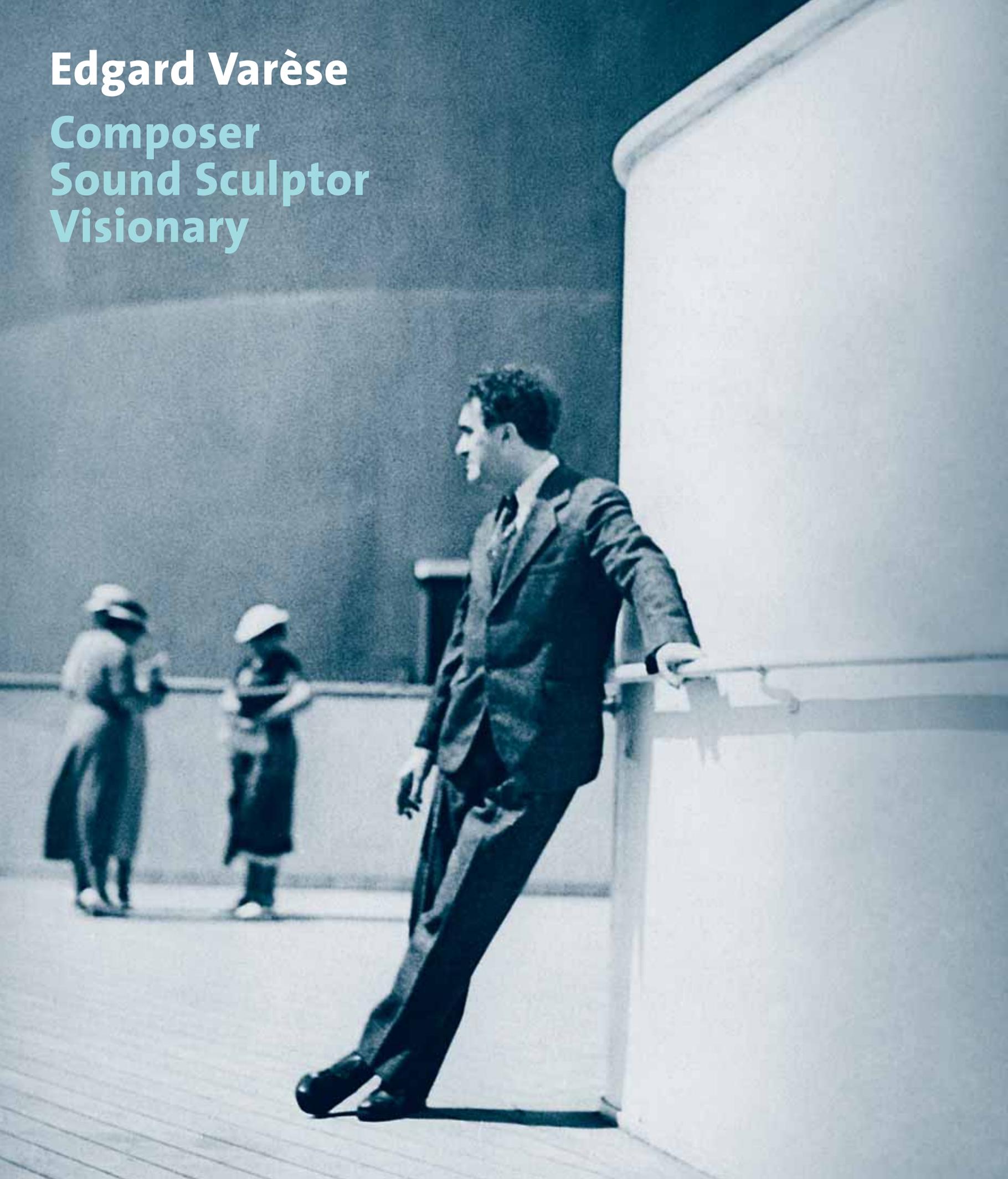


Edgard Varèse

Composer

Sound Sculptor

Visionary



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Visionary

Edited by
Felix Meyer and Heidi Zimmermann

A Publication of the Paul Sacher Foundation

The Boydell Press
Woodbridge, Suffolk
2006

Imprint

A Publication of the Paul Sacher
Foundation, Basel

Catalogue of the Exhibition

Edgard Varèse –

Composer, Sound Sculptor, Visionary

28th April – 27th August 2006

in the Museum Tinguely, Basel



An exhibition organized by the Paul Sacher
Foundation and the Museum Tinguely
as part of the celebrations in honor of Paul
Sacher's 100th birthday.

Exhibition

Concept and organization:

Felix Meyer, Heinz Stahlhut and
Heidy Zimmermann

Co-ordination: Heinz Stahlhut

Archive/librarian: Claire Wüest

Exhibition design and technical services:

Urs Biedert

Administration: Laurentia Leon

Restoration supervision:

Reinhard Bek, Ernst Oberholzer

Transport: ZF Kraft Els, AG, Josy Kraft, Basel

Frames and Mounts: Silvia Tarchini,

Mesmer Galerie und Rahmen GmbH, Basel

Audio chairs: Öffentliche Kunstsammlung/
Kunstmuseum Basel

Sound engineering: Albrecht Gasteiner,

Omniphon, Basel

Catalogue

Concept and editorial:

Felix Meyer and Heidy Zimmermann

Translation from German:

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Commentaries)

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Translation from French:

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French quotations)

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Index: Rosmarie Anzenberger

German language edition published
by Schott Musik International, Mainz

English language edition published
by the Boydell Press, an imprint of
Boydell & Brewer Ltd., Woodbridge, Suffolk

Cover illustration:

Edgard Varèse on the ferry to the Bell
Laboratories (1934), photograph by Thomas
Bouchard (© Diane Bouchard, Brewster, MA)

Design: Sibylle Ryser, Basel

Typesetting (German edition): Sibylle Ryser

Typesetting (English edition): Katrin Ginggen

Setting of musical notation:

ngb | notengrafik berlin

Fonts: Scala and Thesis

Paper: Aconda 13, 115 gm², wood free,
acid free, matt finished

Reproduction: Photolitho Sturm AG,
MuttENZ/Basel

Printed by Kreis Druck AG, Basel

Bound by Buchbinderei Grollimund AG,

Reinach/Basel

Printed in Switzerland

© Paul Sacher Stiftung, Basel

First published 2006

The Boydell Press, Woodbridge, UK

ISBN 1 84383 211 9

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2 Ingolf Dahl and Edgar Varèse, "Compositions for Flute Solo," *New Music Quarterly* 19/4 (July 1946). Varèse's composition is found on p. 13.

3 Marc Wilkinson, "Density 21.5," *The Score and I.M.A. Magazine* 19 (March 1957), pp. 15–18; Jean-Jacques Nattiez, "Densité 21.5" de Varèse: *Essai d'Analyse Sémiologique* (Montréal: Groupe de recherches en sémiologie musicale, 1975), Eng. trans. by Anna Barry as "Varèse's *Density 21.5*: A Study in Semiological Analysis," *Music Analysis* 1/3 (1982), pp. 243–340; Marion Guck, "A Flow of Energy: *Density 21.5*," *Perspectives of New Music* 23/1 (Fall–Winter, 1984), pp. 334–47; Jeffrey Kresky, "A Path Through 'Density,'" *Perspectives of New Music* 23/1 (Fall–Winter 1984), pp. 318–33; Jonathan W. Bernard, "On *Density 21.5*: A Response to Nattiez," *Music Analysis* 5/2–3 (July–October 1986), pp. 207–31, and *The Music of Edgard Varèse* (New Haven and London: Yale University Press, 1987), pp. 217–32; George Perle, *The Listening Composer* (Berkeley and Los Angeles: University of California Press, 1990), pp. 11–13, 16–19, 21–22, 70–83, and 106–110; Jan Dvorak, "Density 21.5: Edgard Varèse und die Konzeption melodischer Totalität," in *Kultur – Bildung – Politik: Festschrift für Hermann Rauhe zum 70. Geburtstag*, ed. Hanns-Werner Heister and Wolfgang Hochstein (Hamburg: von Bockel, 2000), pp. 249–71; Matthew Greenbaum, "The Proportions of *Density 21.5*: Wolpean Symmetries in the Music of Edgard Varèse," in *On the Music of Stefan Wolpe: Essays and Recollections*, ed. Austin Clarkson, *Dimensions & Diversity* 6 (Hillsdale, NY: Pendragon Press, 2003), pp. 207–19.

No piece of music by Edgard Varèse has drawn more attention in the scholarly literature than *Density 21.5*, the piece for unaccompanied flute that he composed in 1936 and reworked in 1946. One reason for this is undoubtedly the piece's canonic status: it now stands, alongside Claude Debussy's *Syrinx* (1913) and Luciano Berio's *Sequenza [1]* (1958), at the very heart of the modern flute repertoire. Another is that the brevity and monophonic structure of *Density* make it more amenable to analysis than Varèse's other works. It is thus not surprising that the bulk of scholarly writings on *Density 21.5* have focused on analytical concerns, drawing for their textual foundation on the "definitive version" published by Ricordi in 1956 and taken over by Colombo (later Colfranc) in 1958.¹ (For the sake of simplicity, I shall refer to this version as the "printed version," though it was preceded by a slightly different first edition, published by the New Music Society in summer 1946, which will be discussed below.²) A large number of authors – including Marc Wilkinson, Jean-Jacques Nattiez, Marion Guck, Jeffrey Kresky, Jonathan Bernard, George Perle, Jan Dvorak, and Matthew Greenbaum – have meticulously examined the piece's melodic design and its implicit harmonies, as well as its formal construction,³ while others (notably Carol Baron) have widened the discussion by considering the intertextual relations between *Density 21.5* and its "compositional forbear," Debussy's *Syrinx*.⁴ Yet few writers have devoted themselves to aspects other than (textual) analysis. Among those who have are Mauricio Freire Garcia, who undertook a spectrographic examination of three performances of the piece; and Thomas Strässle, who discussed the aesthetic implications of the material used in the flute.⁵

It is time now to augment the previous perspectives by adding another view, namely, from a documentary and text-critical vantage point. This is possible because several manuscripts have emerged from the composer's posthumous estate that grant us a fascinating if incomplete glimpse into the genesis of *Density 21.5*. They reveal that the original version differed considerably from the printed version, thereby casting new light on the several stages of the piece's later revision. The object of this essay is to present these manuscripts as a sort of initial "body of evidence" and relate them to various biographical facts relevant to the genesis of the piece, to the extent that this is possible with the present state of knowledge.

The "Original Version"

In a footnote appearing in every edition of *Density 21.5* Varèse laconically remarked that the piece was composed in January 1936 at the request of Georges Barrère "for the inauguration of his platinum flute." This note is misleading in two respects: firstly, Barrère's flute, manufactured by the Wm. S. Haynes Co. of Boston, was not made of pure platinum (as, indeed, a competing instrument manufactured by Rudall, Carte & Co. of London was), but of an alloy consisting of ten percent iridium; and, secondly, Barrère had already given the official debut of the platinum flute at a concert of the Chautauqua Symphony Orchestra on 18 July 1935.⁶ There can be no doubt, however, that *Density 21.5* was the first piece ever to be composed for this instrument. And it is at least highly probable that, unless Barrère demonstrated the instrument

to him beforehand,⁷ Varèse first became acquainted with the platinum flute on 20 November 1935. For it was on this day that he attended an afternoon demonstration in the salon of the New York restaurant Sherry's in which Barrère "endorsed" the new instrument. The event, also attended by other notables such as Walter Damrosch, Henry Hadley, Carlos Salzedo, and Albert Stoessel,⁸ was partly informative and partly an advertising ploy. Besides Barrère's recital of several familiar pieces from the repertoire (by, among others, Gluck, Wormser, and Ravel), there were explanatory remarks on organology and acoustics by renowned experts. Varèse's reaction to the event is not documented; but it is safe to assume that the exchange of information between artists and scientists can only have been to his taste, even though it only involved an "improvement" to an existing instrument and not the creation of entirely new sound-producers, something he had been advocating for years. Moreover, he seems to have been taken by the specific timbral and dynamic virtues of the platinum flute, which, according to an advertising brochure specially prepared for the occasion, consisted in the instrument's capacity to produce a wider range of upper partials in the low and middle registers and greater brilliance in the high register compared to the silver flute.⁹ This became apparent a short while later (in January 1936) when he agreed to Barrère's request to write a piece for a concert scheduled to take place in Carnegie Hall on 16 February 1936 for the benefit of New York's Lycée Français.

Given the absence of a live recording or a score from Barrère's personal library, we have no way of knowing for certain what form *Density 21.5* assumed at its first performance.¹⁰ However, a corrected fair copy in ink from Varèse's posthumous estate very probably shows the "original version" intended for Barrère (see Cat. 125a, plate p. 251), in which case it captures the form the composition maintained until 1946. This single-page manuscript surprises us at the very first glance: not only is the opening of the piece notated a minor third higher than in the printed version, but the piece goes off on a completely different tack from m. 10 and comes to an end after thirty rather than the sixty-one bars of the printed version. Is the "original version" thus only half as long as the definitive version? Or is the manuscript incomplete, as is suggested by the breath mark and the absence of a double bar at the end of the page? Or is this perhaps a preliminary draft of the "original version" rather than the "original version" itself?

Let us start with the third question. All in all, the outward appearance of the basic layer (i.e. the writing in black ink, including the two slips of paper carefully pasted over mm. 20 and 21 in staves 8 and 9), more or less clearly indicates a "finished" version rather than a draft. This supposition receives support from a remark by the composer himself (dating, however, from very much later), in which he mentions that he added the title *Density 21.5* to the piece only after its completion: "My composition was to inaugurate a new flute he [i.e. Georges Barrère] had just received made of platinum. When I took him the score he remarked that it was without a title and insisted on my thinking of one on the spot. That, I said, is simple. As my piece is to inaugurate the first platinum flute in existence and as the density of platinum is 21.5, I shall call it *Density 21.5*."¹¹ At any rate, Varèse is hardly likely to have added an *ex post facto* title in a calligraphic hand to a version he had already withdrawn. (Nor is it likely that he freely invented the chronology of the naming of this piece. The only point that raises doubts is his claim that he thought up the title on the spot while talking to Barrère, for the *verso* of the page contains the penciled inscription "Density 21.6," possibly intended as an alternative title.)¹²

As for the other two questions – the length of the existing manuscript and its degree of completion – perhaps the best way of answering them is by assessing the internal unity of the music committed to paper. To anticipate: the music is unified to a remarkably high degree, not only in itself, but especially in comparison with the printed version. Let me illustrate this point with a few observations.

1. Beginning in m. 10 the melodic ascent stated at the opening has a more purposeful continuation than in the printed version. The peak pitches *f*[♯]3 (mm. 12–13), *a*3 (m. 16), and *a*3/*c*4 (mm. 20–22) produce a contiguous series of three melodic climaxes, each reached in a single gesture and all three separated by roughly equal intervals of time. The threefold ascent to these peak pitches begins with small intervals and proceeds with increasingly wide leaps, placing the entire melodic progress of the first two-thirds of the piece under a single large-scale ascending

4 Carol K. Baron, "Varèse's Explication of Debussy's *Syrinx* in *Density 21.5* and an Analysis of Varèse's Composition: A Secret Model Revealed," *Music Review* 43/2 (May 1982), pp. 121–31.

5 Mauricio Freire Garcia, "Density 21.5 by Edgard Varèse," *The Online Contemporary Music Journal* 7 (2001); Thomas Strässle, "Materialklang: Klangmaterial: Überlegungen zu einer musikwissenschaftlichen Materialforschung am Beispiel von Edgard Varèses *Density 21.5*," *Musik & Ästhetik* 32 (2004), pp. 82–90.

6 See Nancy Toff, *Georges Barrère and the Flute in America*, catalogue of the exhibition in the New York Public Library for the Performing Arts, 12 November 1994 to 4 February 1995 (New York: The New York Flute Club 1994), p. 27.

7 The two musicians were friends at least from the 1920s, when Barrère was still the solo flutist of the New York Symphony.

8 Simon Snooper, "Somebody Told," *Musical Courier*, no. 111 (20 November 1935), p. 20.

9 N. N., *The Platinum Flute and Georges Barrère* (New York: [International Nickel Company], 1935), pp. 2–13.

10 The flutist's posthumous papers are widely dispersed. As far as we know today, they contain no documents on *Density 21.5*. Information kindly supplied by Nancy Toff, 22 August 2003.

11 Unsigned typescript (with handwritten annotations by Louise Varèse) for a radio broadcast of *Density 21.5*, *Octandre*, and *Intégrales* (Canadian Broadcasting Corporation, 1964), pp. 1–2; Edgard Varèse Collection, PSS. The phrase "on the spot" was later deleted by Louise Varèse, who may have been entrusted with editing the text.

12 This note most likely originated after the fair copy on the *recto*, since the two lines of music surrounding it represent only a mirror-image tracing of the corresponding lines printed through from the *recto*. In other words, Varèse may have left sufficient space at the beginning of the fair copy to add a title, which he then invented, not on the spur of the moment, but after a careful consideration of alternatives (such as "Density 21.6"). "Density 21.6" refers to the specific gravity of the platinum-iridium alloy used for Barrère's flute, as Varèse could easily have discovered on p. 14 of *Platinum Flute* (see note 9).

arc. (The much longer printed version contains a comparable melodic expansion proceeding via e^3 [mm. 13–14], g^3 [m. 17], and a^3 [mm. 32–35] to the peak pitches b^3/d^4 in mm. 46–50. However, longer contrasting passages are interpolated between the second and third climaxes, and again between the third and fourth in this version.)

2. The peak pitches $f\sharp^3$ (mm. 12–13), a^3 (m. 16), and a^3/c^4 (mm. 20–22) are also related intervallically, through the strong gravitational force of the minor-third axis system, which, if we adopt the analytical model proposed by Marc Wilkinson – particularly as expanded later by George Perle – underlies the entire piece.¹³ This organizing principle is far more clearly applied in the “original version” than in the printed version, imparting to it a tight coherence from m. 1 to m. 22 in the form of an implicit “harmonic progression.” Ultimately the entire course of the piece, up to and including the climax in mm. 20–22, can be viewed as an elaboration of a threefold “modulation” leading from the basic axis, C_3_0 ($C\sharp-E-G-Bb$) to the second axis, C_3_1 ($D-F-Ab [G\sharp]-B$) and finally to the third, C_3_2 ($D\sharp-F\sharp-A-C$). The modulations take place in three waves: mm. 1–11^I / mm. 11²–12^I / mm. 12²–13^I: $C_3_0-C_3_1-C_3_2$; mm. 13²–15³ / m. 15⁴ / m. 16: $C_3_0-C_3_1-C_3_2$; and mm. 17–18^I / mm. 18² und 19²–3 / mm. 19⁴–22³: $C_3_0-C_3_1-C_3_2$, where in terms of the linear unfolding of the music the three peak pitches belonging to axis C_3_2 ($f\sharp^2$, a^3 , c^4) mark the point of greatest distance from the basic axis C_3_0 .¹⁴ The printed version, in contrast, associates the first climax (mm. 13–14: b^2-e^3) with a return to the axial pitches of C_3_0 .¹⁵ Beginning at m. 15 – especially in the newly interpolated middle section – the series of pitches is only loosely related to the minor-third axis system.

3. Both in mm. 9–12/13–16 and in mm. 28–30/30–32, i.e. at the end of the epilogue-like passage for which the piece abruptly reverts to the middle register (from m. 22 to the piece’s lowest pitch, b , in m. 28),¹⁶ the “original version” clearly avails itself of the syntactical device of the sequence – a device only hinted at in the printed version. In both cases the second half of a bipartite sequence is shifted by the critical interval of a minor third compared to the first half (upward in mm. 13ff., downward in m. 31). These two sequences occupy parallel positions in the overall bipartite form. The sequence in mm. 9–16 brings the first half of the draft to a conclusion in the highest register with the interval of a fifth followed by a tritone (m. 16: $g\sharp^2-d\sharp^3-a^3$), just before the return of the opening motif that begins the second half of the piece in m. 17. In the same way, the sequence in mm. 28–32 rounds off the second half, with the same series of intervals, this time a semitone higher (mm. 31–32: $a^2-e^3-b\flat^3$). This “half cadence/full cadence” relationship – along with the fact that the ascending gesture in mm. 31–32, with its final four pitches $g\sharp^2-a^2-e^3-b\flat^3$, replicates the pitches of the opening motif and its continuation (m. 1: $a\sharp^1[g\sharp^1]-a^1$, m. 2: $e^1-b\flat^1$) – allows us to assume that the “original version” is indeed complete, notwithstanding the breath mark and the missing double bar, the former probably signifying that the tension of the breath is not to relax until the very end of the piece.¹⁷

This, then, is how *Density 21.5* must have looked when Barrère learned it for the benefit concert at Carnegie Hall on 16 February 1936, and when he sought the personal advice of the composer on at least two occasions, judging from the entries of 29 January and 4 February in Varèse’s appointment book. (Incidentally, after the second meeting Varèse expressed his complete satisfaction to his wife, who was then staying with friends in Key West: “The little flute piece is pretty and Barrère plays it well.”¹⁸) And this is also how the piece must have looked long after the premiere, where, however, it did not receive the attention it deserved. For although the “master of ceremonies” Louis Hasselmans specifically discussed the platinum flute and Varèse’s piece in his oral address, the benefit or “gala” character of the event (Varèse belittled the audience as “a public of ambassadors, millionaires, and other lofty farinaceous vegetables of finahnce and high shoshiety, as Count [Pierre] Laval would say”¹⁹) precluded concentration on the music, as did the highly diverse program, which was primarily intended to showcase star performers of French nationality or extraction (including, besides Barrère himself, the harpist Carlos Salzedo, the soprano Lily Pons, and the pianist Robert Casadesus). It is thus hardly surprising that the newspaper reports were more concerned to list the celebrities present (both on stage and in the audience) than to evaluate the items on the program. Nonetheless,

¹³ Wilkinson, “Density 21.5” (see note 3), pp. 17–18; Perle, *Listening Composer* (see note 3).

¹⁴ The abbreviations used here (C = cycle; C_3 = minor-third cycle; C_3_0 = minor-third cycle at transposition level 0) are based on a terminology proposed by George Perle in *The Operas of Alban Berg*, vol. 2, *Lulu* (Berkeley and Los Angeles: University of California Press, 1985), 199ff. I have, however, used a movable do, assigning the number zero to the cycle including $C\sharp$, rather than to the one including C as Perle suggests, because the former is the first to appear in *Density 21.5*.

¹⁵ Since the opening of the piece in the printed version is transposed downward by the axis-defining interval of the minor third, it falls within the same minor-third axis and outlines the same “harmonic progression” (up to the beginning of m. 13) as in the “original version”: C_3_0 (mm. 1–10) – C_3_1 (mm. 11–12) – C_3_2 (mm. 12–13).

¹⁶ This low pitch was later raised in pencil to “do \sharp .”

¹⁷ Similarly, the note “5 mes[ures]” added later in red pencil was hardly intended as an extension of the original ending, but refers to the revisions discussed below, though its exact meaning remains open.

¹⁸ Letter from Edgard to Louise Varèse, 5 February 1936; Edgard Varèse Collection, PSS.

¹⁹ Letter from Varèse to André Jolivet, 18 February 1936; quoted from Edgard Varèse and André Jolivet, *Correspondance 1931–1965*, ed. Christine Jolivet-Erlih (Geneva: Contrechamps, 2002), p. 133.

the *Courrier des Etats-Unis* at least printed Varèse's introductory words to *Density 21.5*,²⁰ while the review in the *New York Times* provided a remarkable characterization of Varèse's piece as a "two-minute solo" – a further indication that *Density 21.5* at that time indeed consisted of no more than the thirty-two bars described above.²¹

The "Intermediate Version"

Perhaps one reason why Varèse agreed so readily to compose *Density 21.5* was that he was hoping for a distraction from the impasse that had beset him in the preparations for his large-scale projects *The One-All-Along* and *Espace*. Indeed, the writing of this little piece evidently released his creative powers for a while, for after completing *Density 21.5* he wrote to his wife: "[...] started *Espace* – it is underway and augurs well. – The discipline imposed by the little flute piece is bearing fruit."²² This "therapeutic" effect did not last long, but it did cause Varèse to focus his entire artistic ambition, more than ever before, on the vast *Espace* project, which represented the very antithesis of a "two-minute solo." In consequence he made no effort to publish the flute piece, but left the fate of this composition in Barrère's hands for the time being. Even so, Varèse did not completely lose sight of his "pièce de circonstance,"²³ which Barrère performed again over the next few months, in Mexico City, Woodstock (New York), and Philadelphia, and perhaps a few other places as well. Varèse's interest can be seen from a comment in a letter to Carlos Salzedo. This comment deserves mention if only because he explicitly placed *Density 21.5* in a context (or on a par) with Debussy's *Syrinx*: "Has B[arrère] bottled up *Density 21.5*? He should do it side by side with *Syrinx* [...]."²⁴ Although he immediately qualified this statement by adding that the piece hardly interested him any more, he was certainly intent on having *Density 21.5* performed. In fact, his suspicions regarding Barrère were groundless at this time: the piece remained in his repertoire, albeit mainly as an encore, and appeared on his radio broadcast for WQXR as late as 11 June 1939. But Varèse knew perfectly well that, in the long run, only publication would prevent *Density 21.5* from vanishing into oblivion, as indeed it did when Barrère suffered a stroke in June 1941 and had to end his concert career. Yet the composer had to grapple with quite different personal and artistic problems during his stay in the western states in the late 1930s and shortly after his return to New York,²⁵ and the publication was made to wait. It was not until summer 1946 that the New Music Society finally issued the work in print – in an entirely new guise, for Varèse had thoroughly rewritten it shortly before (in April 1946).

Varèse's reworking of *Density 21.5* is imperfectly documented. Nonetheless, at least its initial stage can be retraced on the basis of a second fair copy, with corrections, that we shall now proceed to discuss (see Cat. 125b, plate p. 252). This manuscript contains an untitled draft of *Density 21.5* which at first, at least in its basic layer (in black ink), follows seamlessly on from the "original version." Indeed, up to m. 23 it is nothing but a more or less faithful copy of the original version to which Varèse made a few minor alterations (such as the rhythmic changes in mm. 2 and 8) that he had noted in the first stage of his earlier manuscript.²⁶ There then follows, from m. 24 (on the second and fourth staves from the bottom), a wholly new version of the concluding section. The remarkable thing about this version is that the preceding climax in the highest register (a^3/c^4 in mm. 20–22) is accomplished only very slowly: the melodic line reaches into the uppermost register again as early as in m. 24 and arrives at a new, only slightly moderated, climax in the g^3-ab^3 of mm. 27–28. (Appropriately, the most extreme melodic leap occurs in m. 28, where a sixteenth rest is followed by a plunge of a thirteenth from the previous peak pitch a^3 to c^2 , the opening note of a newly inserted tritone figure in "Lombardy rhythm," which was retained in the final version [see mm. 51–52 of the printed version].) Most importantly, however, in this draft the piece does not end with an ascending gesture; instead, in a written-out ritardando, it first comes to a halt on the pitch b^2 , reiterated in increasing note values. (The scalar fragment leading to the first of these notes is a remnant of the two scales in mm. 28 and 30 of the "original version," preserving the e^1-b^2 ambitus of its final notes.) Almost more distinctly than in the "original version," though through the opposite device of melodic stagnation, Varèse has created a remarkable concluding phrase in this "intermediate

²⁰ "Le Concert pour le Lycée Français à Carnegie Hall," *Courrier des Etats-Unis*, 19 February 1936, p. 3. The text is reproduced with minor modifications in Hilda Jolivet, *Varèse* (Paris: Hachette, 1973), pp. 110–12, and in Edgard Varèse, *Ecrits*, ed. Louise Hirbour, trans. Christiane Léaud (Paris: Christian Bourgois, 1983), pp. 87–88.

²¹ "French Musicians Aid School Here," *The New York Times*, 17 February 1936, p. 22. Another critic reported a duration of "three minutes" ("Pons and Boyer Aid Benefit for Lycée Français," *New York Herald Tribune*, 17 February 1936). The metronome mark applicable to the definitive version (quarter note = 72) was later penciled into the "original version." It results in a performance duration of 1'47" for the thirty-two bars. On the other hand, another annotation penciled in the top margin of the manuscript reads "2.30."

²² Letter from Varèse to Louise Varèse, 9 February 1936; Edgard Varèse Collection, PSS.

²³ Letter from Varèse to André Jolivet, 18 February 1936; quoted from *Correspondance* (see note 19), p. 133.

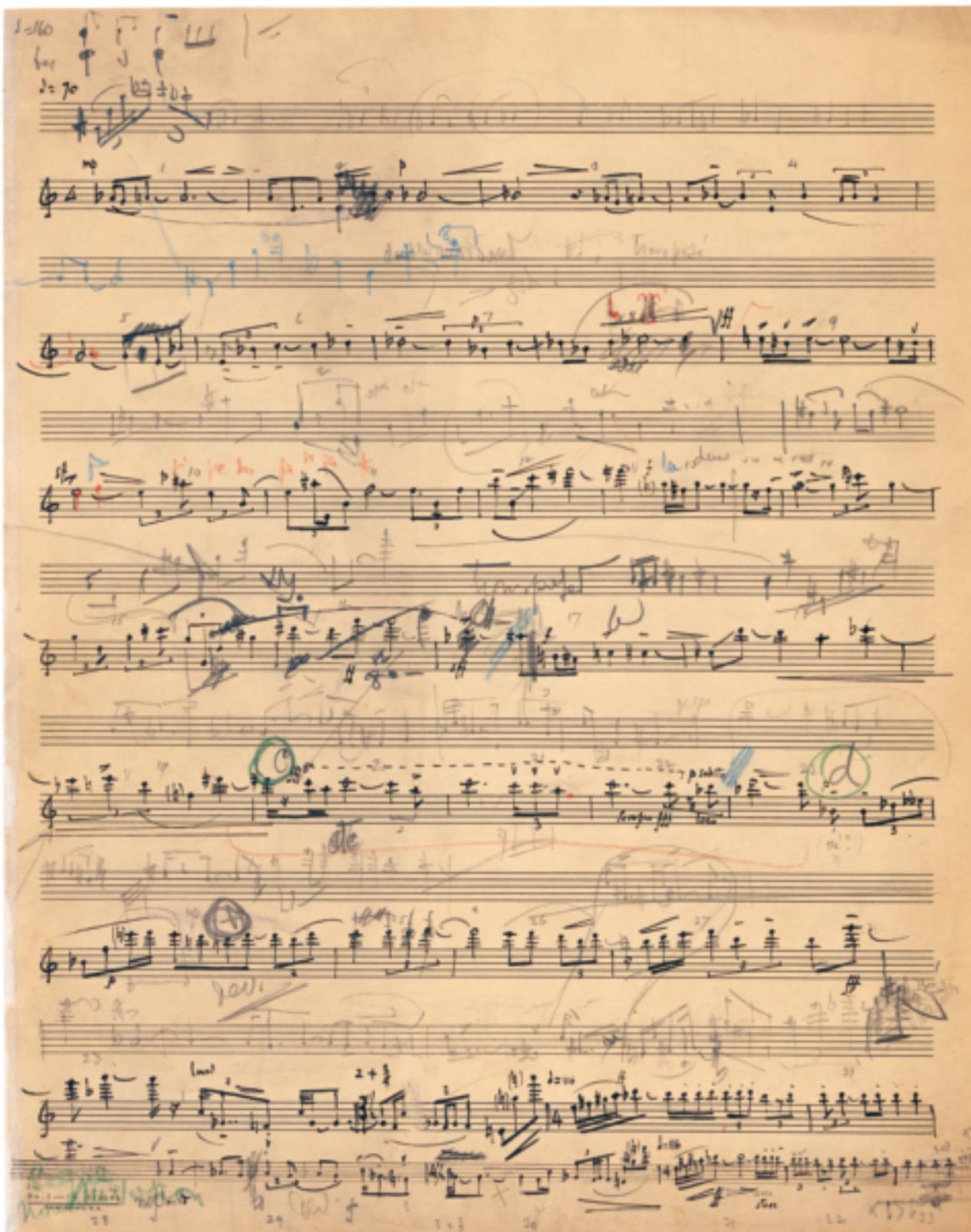
²⁴ Letter from Varèse to Carlos Salzedo, 19 July 1937; Edgard Varèse Collection, PSS.

²⁵ See the essays by David Schiff and Anne Jostkleigrewe on pp. 238–46 and 211–19 of this volume.

²⁶ In principle, given its close proximity to the "original version," an earlier date of origin is conceivable for this inked draft. However, there is no evidence that *Density 21.5* was revised between 1936 and 1946, and we are led to assume that the manuscript captures the initial stage of the revision from April 1946.

CAT. 125A | COMMENTARY P. 274
 Edgard Varèse, *Density 21.5*
 for flute solo, fair copy
 (with corrections) of the
 original version (1936)

The image shows a handwritten musical score for a flute solo, titled "Density 21.5". The score is written on aged, yellowed paper and consists of ten staves of music. The title "Density 21.5" is written in large, bold letters at the top. The tempo is marked "Allegretto" and the time signature is 4/4. The score is characterized by dense, complex rhythmic patterns, often consisting of multiple notes beamed together. Dynamic markings include *mp*, *p*, *ff*, *pp*, *loco*, *subito*, and *5 corde*. The score is heavily annotated with red and blue ink, including corrections, fingerings, and performance instructions. The notation is dense and intricate, reflecting the "density" of the piece's title.



CAT. 125B | COMMENTARY P. 274
 Edgard Varèse, *Density 21.5*
 for flute solo, fair copy
 (with corrections) of a
 second version

version” – which suggests that this manuscript, too, must be considered complete (though again it lacks a double bar).

This new version of *Density 21.5* is closely related to the thirty-two-bar “original version,” not only through the almost identical course of the first twenty-three bars, but also in its overall length of thirty-one bars. It is evident, however, that it left the composer dissatisfied. In any event, he soon filled the “odd” staves, which he had left blank (perhaps even then with a view to a more extensive revision?), with several layers of corrections in lead and colored pencil. At the bottom of the manuscript, in ink, he also notated a revision of the final line on a staff drawn freehand. The corrections are variously marked with arrows, letters (“a,” “b,” etc.), and verbal instructions (e.g. “transposé” and “transposer” in staves 3 and 7, and “segue nouvelle version” in the bottom staff). The impression they convey is highly confusing: only some of them anticipate the printed version (e.g. the corrections at the beginning of the third staff from the bottom, with its lowering of the ab^3 and its embellishment of ab^I in the bars that follow; see mm. 50–52 of printed version). Just as often, however, they were abandoned (this is true of the triplet motif notated in the upper left-hand corner of the page, which is taken up again in a pencil sketch on the third staff in a rhythmically neutral form). And in at least one decisive instance the new version even seems to revert to an earlier stage: note the third staff from the bottom, where the penciled correction at the end of the staff signifies that the new, repetitive, monotone concluding phrase is to be abandoned in favor of the original ascending gesture. In any event, there is a considerable gap between the corrections marked in this manuscript and the printed version, as there is still no sign of Varèse’s substantial interpolations in the middle of the piece (from m. 17).

En Route to the Printed Version

The final upshot of all of these corrections, as well as others that were probably elaborated in another fair copy or separate leaf no longer extant in Varèse’s estate (perhaps the left-hand page of the original bifolium from which our leaf seems to have been separated),²⁷ is preserved in a handwritten copy prepared from a lost original. This copy must have originated no later than 16 April 1946, the day on which Varèse deposited it in a self-addressed sealed envelope at a post office in order to establish his authorship in terms of American common-law copyright. It contains a fifty-six-bar version of the piece that is already very close to the printed version in most respects, and which thus contains not only the newly inserted middle section, but also the downward transposition of the opening by a minor third. Still, the durations in mm. 14–16, and thus the metrical relations, are different in this version, as are the final seven bars (later expanded to ten bars), whose ascending final gesture encompasses only five notes and still makes do without the concluding tritone $e\sharp^3-b^3$ and its “compensatory” tritone e^I-b^I in the lower register (see Examples A and B, p. 254)

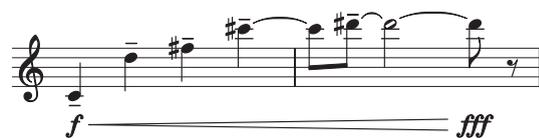
The next stage in the process of revision has come down to us in the form of a fair copy on transparent paper that most likely originated after the “official” date of revision noted in the printed editions (April 1946). There is every indication that Varèse committed it to paper in May 1946,²⁸ following his decision to submit the piece to Frank Wigglesworth, the editor of *New Music Quarterly*. The positive decision from Wigglesworth was soon forthcoming: “By unanimous vote of the Editorial Board your ‘DENSITY 21.5’ has been accepted for publication in the July edition of *New Music*.”²⁹ This fair copy served as a production master for the first edition, with which it is identical except in a few insignificant details.³⁰ In the intervening period Varèse had revised mm. 14ff. as well as the concluding section, including the alteration of the final bars to agree with the above music example. By then he had also introduced another innovation that has received special attention in the organological literature: the now-famous keyslaps in mm. 24, which thus did not originate in 1936, as was generally believed, but were added only in spring 1946. Varèse probably worked out this special effect (“notes marked + to be played softly, hitting the keys at the same time to produce a percussive effect”) in consultation with a flutist. Perhaps his advisor was Ruth Freeman, who, according to an entry in Varèse’s appointment book, paid the composer a visit on 19 June 1946, and who then premiered the re-

²⁷ This is suggested by the arrows drawn from left to right across the edge of the page, referring to staves 7 and 10.

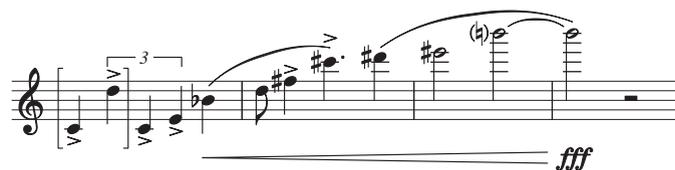
²⁸ In this case our manuscript would be the “correct copy” that Varèse sent to his fellow composer (and flutist) Otto Luening on 17 May 1946 with the comment: “Disregard first one – or rather please throw it away.” (Otto Luening Collection, Library for the Performing Arts, New York Public Library). Unfortunately I have been unable to confirm the existence of a corresponding handwritten copy in the Luening Collection.

²⁹ Letter from Frank Wigglesworth (New Music Edition) to Varèse, 27 May 1946; Edgard Varèse Collection, PSS.

³⁰ The two accents on $d\sharp^I$ and a^I in m. 12 and the slur in m. 39 are missing in the printed edition. The latter was corrected in later editions.



Ex. A



Ex. B

EXAMPLE A
Density 21.5, concluding gesture
in the handwritten copy of April 1946

EXAMPLE B
Density 21.5, concluding gesture
in the printed version

vised version of *Density 21.5* at a recital in New York's Town Hall on 18 November 1946. The more likely "begetter" of the key-slap was, however, the renowned French flutist René Le Roy, who had already paid a visit to Sullivan Street on 4 April 1946 (while the piece was being decisively reworked), and who again visited Varèse on 31 May 1946, shortly before the above-mentioned letter of acceptance from the New Music Edition. Varèse had long been on friendly terms with Le Roy. Indeed, *Density 21.5* was to remain closely associated with him in the years that followed: Le Roy made the first gramophone recording of the piece (issued in 1949), and also figured as soloist on the second recording, the much-touted all-Varèse LP issued by EMS in 1950 (see Cat. 172 and 173, pp. 390 and 392).³¹

But even the completion of the production master, and the resultant first edition in *New Music Quarterly*, did not quite bring the process of revision to an end. In 1951 *Density 21.5* was reissued in a version written out by Chou Wen-chung,³² once again with several alterations by the composer. It was this version that served as a basis for the newly engraved edition published a few years later (after the collapse of New Music Edition) by Ricordi in New York. The most important subsequent alteration involves the motif $g^3-f^{\#3}-f^{\#2}(-e^{\#2})$ in m. 29, which is now repeated not once but twice, with its lower pitches elongated in its first and third occurrences. As a result, m. 29 is expanded into two bars with different time signatures (3/4 in m. 29, 4/4 in m. 30), so that the composition is now sixty-one bars long instead of sixty.³³ Equally worthy of mention are the more differentiated dynamic and articulation marks in mm. 24–28, which as a whole have been raised to a noticeably higher dynamic level, as well as the tie of d^2 over the bar line to m. 26 and the omission of the key-slap on the final $c^{\#1}$ of m. 24. These final touches probably reflect Varèse's experience of the piece in performance by this time. In short, only the revised edition of 1951, and the Ricordi print based on that edition, capture the piece in its definitive form, which differs in several details from the first edition. I therefore continue to use the Ricordi edition (the only one of the three still in circulation) as my point of reference and to refer to it, for the sake of simplicity, as the "printed version."

Conclusions

The sources in the Edgard Varèse Collection reveal that the composer delved deep into the substance of *Density 21.5* when he resumed work on the piece in spring 1946; that he made important changes just prior to the appearance of the first edition; and that he again altered several details while preparing the second edition. The laconic note "Revised April, 1946," printed in all editions of the piece, thus conveys a highly abridged picture of the piece's rich and complex genesis. In actual fact, the revision of 1946 is more akin to a reworking of *Density 21.5* in which the "original version" is almost as thoroughly suppressed as those pictorial notions and ideas on which Varèse occasionally based his music. They too, Varèse claimed, merely served as a goad to his artistic imagination and gradually fell aside during the act of composition, in keeping with a precept of Georges Braque that Varèse was fond of quoting, namely, that a work of art is finished only when nothing remains of its original idea.³⁴

All the same, this analogy is only intended in a metaphorical sense, as a symbol for the extent of Varèse's emendations. When we look at these more closely and relate them specifi-

³¹ New Music Quarterly Recordings 1000A-B (1949); Elaine Music Shop EMS 401 (1950).

³² Edgard Varèse, *Density 21.5* for flute alone (New York: New Music and American Music Center, [1951]).

³³ A copy of the 1946 production master, preserved in the Varèse estate, reveals that here the composer originally intended only to change the rhythm of the first figure (more precisely, its third note, $f^{\#2}$). Consequently, the only annotation here is the extension of m. 29 to 5/4 meter. The extension of m. 29 to two bars is marked on an annotated copy of the New Music edition located in the Otto Luening Collection of the Library for the Performing Arts (New York Public Library). Information kindly supplied by George Boziwick of the New York Library for the Performing Arts.

³⁴ See Edgard Varèse, "Autobiographical Remarks," lecture delivered at Princeton University on 4 September 1959; typescript in the Edgard Varèse Collection, PSS, p. [6].

cally to the musical givens of the composition, we might even claim exactly the opposite: that it is precisely and solely the original idea that was allowed to survive, namely, in the form of the first ten bars, the only part of the piece left untouched. Whatever the case, it is a fact that Varèse left these bars in their original state, thereby giving due recognition to the internal coherence that resides especially in their carefully crafted upward ascent within the octave from e^1 to e^2 and their tight adherence to the minor-third axis C_3^0 . But it is also true that he then moved further and further away from the original version and in fact undertook a radical reworking of the piece. As a rough approximation (and ignoring the chronology of the various stages of revision), this process can be summarized under the following three headings as follows:

1. Reworking of mm. 10–16, conspicuously weakening its sequential subdivisions (see mm. 10–17 of the printed version).

2. Insertion of a new middle section) between mm. 16 and 17 (see mm. 18–40 of the printed version). Here frequent reference is made to the lower limit of the ambitus, $c\sharp^1$ (see mm. 24ff. of the printed version), while the previous peak pitch, g^3 in m. 17, is surpassed in the climax of mm. 32–35.

3. A very free reworking of mm. 17–32 (see mm. 41–61 of the printed version). Here the following correspondences can be fairly clearly discerned: printed version mm. 41f. and “original version” m. 17 (return of principal motif); printed version mm. 46–50 and “original version” mm. 20–22 (climactic passage of thirds in uppermost register); and printed version mm. 54–55 and “original version” mm. 24–25 (series of pitches recapitulating mm. 7–9: $c\sharp^1-e^1-c\sharp^1-f\sharp^1-g^1$ in the printed version, $b\flat^2-d\flat^3-b\flat^2-d\flat^3-e\flat^3-e^3$ in the “original version”). Other elements, such as the ascending final gesture, merely retain their general melodic shape, and mm. 50–53 were added afresh.

The most striking feature in the revision of *Density 21.5* is undoubtedly its expansion from thirty-two to sixty-one bars, owing primarily to the interpolation of the middle section. This may serve as one indication that Varèse ultimately wanted to impart greater weight to the piece and remove the stigma of a *pièce de circonstance* that he himself had attributed to it in the letter to André Jolivet cited above. Still more important, however, are the internal structural changes that this expansion entailed. Among these are the discontinuous placement of the melodic ascents, the loosening of the tonal relation to the minor-third axis system, the weakening of parallel formations in the musical syntax, and a tendency to vary the timbre by differentiating the dynamic and articulation marks and by incorporating key-slaps. The printed version thus appears more varied and flexible than the more compact and unified, but at the same time more repetitive and tonally rigid “original version,” which Varèse probably felt deserving of revision not only because of its brevity, but also because of its slightly schematic structure.³⁵ It is true that the definitive version is based on the same underlying idea: a melodic line beginning in small intervals in the lower-middle register and expanding upward (and occasionally downward) by deliberately “overreaching” the highest and lowest pitches of the moment. (This partly explains why Varèse interpolated a new high-point between the registral peak of the first section – and of the entire “original version” – and the subsequent climax in mm. 32–35, at the same time expanding the musical space further: upward, to the limits of playability, by transposing the climactic passage in thirds up a whole tone in mm. 46–50;³⁶ and downward, by lowering the opening section, thereby shifting to $c\sharp^1$ the lower limit first heard in m. 2 and not “undercut” until m. 56.) All in all, however, this underlying idea is handled with much more freedom, the sacrifice in melodic and harmonic consistency being offset with other devices, such as the more explicit motivic references: note, for example, the two recurrences of the full-bar *Urform* of the principal motif in mm. 15 and 41, now transposed to the pitch levels of its second and third notes. (These recurrences, however, are momentary in effect and do not allow us to speak of a tripartite subdivision of the form. Indeed, it is precisely the formal ambiguity of the printed version that sets it apart from the clearly bipartite “original version.”)³⁷ Just how far Varèse distanced himself from his original concept is nowhere more apparent than in the ascending final gesture. Here, for all the superficial similarity with the

35 Several analysts have pointed out the difference between the tight construction of the opening section of *Density 21.5* and the looser writing of the continuation; Jeffrey Kresky, for example, claimed that “a path as clear and consistent as that found in the first section is not evident” from m. 14 (Kresky, “Path Through ‘Density’” [see note 3], p. 329). This discrepancy is now verified by the history of the work’s gestation.

36 In his second recording of the piece (the EMS recording of 1950), which was supervised by the composer, René Le Roy had to resort to the piccolo for this passage. That Varèse was in agreement not only bears witness to his pragmatism, but suggests just how much importance he attributed to the expansion of the timbral spectrum.

37 The analyses of *Density 21.5* published to date reveal highly contrasting accounts of the piece’s formal design, depending on the criteria of subdivision employed. Jan Dvorak, Mauricio Freire Garcia, and Malcolm MacDonald presuppose a tripartite formal design; see Dvorak, “Melodische Totalität” (see note 3); Garcia, “Density 21.5” (see note 3), and Malcolm MacDonald, *Varèse: Astronomer in Sound* (London: Kahn & Averill, 2003), pp. 290–99. A bipartite reading (with the caesura just before m. 29) can be found in Marion Guck, “Flow of Energy” (see note 3), George Perle, *Listening Composer* (see note 3), and Ingeborg Dobrinski, *Das Solostück für Querflöte in der ersten Hälfte des 20. Jahrhunderts*, Kölner Beiträge zur Musikforschung 99 (Regensburg: Gustav Bosse, 1981), pp. 44 und 179–84. But completely different criteria of subdivision have also been proposed, e.g. by Carol Baron, who divides the piece into seven sections in “Varèse’s Explication” (see note 3).

original version, the tonal organization followed up to this point, with its fixation on the minor third, is abandoned in favor of the two whole-tone scales, C₂₁ (C–D–E–F♯–G♯[A♭]–B♭) and C₂₂ (C♯–D♯(E♭)–E♯[F]–G–A–B) in mm. 56–59 and mm. 59–61. Thus, if the gesture in the “original version” rounds off the piece with a reference to the pitches of the opening, in the published version it “transcends” it by establishing a new tonal order. But in so doing, it comes all the closer to the effect that Varèse, speaking of his vision of a fourth musical dimension, once called “that feeling that sound is leaving us with no hope of being reflected back” – “that sense of projection, of a journey into space.”³⁸

38 Edgard Varèse, “Music and the Times,” lecture delivered at Mary Austin House, Santa Fe, New Mexico, on 23 August 1936; quoted from the version published under the title “New Instruments and New Music,” *Contemporary Composers on Contemporary Music*, ed. Elliott Schwartz and Barney Childs (New York: Holt, Rinehart and Winston, 1967), pp. 196–198, esp. 197.