

Boulez's theoretical project was particularly ambitious: taking the impulse towards 'zero hour', post-horror *tabula rasa* to the extreme of intending to reinvent music from the bottom up, with internally consistent foundations, at least according to a letter he wrote to Karlheinz Stockhausen, no doubt in the spirit of friendly artistic competition, in December 1959:

As a matter of fact, I've been giving much thought in general to the foundations of today's music. It will be the theme of my course at Darmstadt: six lectures on a new musical methodology. In preparation, I'm rereading Descartes; and I'm struck by how much our musical reasoning is in general inconsistent and without peremptory logic. We have to try to give our thought an internal rigour which it is far from possessing. ⁴

Even if a proposed multi-volume treatise on music never came to fruition, the tenor of the project can be sensed by imagining a combination of *Penser la musique aujourd'hui* with the 1963 lecture "The Necessity of an aesthetic orientation". And yet, Boulez's theoretical writings seem to have temporarily run out of steam around that time, 1963 being the year in which, according to Jean-Jacques Nattiez, 'Pierre Boulez temporarily ceases to write texts pertaining to the elaboration of musical language". This is evident in the text 'Periform' that Boulez wrote as a talk delivered at a 1965 conference on musical form, in which he sounds more Dada than Descartes ('Is the virgin forest a form? No doubt.') That the decade that followed this essay was short on theoretical writings was no doubt at least partly the result of Boulez's new role as an internationally renowned conductor (having conducted the *Rite of Spring* at the Théâtre des Champs-Elysées on 18 June 1963 in an acclaimed performance, and leading up to his simultaneous appointment to the New York Philharmonic and the BBC Symphony Orchestra in 1971), but perhaps also due to his disillusionment with theoretical considerations *per se.*

This impulse towards theorising was renewed when, upon a formal invitation by the historian Emmanuel Le Roy Ladurie, but proposed by Collège member and Boulez admirer Michel Foucault, Boulez was appointed to the chair of 'Invention, Technique and Language in Music' at the Collège de France, that venerable French institution founded in the sixteenth century which assembles scholars in all major fields of the sciences and the arts an, in addition to having them conduct their own research, has them give public lectures—or 'leçons', in the time-honoured parlance of the Collège, a

³ 'Current Investigations' ['Recherches maintenant'](1954), 'Corruption in the Censers' ['La Corruption dans les encensoirs'] (1956), 'Alea' ['Aléa'] (1957) all published in Pierre Boulez, *Stocktakings from an apprenticeship*, ed. Paule Thévenin, trans. Stephen Walsh, intro. Robert Piencikowski (Oxford: Oxford University Press, 1991), pp. 15-19, 20-25 and 26-38.

⁴ Quoted in Philippe Albèra, Pli selon pli. Études et entretien (Geneva: Contrechamps, 2003), 78.

⁵ The first part of this essay is translated as 'Putting the phantoms to flight', in *Orientations*, ed. Jean-Jacques Nattiez, trans. Martin Cooper (London: Faber, 1986), 63-83.

⁶ 'Si l'année 1963 avait été retenue (...), c'est parce que, après cette date, Pierre Boulez cesse d'écrire, provisoirement, des textes relatifs à l'élaboration de son langage musical.', in Jonathan Goldman, Jean-Jacques Nattiez and François Nicolas eds., *La pensée de Pierre Boulez à travers ses écrits* (Sampzon: Delatour, 2009), p. 13.

⁷ 'Est-ce que la forêt vierge est une forme ? Sans doute.' 'Périforme', in Boulez, *Points de repère 1. Imaginer*, ed. Jean-Jacques Nattiez (Paris, Bourgois, 1995), pp. 397-403.

⁸ Michel Foucault, 'Pierre Boulez, the Pierced Screen' (1982), in James D. Faubion ed., *Aesthetics, Method and Epistemology: Essential Works of Foucault 1954-1984*, trans. A.M. Sheridan (London, Penguin: 1998), pp.241-244. This text was included in the French edition of this volume.

word that sounds archaic today when used in that sense—intended for a lay audience. Although not the first Chair in music at the Collège—the musicologist Jules Combarieu gave a supplementary course in music history there between 1904 and 19109—Boulez's appointment was the expression of a desire to expand the institutions scope to include creative activities. As is the custom at the Collège, the precise wording of the Chair is made-to-measure for the candidate put forward for it. The Chair's very name was tailor-made to suit the composer who had pushed in his writings the linguistic metaphor of music to new heights. This parallels the nomination of Foucault to the Collège de France to the chair of 'The History of Systems of Thought' in 1970, a chair that in its very definition was of course intended for Foucault. Boulez would have been approached before the chair was created, and would have had a hand in writing Le Roy Ladurie's presentation text submitted to the Collège's administration on 16 March 1975, a text containing many themes dear to Boulez himself. For example, in a critical appraisal of Schoenberg, Le Roy Ladurie writes that 'Schoenberg's approach focuses on each element of sound separately: pitch, intensivity [sii], duration, timbre. Twelve-tone technique is often portrayed as being too systematic. In fact, it is not, or else it is systematic only in the short term. It is not always capable, for example, of 'thinking' form'. That Boulez needed to continue the formal explorations left hanging by the 'Maître de Vienne' is consistent with the aesthetic program of the author of 'Schoenberg is Dead' (1951). So it was that, once named to this new chair, Boulez gave nine one-hour lectures plus five two-hour seminars per year, beginning with the inaugural address on 10 December 1976, until the spring of 1995, with only a few exceptions, including two years in which no lectures took place. Boulez's very assiduity at the Collège is perhaps surprising given his heavy conducting schedule during this time, but understandable given the strict regulations of Collège professors, who are under no circumstances allowed to vary the annual number of leçons given.

Boulez did not prepare written lectures for each of his leçons and seminars at the Collège. Instead, he would write a single long essay of approximately 20 to 30 pages for each academic year, each of which was devoted to a specific theme, and delivered all of the years' lectures and seminars by extemporising from the prepared text. As a result, when Jean-Jacques Nattiez prepared the original French version of this volume, he published one essay per academic term, rather than the customary publication of each of the nine lectures as a separate essay, following Pierre Boulez's own instructions. Subsequently, Boulez revised each of the essays with a view to publication, and that is the form which this current volume also takes. In his revisions, Boulez removed some of the references to specific musical examples that were sometimes evoked during the lectures, which contributes to the impression of these essays as being meditations on music in general rather than commentaries on specific works. Some of the works mentioned in Boulez's lecture notes but subsequently redacted from the final version shed a fascinating light on Boulez's appraisal of the works of his own time, including a good number that were composed after 1970. In the 1979-1980 courses that became 'Automatism and Decision', for example, Boulez enumerated works that exhibit indeterminacy on different planes. Among works that include various degrees of chance and determination in their form

⁹ Rémy Campos, Nicolas Donin and Frédéric Keck, 'Musique, musicologie, sciences humaines: sociabilités intellectuelles, engagements esthétiques et malentendus disciplinaires (1870-1970), Revue d'Histoire des Sciences Humaines n° 14 (2006/1), pp. 3-17; 6-7.

¹⁰ L'effort de Schönberg porte séparément sur chaque élément du son: la hauteur, l'intensivité [sic], la durée, le timbre. La dodécaphonie est souvent présentée comme étant trop systématique. En fait, elle ne l'est pas, ou bien elle l'est à court terme. Elle ne se révèlera pas toujours capable, par exemple, de penser la forme.' Proposition de création d'une chaire intitulée Invention, Technique et Langage en Musique, par M. Emmanuel LE ROY LADURIE', Collège de France, Cabinet de l'Administrateur, Assemblée du 16 mars 1975, pp. 44-48; p. 45.

or structure one finds not only Cage's Music of Changes, Stockhausen's Klavierstück XI and Henri Pousseur's Mobile, but also Brian Ferneyhough's Time and Motion Study II (1973-1976); among pieces that exhibit degrees of indeterminacy with regard to pitch and timbre, Boulez cites not only Varèse's *Ionisation* as might have been expected, but also Heinz Holliger's *Psaume* (1971) and *Cardiophonie* (1971), as well as Berio's Circles. His discussion of indeterminacy in the form of 'found objects' includes references to Kagel's Exotica (1970-1971) and Acustica (1968/1970) as well as Dieter Schnebel's Maulwerke (1968-1974). In other categories of indeterminacy, Boulez cites graphic scores by Earle Brown and Sylvano Bussotti and even Paul Méfano's Périple(s) à 1 (1978) for solo saxophone that was composed scarcely a year before the lecture. Not that there is anything surprising about Boulez being familiar with the most recent works by his contemporaries and by the younger generation of composers—one has only to consider that fact that Boulez was actively programming many of these works in Ensemble InterContemporain concerts, just as he had decades earlier in Domaine Musical seasons. These musical examples nevertheless illustrate that whatever his reasons for omitting them in the final version of the essays, familiarity with and reflection on the works of the musical present shaped the form that these musical meditations ultimately took. Boulez also decided not to publish the texts prepared for the seminars, many of which featured collaborations with researchers associated with IRCAM, the acoustic and music research institute that he founded, including David Wessel, Andrew Gerszo and Giuseppi di Giugno, perhaps because their interactive format did not lend themselves to the essay format.

Boulez's procedure of writing a single essay for each academic year (or sometimes for several successive years, see below) is what accounts for the (relative) brevity of this volume, considering that it covers fifteen academic terms. One need only compare it with the 2015 publication of Pierre Bourdieu's Collège de France lectures from only three terms (1989-1992) that span some 600 pages. The essays here were collected by Nattiez in collaboration with their author, and published first in the volume Jalons (pour une décennie) from 1989, which includes ten years of lectures, and then in Leçons de musique: Points de repère III from 2005, which assembles the nearly complete essays, newly corrected and approved by Boulez, of which this volume is the translation. In several cases, the titles of the essays were different from those used for the yearly lecture themes; these new titles were added either by Boulez or by Nattiez with the composer's approval. Indeed, one could imagine a future critical edition of Boulez's complete Collège de France lectures, transcribed from the audio recordings of the leçons, which would require several volumes in the manner of what was undertaken for Foucault's complete Collège lectures.

Chapter 1 is the 'Projet d'enseignement' or 'teaching statement' that Boulez submitted as part of his official acceptance of the invitation to be appointed to the Chair, and its title here is simply taken from the name of the chair, i.e., 'Invention, technique and language'. Chapter 2, here given the title 'Invention/Research' is the text of Boulez's inaugural address, the lecture that is traditionally 'delivered solemnly in the presence of colleagues to a large audience, [...] an opportunity to situate his writings

¹¹ Pierre Bourdieu, *De l'état. Cours au Collège de France (1989-1992)*, Patrick Champagne, Remi Lenoir, Franck Poupeau and Marie-Christine Rivière (éd.) (Paris: Raison d'agir/Seuil, 2012).

¹² Pierre Boulez, *Jalons (pour une décennie)*, ed. Jean-Jacques Nattiez, pref. Michel Foucault (Paris: Bourgois, 1989), and *Leçons de musique: Points de repère III*, pref. by Jean-Jacques Nattiez, Michel Foucault and Jonathan Goldman, (Paris Bourgois, 2005).

¹³ The eight volumes in the series 'Lectures at the Collège de France' published between 2003 and 2016, for example: Michel Foucault, *Lectures on the Will to Know. Lectures at the Collège de France 1970-1971 and Oedipal Knowledge*, ed. Daniel Defert; gen. ed. François Ewald and Alessandro Fontana; series ed. Arnold I. Davidson; trans. Graham Burchell (New York: Palgrave Macmillan, 2013).

and teaching in relation to predecessors and to the most recent research developments'. ¹⁴ This inaugural address was published by Boulez in the program of a series of concerts and exhibitions that marked the opening of IRCAM in 1977, where he collaborated with sound engineers and computer programmers at the forefront of innovations in sound-processing technology, rather than in a separate Collège de France publication as is usually the custom. ¹⁵

After this inaugural address, Boulez gave no lectures in the first academic term (1976-1977). Chapter 3, 'Idea, realisation, métier,' is derived from the lecture notes used in the 1977-1978 academic year, whose title was announced as 'Musical invention I: origins and antecedents'. Chapter 4, 'Language, material and structure', corresponds to the lectures given in the 1978-1979 academic year, and were originally advertised as 'Invention musicale II: dimensions and codes'. Chapter 5, 'Composition and its various gestures' forms the basis for the 1979-1980 academic year under the same title, as does Chapter 6, 'Automatism and decision', for 1980-1981. The latter title is clearly an allusion to György Ligeti's well-known 1958 published analysis of the first piece of Boulez's Structures for Two Pianos (1951-1952). 16 Apparently unsatisfied with the text from the 1981-1982 term, 'Research and creation', Boulez chose not to include it in either Jalons or Leçons de musique. Chapter 7, 'The notion of theme and its evolution', is the text used in the 1982-1983 academic year under the same title. Chapter 8, 'Theme, variations and form' and Chapter 9, 'Athematicism, identity and variation' were used in the 1983-1984 and the 1984-1985 academic years respectively, both under the title of 'The Thematic challenge'. Chapter 10, 'The System and the Idea', corresponds to the 1985-1986 academic year, in which Boulez derived his lectures from a journal article that he had recently published.¹⁷ Similarly, after not having given lectures in the 1986-1987 term, for the 1987-1988 season, 'Between Order and Chaos' (Chapter 11), Boulez used a recently-published journal article as the basis for his lectures. 18 Nevertheless, with regards to these two articles, the texts that Boulez prepared for publication in Leçons de musique are considerably altered in comparison to their original publication, and in the case of 'The System and the idea', the essay published in this volume is fully twice as long as its originally published version. Chapter 12, 'Memory and creation', formed the basis for the lectures given in both 1988-1989 and 1989-1990, both announced under the same title. Chapter 13 (here titled 'The Concept of writing'), Chapter 14 ('Notation, transcription, invention') and Chapter 15 ('Writing and idea') formed the basis for the 1990-1991, the 1991-1992 and the 1992-1993 academic years respectively, all of which were originally announced under the title 'The concept of writing'. There were no lectures in 1993-1994, before the final academic year, 1994-1995, when Boulez gave lectures under the title 'The work: whole or fragment?' The dates and titles of the original lectures are listed in the original French below, established from recordings, Collège de France records, and Boulez's agenda entries.

¹⁴According to the official website of the Collège de France: 'Solennellement prononcée en présence de ses collègues et d'un large public, elle est pour lui l'occasion de situer ses travaux et son enseignement par rapport à ceux de ses prédécesseurs et aux développements les plus récents de la recherche.' http://books.openedition.org/cdf/156

¹⁵ Until 2003, these inaugural lectures were published as *Leçons inaugurales*, Edition Collège de France. Boulez's lecture was published as 'Invention/Recherche' in *Passage du XXe siècle (1ère partie)*, Jan.-Jun. 1977, IRCAM; an English translation of this essay was published as 'Technology and the Composer' in *The Times Literary Supplement* 6 May 1977 and reprinted in *Orientations*, *op. cit.*, pp. 486-494.

¹⁶ György Ligeti, 'Pierre Boulez: Decision and Automatism in Structure Ia', *Die Reihe* no. 4 (1960), pp. 36-62.

¹⁷ Le Système et l'idée', In Harmonique, no. 1 (Dec. 1986), pp. 62-104.

¹⁸ 'Entre ordre et chaos', *InHarmonique*, no. 3 (Mar. 1988), pp. 104-136.

Lecture dates and annual topics¹⁹

Inaugural address: 10 Dec. 1976

1977-1978: L'invention musicale-I : origines et antécédents

11 Jan. 1978, 25 Jan., 1 Feb., 22 Feb., 1 Mar., 22 Mar., 29 Mar., 12 Apr., 19 Apr. 1978-1979: L'invention musicale-II : dimensions et codes

6 Oct. 1978, 13 Oct., 20 Oct., 27 Oct., 3 Nov., 10 Nov., 17 Nov., 24 Nov., 1 Dec. 1979-1980 La composition et ses différents gestes

18 Jan. 1980, 25 Jan., 1 Feb., 8 Feb., 15 Feb., 22 Feb., 29 Feb., 7 Mar., 14 Mar. 1980-1981 Automatisme et décision

27 Feb. 1981, 6 Mar., 13 Mar., 20 Mar., 4 Apr., 24 Apr., 2 May, 12 Jun., 19 Jun. 1981-1982: Recherche et création

15 Jan. 1982, 22 Jan., 29 Jan., 5 Feb., 19 Feb., 20 Feb., 12 Mar., 13 Mar., 19 Mar. 1982-1983: La notion de thème et son évolution

14 Jan. 1983, 21 Jan., 29 Jan., 4 Feb., 18 Feb., 25 Feb., 4 Mar., 11 Mar., 25 Mar. 1983-1984 L'enjeu thématique-I

13 Jan. 1984, 20 Jan., 27 Jan., 3 Feb., 2 Mar., 9 Mar., 16 Mar., 23 Mar., 30 Mar. 1984-1985: L'enjeu thématique-II

11 Jan. 1985, 12 Jan., 18 Jan., 19 Jan., 1 Feb., 2 Feb., 8 Feb., 9 Feb., 15 Feb. 1985-1986: no lectures

1986-1987: Le système et l'idée

30 Jan. 1987, 20 Feb., 20 Mar., 27 Mar., 3 Apr., 10 Apr., 15 May, 22 May., 29 May 1987-1988: Entre ordre et chaos

29 Jan. 1988, 5 Feb., 12 Feb., 19 Feb., 15 Apr., 22 Apr., 29 Apr., 6 May, 13 May 1988-1989: Mémoire et création-I

3 Feb. 1989, 4 Feb., 10 Feb., 11 Feb., 17 Feb., 18 Feb., 24 Feb., 25 Feb., 3 Mar. 1989-1990 : Mémoire et création-II

26 Jan. 1990, 27 Jan., 2 Feb., 3 Feb., 16 Feb., 17 Feb., 9 Mar., 10 Mar., 17 Mar. 1990-1991: Le concept d'écriture –I

30 Nov. 1990, 1 Dec., 7 Dec., 8 Dec., 14 Dec., 15 Dec., 18 Jan. 1991, 19 Jan., 25 Jan. 1991-1992: Le concept d'écriture –II

10 Jan. 1992, 11 Jan., 24 Jan., 25 Jan., 11 Apr., 16 Apr., 17 Apr., 18 Apr., 19 Jun. 1992-1993: Le concept d'écriture – III

30 Oct. 1992, 31 Oct., 6 Nov., 7 Nov., 13 Nov., 14 Nov., 8 Jan. 1993, 9 Jan., 12 Feb. 1993-1994: no lectures

1994-1995: L'œuvre : tout/fragment

21 Oct. 1994, 22 Oct., 28 Oct., 29 Oct., 3 Feb. 1995, 4 Feb., 17 Feb., 18 Feb., 8 Apr.

Boulez's Collège de France period also inaugurated a new manner in his own compositional career which led to a marked stylistic departure, as witnessed by such works as *Rituel, Messagesquisse* (1976-1977), and the *magnum opus* of this period, *Répons* (1981; 1984), as well as later large-scale works such as *Sur Incises* (1996-1998) and *Dérive 2* (1988-2006/2009). We cannot know how theory and practice developed together in Boulez's mind, but it remains clear that this period was marked by a return to

¹⁹ Dates assembled by Jean-Jacques Nattiez and deposited in the Pierre Boulez Fonds at the Université de Montréal; the years of the different lectures are also listed in Jean-Jacques Nattiez's original preface to the French edition, 'Pierre Boulez professeur', in *Leçons de musique*, op. cit., pp. 11-16.

systematic thinking—to think music in all its generality. Far from bearing only on Boulez's own music or musical thought, the ideas elaborated in this volume apply in principle to any musical language and may well be of interest to composers, performers, and music lovers of all kinds, 'no aesthetic orientation necessary', as it were. It might further be advanced that the two lectures that concern the central Boulezian concept of 'invention' (Chapters 1 and 2) could well apply to any creative endeavour and contribute to the current scholarly conversation about the nature of creativity.

This English edition complements the last English volume of Boulez's writings, *Orientations*, published in 1986.²⁰ All other volumes published in English since that time have been either a retranslation of an existing volume, ²¹ published letters, ²² or book-length conversations or interviews. ²³ The texts of this volume can at times be read as a kind of diary of Boulez's problems and discoveries encountered during the gestation of his compositions: the reflections Boulez presents here on idea, gesture, creativity, the musical object, the concept of writing, or, for example, the status of the musical 'work', as well as the notion of deduction, and envelope, are inextricably linked to Boulez's development as a composer. For example, in the final year's course, 'The Work: Whole or Fragment?', Boulez makes no secret of the fact that in studying the status of the musical work he is reflecting on a problem of particular personal interest. The relationship between fragment and whole is of course central to Boulez's reflections on form; his works *Dérive 1*, *Mémoriale*, *Anthèmes 1* and 2, for example, are fragments, grafts, or extensions, of *Répons* and ... *explosante-fixe*... respectively.

In these lectures Boulez was still searching for adequate solutions to musical problems after a half-century of compositional experience. It is remarkable to find Boulez still meditating in the 1980s and 1990s on the consequences of two of his most fundamentally important compositional experiments from the 1950s: total serialism, the iconic example being his *Structures for two pianos*, *Book 1* (1951-1952), and on open or mobile form, its *locus classicus* being the Third Piano Sonata (1958-63). Indeed, with regards to open form, and more generally the cluster of concepts that include indeterminacy, aleatorics and chance, Chapter 6 contains a sustained reflection replete with considerable aesthetic detail that at times recalls Boulez's now classic correspondence with John Cage that famously circles around these compositional attitudes.²⁴ But new areas of focus are in abundance here too, most significantly regarding the theme and thematic processes (Chapters 7-9), perceptual markers that he terms 'envelopes' and 'signals' (Chapters 9-11), the problem of 'authenticity' (Chapter 12), or large-scale form (Chapters 12-16), among many others.

Boulez's highly literary style, his crisp and precise sentences, also reveal his affiliation to a French literary as well as musical tradition—in a way that follows in this respect in the footsteps of another literary titan, Hector Berlioz. Boulez also shows himself to be the product of a classical education:

²⁰ Pierre Boulez, *Orientations*, ed. Jean-Jacques Nattiez, trans. Martin Cooper (London, Faber and Faber, 1986).

²¹ Stocktakings from an Apprenticeship, trans. Stephen Walsh, introduction by Robert T. Piencikowski (Oxford University Press, 1991); first translation published as *Notes of an Apprenticeship* (Random House, 1968).

²² The Boulez-Cage Correspondence, ed. Jean-Jacques Nattiez, trans. Robert Samuels (Cambridge University Press, 1995).

²³ Rocco Di Pietro, *Dialogues with Boulez* (Lanham, MD: Scarecrow Press, 2001); *Conversations with Boulez: Thoughts on Conducting*, trans. Camille Naish (Portland, OR: Amadeus Press, 1996); *Boulez on Conducting: Conversation with Cécile Gilly* (Faber and Faber, 2003).

²⁴ Pierre Boulez and John Cage, *The Boulez-Cage Correspondence*, ed. Jean-Jacques Nattiez, ed. and trans. Robert Samuels (Cambridge: Cambridge University Press, 1995).

many of the concepts he uses to describe musical discourse are inspired by notions in classical rhetoric (tropes, schema, invention, etc.), so much so that one sometimes has the impression of reading a manual on musical rhetoric in the tradition of Johann Mattheson's Das neu-eröffnete Orchestre (1713), and this should come as no surprise, given the classical elements of Boulez's musical discourse.²⁵ Moreover, as Patrick McCreless noted, 'what the later eighteenth century tended to call rhetoric gradually began to be subsumed under what the nineteenth century called structure, to the point that musical rhetoric disappeared altogether. It was left to twentieth-century musicology to recover, underneath the nineteenth-century concepts of expression, organicism, and structure, the rhetorical roots of the music and music theory of the preceding centuries'. 26 It is conceivable that twentiethcentury composers like Boulez did the same in their writings and compositions. Indeed, some readers may be struck by the underlying organicism of Boulez's approach, as if his legons were follow-ups to the lectures that formed Anton Webern's posthumous volume The Path to the New Music, a book that Boulez quotes repeatedly here. Boulez is at any rate unabashed to appeal to organic metaphors, as when he notes, in Chapter 9, that 'The difficulty is to transmit, to have the listener perceive not only an *order*, but to create a living, sensitive, organism that displays this order in a perceptible way'.²⁷ It may also be that the classical tropes of Boulez's thought in the Collège lectures are the flip-side of his other major activity during those years: as director of IRCAM, from its beginnings in the early to mid-1970s until 1993. As the official Collège document presenting Boulez's candidacy for the Chair, signed by Le Roy Ladurie and presented on 29 June 1975, states: 'Boulez's teaching at the Collège de France will take place in parallel with his activity as director of IRCAM [...] The collaboration between musicians and scientists, research conducted at IRCAM and, in parallel, Pierre Boulez's teaching at the Collège de France, will form a kind of laboratory that is at once individual and collective, in which contemporary music and its science will be created; in which one will create and, at any rate, think the music of today'. 28 Indeed, as a lecturer in the hallowed halls of the Collège de France, Boulez's musical meditations take on a timeless character, one in which technology and what Boulez terms the 'machine' play only supporting roles. This double nature—technologist in the IRCAM morning, classicist in the Collège de France afternoon—is of course the mirror image of the double (viz. his work Dialogue de l'ombre double) and indeed multiple (viz. his work Eclat-multiples) facets of Boulez the musician.

Other readers will be struck by the affinity of many of these chapters with contemporaneous musicological writing. For example, when, in Chapter 5, Boulez states that 'For a long time, music did not pose the problem of expression (and its sentimental caricature 'being expressive') as a separate

²⁵ Arnold Whittall, 'Boulez et le classicisme moderne (Schönberg, Berg)', in *La pensée de Pierre Boulez à travers ses écrits, op. cit.*, pp. 195-208.

²⁶ Patrick McCreless, 'Music and Rhetoric', *Cambridge History of Western Music Theory* (Cambridge University Press, 2006), 847-879; 876. I wish to thank Arnold Whittall for pointing this out to me.

²⁷ [REPLACE BY PAGE NUMBER IN THIS VOLUME Chapter 9]

²⁸ L'enseignement de Pierre Boulez au Collège de France se déroulerait parallèlement avec son activité de Directeur de l'IRCAM [...] La collaboration entre musiciens et scientifiques, l'expérimentation musicale, les recherches menées à l'IRCAM, et, parallèlement l'enseignement de Pierre Boulez au Collège de France formeront une sorte de laboratoire à la fois individuel et collectif où l'on créera <u>aussi</u> la musique contemporaine et sa science; où l'on créera et où en tout cas l'on pensera la musique aujourd'hui.' Excerpt from 'Proposition de création d'une chaire intitulée Invention, Technique et Langage en Musique, par. M. Emmanuel LE ROY LADURIE, presented to the Cabinet de l'Administrateur of the Collège de France on 16 March 1975. In Boulez Archives, Université de Montréal.

category', one feels that such a sentence might be found on a page of Carl Dahlhaus's writings. Elsewhere, Boulez's writes in the mode of what is usually understood in English as that of the critic. When, in Chapter 3, speaking of works that are 'like veritable geological cataclysms that have entirely changed the configuration of musical thought', Boulez recalls T. S. Eliot's well-known theory of poetic genius in the poet's famous essay 'Tradition and Individual Talent', an essay that Boulez quotes at length in Chapter 12.²⁹ Sometimes, his prose makes striking use of political or even martial metaphors, as when he discusses musical ideas that when 'conceived with enough power, [...] can invade territories that are most distant from their point of direct application'.³⁰ At other times, he clearly wants the politically-charged connotations of words like 'hierarchy' to ring out: 'By no means is it a hierarchy of what is important and what is not, a kind of hierarchy of that which earns distinction versus that which inspires contempt, noble versus ignoble, but rather: that which is at the centre, that which is in the periphery; that which is decisive, that which is relative'.³¹

It has often been noted (by Célestin Deliège and Nattiez in particular) that the Collège de France lectures represented a decisive turn towards an exploration of the way music is perceived in practice, even if sensitivity to perceptual factors can hardly be underestimated in either Boulez's earliest writings or indeed his compositions, and it is refreshing, in an era when so much modernist musical production is dismissed out of hand as mere 'Augenmusik' divorced from real musical experience, to read Boulez's claim that

being conscious of the various forms of musical perception and to know how to explore them, to exploit them, enriches invention considerably. Perception through presence and perception through absence mark the limits within which lies an immense field of possibilities; elements set in relief or hollowed-out elements, reassured memory or thwarted memory, these are the two poles of the relationship of the listener with the work'.³²

And yet it is instructive to consider to what extent the Collège de France lectures represent an aesthetic reversal with respect to the earlier writings, or, if one likes, and in a nod to the title of the earlier volume of Boulez's writings, could these lectures be considered the expression of theoretical and methodological 're-orientations'? Rather than to speak of an aesthetic turn, it would likely be more accurate to speak of the way reading this volume reminds us once again of the crucial role played by the listener in Boulez's conception of the musical experience. The concern for the nature of sound perception evident in this writings is also a reflection of the kind of psychoacoustic research that was then taking shape at IRCAM, spearheaded by David Wessel and later Stephen McAdams. One senses in Boulez's comments about perception, memory and signals, a sincere belief, shared by other IRCAM composers at the time, that new findings in psychoacoustics would soon transform the way music was composed. The concern for the nature findings in psychoacoustics would soon transform the way music was composed.

²⁹ [REPLACE BY PAGE NUMBER IN THIS VOLUME Chapter 3, Leçons de musique, p. 77.]; Eliot Citation on page [REPLACE BY PAGE NUMBER, chapter 12)

³⁰ REPLACE BY PAGE NUMBER IN THIS VOLUME Chapter 3

³¹ REPLACE BY PAGE NUMBER IN THIS VOLUME Chapter 5

³² REPLACE BY PAGE NUMBER IN THIS VOLUME Chapter 5

³³ Other recurring concepts are discussed in Chapter 4 of Jonathan Goldman, *The Musical Language of Pierre Boulez* (Cambridge University Press, 2011), 53-82; this Chapter contains the better part of the author's preface to the original French version of the current volume.

³⁴ I wish to thank Nicolas Donin for suggesting this point to me. This psychoacoustic research is highlighted in the seminal volume showcasing research at IRCAM and other similar laboratories in the 1980s: Jean-Baptiste Barrière ed., *Le timbre, métaphore pour la composition* (Paris: Bourgois, 1991).

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Boulez's book contained no footnotes, and all footnotes in this volume are editorial.

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Significantly, the contributions by David Wessel and Stephen McAdams are both collaborations with composers, suggesting the extent to which composers in the IRCAM orbit had a stake in psychoacoustic research and the study of perception more generally: Jean-Claude Risset and David L. Wessel, 'Exploration du timbre par analyse et synthèse', and 'Qualités et fonctions du timbre musical', and Stephen McAdams and Kaija Saariaho, 'Qualités et fonctions du timbre musical', both in Le timbre, métaphore pour la composition (op. cit., pp. 102-133 and 164-181).