

**FUGUE IN F MINOR** 



#### MAURICE RAVEL

### **FUGUE IN F MINOR**

THE AUTOGRAPH MANUSCRIPT IN FACSIMILE,

TRANSCRIPTION, AND PERFORMANCE

#### ACKNOWLEDGMENTS

This publication is made possible through the generous support of Nancy McCormick Vella.

The original manuscript of Maurice Ravel,
Fugue in F Minor, c. 1897, was purchased
in part with the support of the James A. and
Sally Ann Hagan Endowed Fund for Music.

Special thanks to the Northwestern University Library
Board of Governors; Dean Toni-Marie Montgomery
of the Bienen School of Music; and Gerardo Ribeiro,
Richard Van Kleeck, Sara Stigberg, Jim Hobbs, Alex Herrera,
Tom Fredrickson, Heather Cosgrove, and Carolyn Paulin.

 $Produced \ by \ the \ Department \ of \ University \ Relations \ and \ Northwestern \ University \ Library, \ Northwestern \ University, \ Evanston, \ Illinois \ Edition \ limited \ to \ 500 \ copies$ 

ISBN 978-0-615-56668-9

 $Library\ of\ Congress\ Cataloging-in-Publication\ data\ are\ available\ from\ the\ Library\ of\ Congress.$ 

Copyright © 2011 by Northwestern University. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the prior permission of Northwestern University Library.

Inside front cover: *Portrait of Maurice Ravel* (oil on canvas) by Henri-Charles Manguin, Musée National d'Art Moderne, Centre Pompidou, Paris, France/Bridgeman Art Library, © 2011 Artists Rights Society (ARS), New York/ADAGP, Paris. Pages 3 and 12: Photograph of Maurice Ravel by Pierre Petit, 1907, Bibliothèque nationale de France, département Musique. Page 6: Postcard depicting the Paris Conservatoire, 1906, Bibliothèque Historique de la Ville de Paris, Paris, France/Archives Charmet/Bridgeman Art Library. Page 8: Photograph of André Gedalge by D. Enoch, 1910, Bibliothèque nationale de France.



#### CONTENTS

INTRODUCTION

D. J. Hoek

4

ESSAYS
The Student Ravel:
Fugue in F Minor
Keith E. Clifton

6

Ravel, Gedalge, and the Scholastic Fugue: An Analysis of the Fugue in F Minor Scott J. Schouest

9

SCORE

Fugue in F Minor

Edited by Keith E. Clifton

and Scott J. Schouest

12

APPENDIX

22

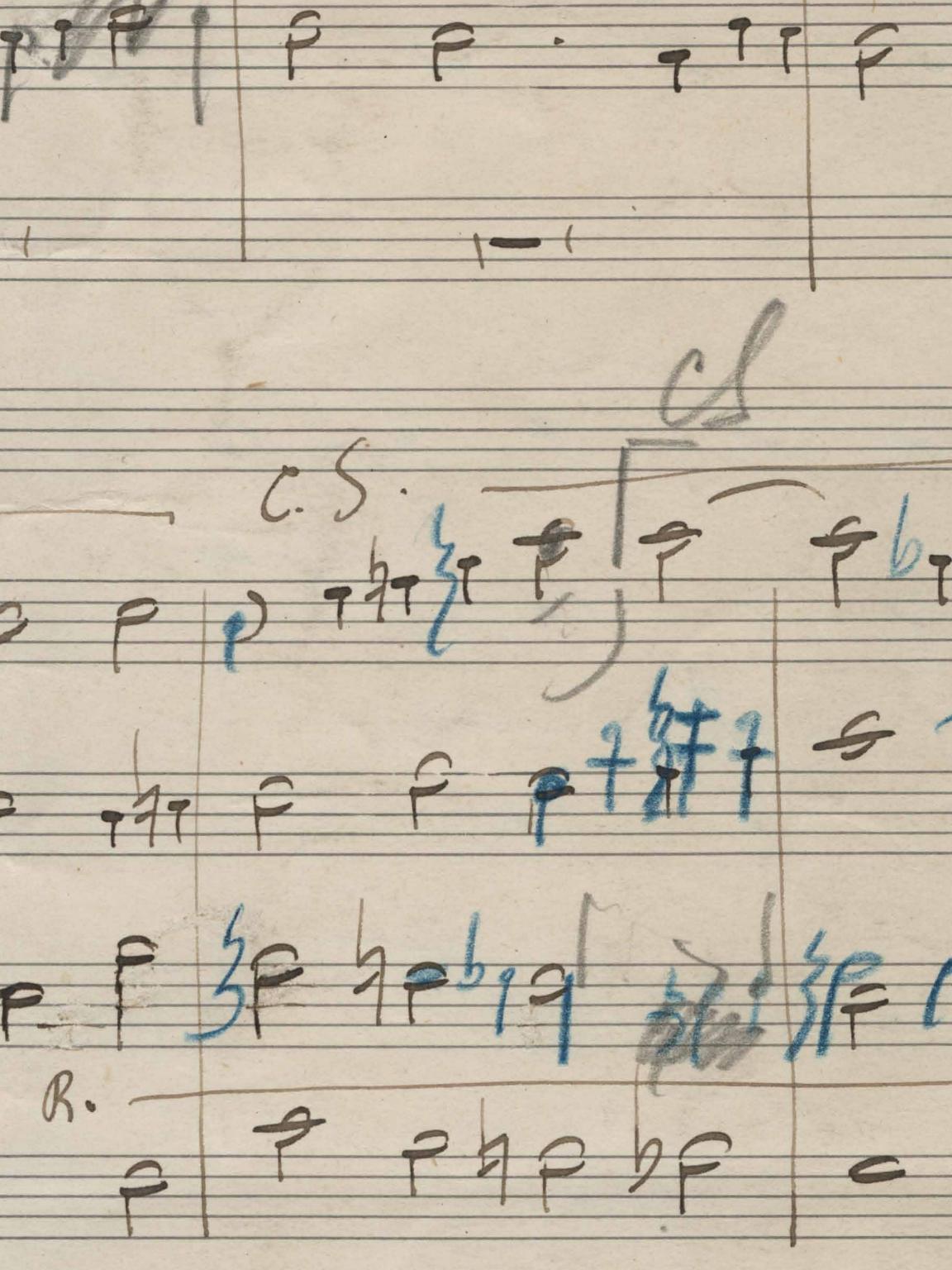
CRITICAL NOTES

24

FACSIMILE SCORE in back pocket

CD

Audio recording of the premiere performance of Ravel's Fugue in F Minor



by D. J. Hoek

Not long after I began as head of Northwestern's Music Library in the fall of 2004, I became aware of a manuscript by Maurice Ravel that had come on the market. As described by the dealer offering it, the manuscript dated from Ravel's student days and included a complete, unpublished four-voice fugue—essentially, a "new" Ravel composition. Of course, I was interested. Ravel—unquestionably one of the most skillful, inventive, and influential composers of the early 20th century—remains today a figure of tremendous appeal to scholars, performers, and audiences alike. The manuscript's allure became even greater when I found, to my surprise, that Northwestern then held no original Ravel materials. Given our Music Library's long commitment to 20th-century music and extensive manuscript collection—with unique items by Satie, Schoenberg, Stravinsky, Boulez, and Cage, to name only a few—Ravel's absence was unexpected. And so, aware that my first major acquisition at Northwestern would be significant for multiple reasons, I bought it.

Collecting manuscripts and other rare materials is always a hopeful endeavor. Such artifacts carry an indefinable magic that links the present day to a different time and place. Indeed, just holding papers once handled by Ravel is a terrific and sobering experience. But the curator's ultimate wish is for such items to gain new life by providing the solution to a question, offering a fresh perspective, or informing subsequent creative expression.

Consequently, I was glad to meet Keith Clifton when he stopped by my office to introduce himself not long after I acquired the manuscript. He explained that he was a Northwestern alumnus (and also a former employee of the Music Library) who was visiting to do some research. He also mentioned that his dissertation had been on Ravel. I told him, "I have something to show you." Clifton looked over the manuscript and immediately recognized Ravel's distinctive hand as well as the potential this unique document held. We decided that a performance of the piece—its world premiere—was in order. And since doing that would require a careful transcription of the manuscript, we decided to present the first published iteration of the fugue as well.

About five years later, the ideas shared in that initial conversation began to materialize. Clifton and Scott J. Schouest then studied the manuscript and produced an edited version of the fugue suitable for performance. Engaging the talents of a quartet of top graduate string students from the University's Henry and Leigh Bienen School of Music, that first performance was given on April 15, 2010, on the Northwestern campus. In addition to some 200 people in attendance, the premiere reached a far greater audience thanks to its broadcast on WFMT-FM, Chicago's foremost classical music radio station, and through the filming of a documentary about the event for the Big Ten Network.

With this publication we present Ravel's Fugue in F Minor to an even broader audience. Along with a facsimile of the original manuscript, this collection includes the edited transcription of the fugue and essays by Clifton and Schouest on the historical and biographical context of the work as well as structural aspects of the composition. Additionally, the accompanying disc provides an audio recording of the fugue's first performance.

Even though Ravel probably never intended the Fugue in F Minor to be published or performed in a concert setting, it is clear that he put much care into producing this commendable work. By bringing this piece to light now, we learn a bit more about that young composer. Through exercises like this, Ravel achieved a mastery of technique that ultimately provided the foundation necessary to reach the heights of musical creativity.

D. J. Hoek is head of the Music Library at Northwestern University.



The Paris Conservatoire in 1906

#### THE STUDENT RAVEL: FUGUE IN F MINOR

by Keith E. Clifton

Along with his contemporary Claude Debussy, Maurice Ravel (1875–1937) is widely recognized as one of the two most important French composers of the early 20th century. Many of his works, including *Histoires naturelles* (1906), *Gaspard de la nuit* (1908), *Daphnis et Chloé* (1912), and *Bolero* (1928), are standards in the repertoire of singers, pianists, orchestras, and ballet companies worldwide. While Ravel and Debussy are commonly known as "impressionists" (a term both composers disdained), Ravel was a singular artist, disciplined and meticulous, whose music transcends simple categorization. He reserved special reverence for Mozart, Bach, Chopin, and Liszt and believed that composers, like painters and writers, should learn their craft by studying and imitating good models.

The Fugue in F Minor is one example from a large group of Ravel's unpublished sketches, fragments, and incomplete compositions housed in private collections and libraries, primarily in France and the United States. Although much of this material—more than 500 pages in total—remains unexamined, the extant scores provide a fascinating look into Ravel's elusive creative process. Because most date from after 1900, the Fugue in F Minor is notable as a rare complete work from Ravel's student period.

Like other French composers of his generation, Ravel studied at the Paris Conservatoire, a crucial first step to a successful musical career. He entered in 1889 at age 14 as a gifted member of the junior piano class, and he continued his studies there on and off for the next decade. During this period and throughout Ravel's lifetime, much of the focus at the school was on training virtuoso performers, with the study of composition—fugue, counterpoint, and orchestration—secondary in importance. Ravel's only formal musical education took place at the Conservatoire, and his earliest attempts at composition correspond with his entrance to the school.

Ravel's tenure at the Conservatoire could best be described as turbulent. Dismissed in 1895 for deficiencies in music theory and piano performance, he returned in 1898 as a student of distinguished composer Gabriel Fauré, only to be ejected again in 1900 after losing the Prix de Rome competition the first of five times. Established by the French government in 1803 as a way "to further the artistic development of talented young composers by means of a state subsidy," the competition proceeded through several stages, including a preliminary round in which contestants were required to submit an academic fugue and a work for chorus and orchestra. Placing high

in the competition or winning the coveted prize could significantly boost a young composer's career, at least in the short term: the list of previous winners includes both prominent composers and names long since forgotten.<sup>3</sup>

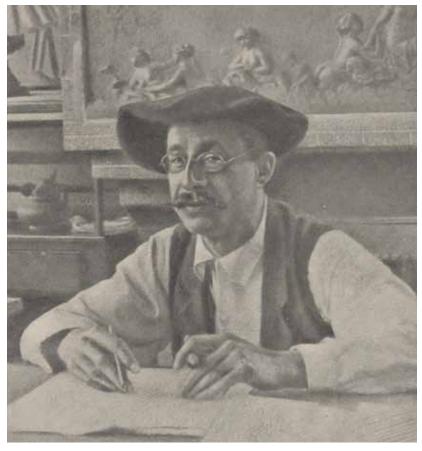
Ravel's failure to advance beyond the preliminary round in 1905 led to a major scandal dubbed "L'affaire Ravel" by the French press. It was later discovered that all finalists that year were students of the same teacher at the Conservatoire. And yet despite these challenges, Ravel's training provided a solid foundation for his later career. As Gerald Larner notes, "It is against the backdrop of the Conservatoire that Maurice Ravel was to pass from adolescence to maturity."

By all accounts, Ravel was a dedicated student who took his education in counterpoint and fugue seriously. His commitment to systematic musical training was confirmed by fellow student Nadia Boulanger:

I had a surprise when I found myself in Fauré's class and discovered Ravel was there, too, doing, as I used to do then, traditional counterpoint. . . . I asked him why he was still studying counterpoint. "One must clean the house from time to time; I often do it that way," he replied.<sup>5</sup>

An important early influence was André Gedalge, an adjunct instructor when Ravel studied at the Conservatoire. (In 1905 Gedalge was appointed professor of counterpoint and fugue, a position he retained until his death in 1926.) Ravel affirmed the importance of Gedalge to his compositional development several times, most prominently in 1928 when he stated, "I am pleased to acknowledge that I owe the most valuable elements of my technique to André Gedalge." The teacher's specialization was the fugue, and in 1901 Gedalge published his *Traité de la fugue*, a standard resource on the subject for most of the 20th century and still in use today. This treatise contains detailed, practical information for composing fugues as well as numerous examples of fugue subjects by a variety of composers, including Bach, Gounod, Massenet, and Gedalge himself.

Although undated, Ravel's fugue probably was composed in 1897, his first year of study with Gedalge. A prime example of a scholastic fugue, the work was composed according to strict rules dating back to the 18th century. The opening melody, which serves as the fugue's main subject, was almost certainly written by



André Gedalge

Gedalge and given to Ravel as the basis for the assignment. This subject would later appear in an appendix of the *Traité*, but it was still unpublished when Ravel first encountered it.<sup>8</sup> Gedalge required his students to label the sections of the fugue, and Ravel dutifully complied, clearly indicating the various contrapuntal devices in the fugue manuscript. Each part is notated in a different clef and the instrumentation is unspecified, mirroring procedures used in Baroque works such as Bach's *Art of Fugue*. Although it is possible that Ravel enlisted his fellow Conservatoire students to play the work informally, no records confirm that it was ever performed.

Instrumentation options for effectively performing the fugue include string quartet, two pianos, and organ. Because the range of each instrument in the string quartet most closely matches the range of each fugue line, this ensemble may be the most practical. The lack of specific instrumentation and absence of tempo, dynamic, articulation, and phrase markings indicate that Ravel conceived of the fugue as an academic exercise rather than a significant composition. While these omissions create challenges, they allow contemporary performers some freedom to interpret the fugue as they wish. Corrections in blue and black pencil on the first page of the manuscript, likely by Gedalge, represent alternate solutions to the exposition section of the fugue.

While none would consider the Fugue in F Minor as equivalent to the masterpieces of his maturity, the work allows us to explore Ravel's music at a crucial period in his artistic development. Its academic intentions notwithstanding, the fugue provides brief glimpses of the Ravel to come, including examples of his developing harmonic language. The coda section, with its soaring lyricism and use of pedal points, anticipates the opening movement of the String Quartet in F Major (1902–03), his first great chamber work. Ravel's earliest important keyboard compositions, the *Menuet antique* (1895) and *Sites auriculaires* (1897), were published during the same period as the fugue, and his first large orchestral score, *Ouverture de Shéhérazade*, appeared in 1898. Other significant pieces would follow in quick succession.

In sum, writing this fugue contributed to the technical foundation not only for five Prix de Rome efforts but also for use of contrapuntal devices in Ravel's later music, such as the "Fugue" movement of the piano set *Le tombeau de Couperin* (1914) and the finale to his second opera, *L'enfant et les sortilèges* (1925). Though eclipsed by his greater works, this small academic exercise represents a notable link to Ravel's mature compositions as it effectively demonstrates, in Orenstein's words, his "relentless search for clarity of expression."

Keith E. Clifton is associate professor of musicology at Central Michigan University.

- For inventories of unpublished Ravel material, see Arbie Orenstein, Ravel: Man and Musician (New York: Columbia University Press, 1975; reprint, New York: Dover, 1990), 242–45, and Stephen Zank, Maurice Ravel: A Guide to Research (New York: Routledge, 2005), 363–72.
- 2. Orenstein, Ravel: Man and Musician, 33n29.
- 3. Distinguished winners of the Prix de Rome include Hector Berlioz (1830), Charles Gounod (1839), Georges Bizet (1857), and Debussy (1884). Ravel entered every year from 1900 to 1905, with the exception of 1904. Regarding his consistent failures in the competition, Orenstein has posited that Ravel simply did not work well under extreme deadlines or with uninspiring texts, as in the required cantata setting for the competition ("Some Unpublished Music and Letters by Maurice Ravel," *Music Forum* 3 [1973]: 299–307).
- 4. Gerald Larner, Maurice Ravel (London: Phaidon, 1996), 12.
- Bruno Monsaingeon, Mademoiselle: Conversations with Nadia Boulanger, trans.
   Robyn Marsack (Manchester, UK: Carcenet, 1985), 25–26, cited in Stephen Zank, Irony and Sound: The Music of Maurice Ravel (Rochester: University of Rochester Press, 2009), 85.
- 6. "An Autobiographical Sketch by Maurice Ravel," in A Ravel Reader, ed. Arbie Orenstein (New York: Columbia University Press, 1990), 32. Zank states that Gedalge's teaching "stood out considerably amidst a curriculum weighted toward the training of instrumental virtuosos and composers for the musical theater" (Irony and Sound, 86).
- 7. André Gedalge, *Traité de la fugue* (Paris: Enoch et cie., 1901). Translated by Ferdinand Davis as *Treatise on the Fugue* (Norman: University of Oklahoma Press, 1965).
- Page 8 of the fugue manuscript includes a sketch that also appears in Appendix A of *Traité*.
- Orenstein, Ravel: Man and Musician, 152. A complete transcription of Ravel's 1902 Prix de Rome fugue, which exhibits striking similarities to the Fugue in F Minor, is provided in Zank, Irony and Sound, 283–88.

by Scott J. Schouest

Properly speaking, Maurice Ravel's Fugue in F Minor is a *fugue d'école*, or scholastic fugue—a musical exercise that exists specifically to give young composers advanced practice in the craft of counterpoint through the applied art of composition. During his course of study at the Paris Conservatoire, Ravel composed this fugue under the tutelage of André Gedalge, who provides an exhaustive treatment of the scholastic fugue in his *Traité de la fugue* of 1901. Gedalge describes the scholastic fugue not as "a genre of composition, but . . . an exercise in musical rhetoric, an arbitrary, conventional form, which, in practice, does not find its application absolute."

According to Gedalge, "the essential parts of the scholastic fugue are the subject; the answer; [one or more] countersubject[s]; the exposition; the counterexposition; the episodes [or diversions], which consist of passages to various keys in which the subject and answer are heard; the stretto; and the pedal point." Gedalge casts the scholastic fugue into three large sections: the first section, consisting of the exposition and optional counterexposition with an intervening episode; a second section featuring "developments [that] consist of episodes [that] periodically progress to the subject, answer, and countersubject"; and a third and final section comprising a series of stretti. This description of the scholastic fugue in Gedalge's *Traité de la fugue* provides a detailed blueprint for Ravel's Fugue in F Minor.

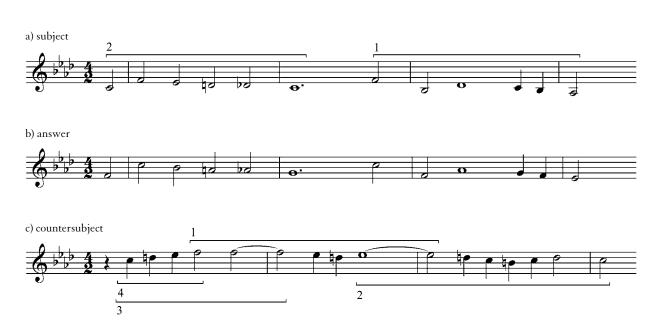
# First Section: Exposition—Subject, Answer, and Countersubject (mm. 1–16)

The exposition of a scholastic fugue introduces the subject—
the fundamental musical theme of any fugue—and one or more

secondary themes, or countersubjects. In an appendix to his *Traité*, Gedalge provides a collection of 231 prospective fugue subjects attributed to various composers. The subject Ravel used for his fugue (see figure 1a) is the first on this list and is one Gedalge himself composed.<sup>4</sup> Gedalge prescribes a plan for the exposition: "The subject is stated in one of the parts, followed by the answer in another part; a third voice restates the subject, to which the answer responds in the fourth part. These four successive entries constitute the exposition." He also presents a series of arrangements for subject and answer presentations corresponding to patterns of entry for each of the individual voices. Ravel follows the third of the more than 70 schemes Gedalge suggests for scholastic fugues in four parts.<sup>6</sup>

Ravel's Fugue in F Minor begins with the unaccompanied tenor voice sounding the first statement of this subject in mm. 1–4. Gedalge's *Traité* addresses the relationship between subject and answer at length, with only 3 pages allocated for discussion of the subject itself but 47 pages devoted to the answer. He explains: "After the subject has been stated in its entirety in one voice, it is imitated in another voice. This imitation is called the 'answer."

Figure 1b presents the answer that sounds in the alto voice in mm. 5–8 of Ravel's fugue, immediately after the initial statement of the subject. Transposing the answer into the dominant is a convention of fugal design, but when a subject such as this one begins on the fifth degree of the scale, composers often make adjustments to preserve the overall sense of the tonic key throughout the exposition. Ravel applies a simple adjustment prescribed by Gedalge: the answer begins



**Figure 1** Subject, answer, and countersubject

on F rather than the expected G. According to Gedalge, "every subject that begins with the dominant is considered as starting in the key of the dominant. The dominant, in this case, is considered as tonic of the key on the fifth degree of the subject. Answer to it must be made by the first degree of the principal key." Completing the exposition, the soprano voice restates the subject in mm. 9–12, followed by the bass's restatement of the answer in mm. 13–16.

Ravel's fugue includes one countersubject (figure 1c). Gedalge describes the countersubject as

a counterpoint . . . [that], entering shortly after the subject, accompanies it at each of its subsequent entries. . . . The countersubject should have nothing in common with the subject except its tonality. It should not resemble the subject in either melody or rhythm. Nevertheless, the countersubject should be in the same general style as the subject: it should *contrast* but not *contradict*. The countersubject should lend variety without destroying the unity of the fugue.<sup>9</sup>

Ravel's countersubject seems to expand upon five of the first six notes of the subject: C, F, E, D, and C. (The countersubject does not feature Db, the fifth pitch of the subject.) Stepwise motion at the beginning of the countersubject fills in the leap of a perfect fourth from C to F heard at the beginning of the subject. Ties in the countersubject prolong the second and third pitches of the subject, F and Eb. The fourth pitch of the subject, D, is embellished but functions as a passing tone to the C that completes the countersubject. Shorter overall rhythmic values and a narrower melodic range distinguish the countersubject further. In keeping with the schematic of the exposition Ravel selected for this fugue, the countersubject immediately follows the subject in each voice except the bass: first in the tenor (mm. 5–8), then in the alto (mm. 9–12), and lastly in the soprano (mm. 13–16). Ravel chooses not to include a counterexposition, and the exposition concludes with the final statement of the subject in the bass accompanied by the countersubject in the soprano.

#### Second Section: Development (mm. 17–55)

The development of a scholastic fugue features episodes alternating with statements of the subject transposed into keys closely related to the overall tonic. Gedalge outlines the specific key areas that a scholastic fugue in a minor key should visit:

The first episode leads to the subject in the key of the third degree (major), where the answer brings about modulation to the unaltered seventh degree (major). From there, modulation

is made to the fourth degree (minor), and the answer is heard at the sixth degree (major). Finally, an episode in which the subject is heard in the key of the dominant leads to the first stretto.<sup>10</sup>

Ravel follows this tonal plan in the development section of his fugue. In mm. 23–26 the alto voice presents the subject in Ab major, the third scale degree of F minor, accompanied by the countersubject in the bass. Following this in mm. 27–30, the tenor voice presents the answer in Eb major, the unaltered seventh scale degree of F minor, paired with the countersubject in the soprano. In mm. 35–38, the subject surfaces in the alto voice again, but this time it is in Bb minor, the fourth scale degree of F minor, coupled with the countersubject in the tenor. The bass voice in mm. 39–42 delivers the answer in Db major, the sixth scale degree of F minor, supported by the countersubject in the alto.

In addition to their function as modulating passages connecting subject entries, the episodes in the development section feature the fragments of the subject and countersubject indicated by brackets in figures 1a and c. Numbers label the fragments according to the order each first appears in the fugue. For Gedalge,

[t]he episodes of a fugue, based on the nature of the musical phrases involved, consist of [a] series of imitations, more or less exact, [that] derive from fragments of the subject, answer, countersubject, coda, and/or free parts of the exposition. These fragments are combined in such a way as to form an uninterrupted melodic line [that] connects the various entrances of the subject and answer in the neighboring keys of the subject.<sup>11</sup>

The first episode, spanning mm. 17–22, features fragment 1 of the countersubject. The second episode, occupying mm. 31–34, is based on fragment 1 of the subject and fragment 2 of the countersubject. The third episode, extending across mm. 43–55, begins with inversions of both fragment 2 of the subject and fragment 3 of the countersubject. All four fragments of the countersubject are heard in the upper voices between mm. 47 and 55, including an augmentation of fragment 4 of the countersubject. Fragment 2 of the subject appears in augmentation in the bass at m. 49. Missing, however, is a statement of the subject in the dominant leading to the first stretto. Instead, Ravel relies on a dominant pedal point in the bass at the end of the development to prepare for the stretto's arrival. Gedalge calls for the pedal point in two specific locations: "on the dominant at the end of the episode immediately preceding the stretto section, [and] ... on the tonic at the end of the fugue." 12

#### Third Section: Stretto (mm. 56–107)

According to Gedalge, "the name 'stretto' . . . is applied to any combination in which the answer enters nearer the head of the subject than in the exposition. . . . Moreover, the name 'stretto' is given to the entire last section of the fugue in which . . . each stretto is made progressively nearer the head of the subject."13

At the beginning of the stretto section, a slightly abbreviated version of the subject passes among the voices in mm. 56–66, overlapping at ten-beat intervals. In mm. 67–73, stretti involving the countersubject and its fragments occur at two-beat intervals. Between mm. 74 and 87, Ravel divides the subject in half, with stretti of the first half sounding in mm. 74-81 at four-beat intervals and stretti of the second half occurring in mm. 82-84 at two-beat intervals. Ravel not only diminishes the rhythmic interval between the answer and the head of the subject, he also reduces the length of the melodic fragments involved in the stretto. This scheme culminates with the sustained dominant chord under the fermata at m. 87. Stretti featuring the head of the subject in inversion occur at four-beat intervals between mm. 88 and 93. The head of the subject in its original form creates stretti at two- and four-beat intervals throughout mm. 94-99 and reaches the tonic pedal point at m. 100, which ushers in the end of the fugue. Voices above the tonic pedal freely toss about many overlapping fragments of the countersubject, and Ravel concludes his fugue in the parallel mode of F major.

The connections between André Gedalge's ideas and methods -as codified in Traité de la fugue-and Ravel's Fugue in F Minor are undeniable. By measuring the principles set forth by Gedalge against the structure of this particular exercise, Ravel is shown to be a dutiful student, never straying too far from his teacher's instructions. But while many of the compositional choices made in this study were derived directly from Gedalge's lessons, Ravel demonstrates that the rigorous formality of the scholastic fugue still allows ample room for originality.

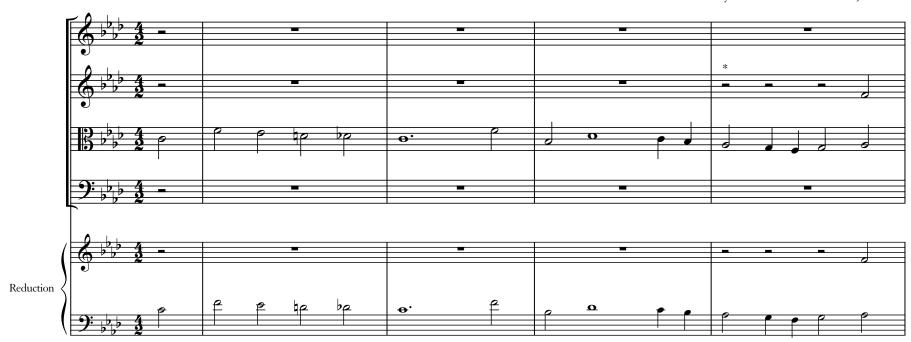
Scott J. Schouest is an independent music theorist who lives in Mount Pleasant, Michigan.

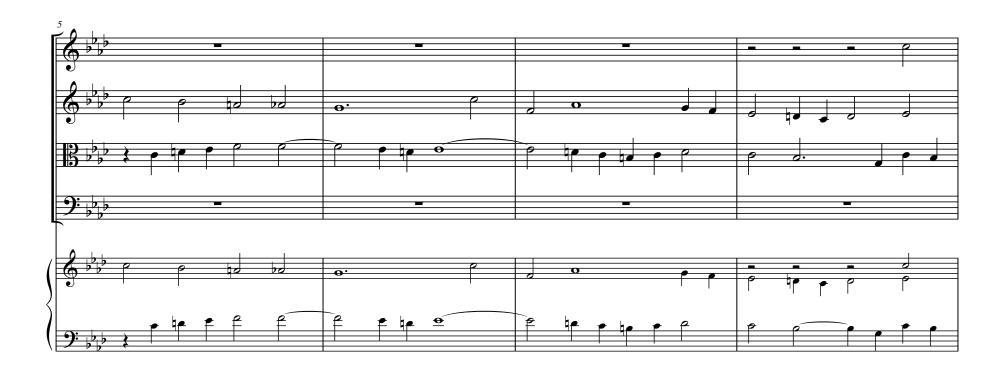
- André Gedalge, Traité de la fugue (Paris: Enoch et cie., 1901), 1. Translation by author.
- 2. André Gedalge, Treatise on the Fugue, trans. Ferdinand Davis (Norman: University of Oklahoma Press, 1965), 4 (cited hereafter as Davis). Davis excludes a footnote Gedalge attached to the term counterexposition: "The counterexposition is an optional device; it is heard only in certain cases, which will be specified and studied later." Gedalge, 8. Translation by author.
- Davis, 117, 168, 173. 3.
- Ibid., 296. Although figure 1 presents the subject in the treble clef, it appears in the tenor clef in Gedalge's Traité.
- Ibid., 72.
- Ibid., 77.
- Ibid., 9.
- Ibid., 17.
- Ibid., 60.
- 10. Ibid., 169.
- 11. Ibid., 119.
- 12. Ibid., 265.
- 13. Ibid., 173.



#### Maurice Ravel

Edited by Keith E. Clifton and Scott J. Schouest





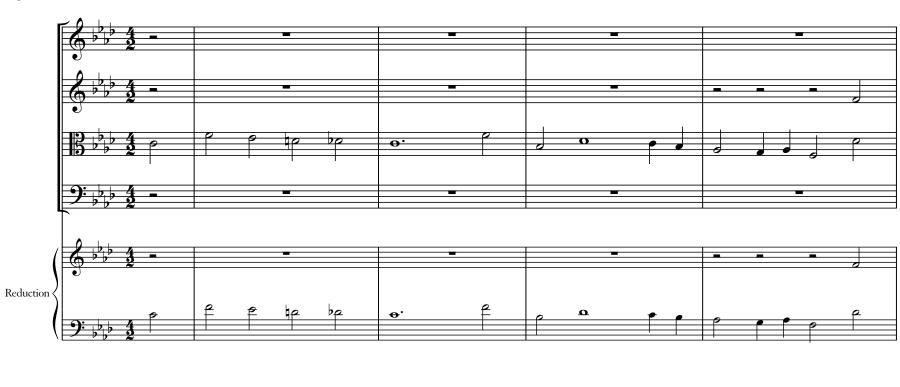


<sup>\*</sup> See critical notes



#### APPENDIX

Exposition with corrections (mm. 1-17)









Corrections to the bass voice (mm. 98–99)



#### CRITICAL NOTES

The measure/beat numbers below pinpoint a location in the score by indicating the measure number followed by the beat or range of beats within that measure, if needed. For example, 4.1–3 references beats one through three in measure four.

Standard nomenclature designates specific voices in the fugue: soprano, alto, tenor, bass.

Pitch designations follow the standard recommended by the Acoustical Society of America, which combines a capital letter with a numeral to identify specific pitches. The capital letter indicates pitch class, and the numeral specifies the octave containing the precise pitch. Thus, C4 refers to middle C, C5 to the C one octave above middle C, and so on. Similarly, C3 refers to the C one octave below middle C, C2 to the C two octaves below middle C, and so on. Pitches between any two Cs one octave apart carry the octave number of the lower C. G4, for example, indicates the G a perfect fifth above C4, or middle C. D3 indicates the D a major second above C3.

Measure/Beat	Voice	Note
4.1–3	Alto	Three half rests added to ease reading
18.1–3	Tenor	Manuscript indicates a dotted half note for E  4, which is rhythmically incorrect
23.4–24.1	Bass	Tie between the two D3s missing in manuscript
30.1	Alto	Parentheses added to the courtesy accidental on Db4
32.3–4	Bass	Manuscript indicates a half note for Ab3, which leaves the measure rhythmically incomplete
41.2	Tenor	Manuscript indicates G3, which forms a cross-relation with the G\(^1\)2 in the bass on beat 1
47–54	Bass	Breves in manuscript replaced by double whole notes
47.2	Soprano	Natural sign for D5 missing in manuscript
48.1–3	Bass	Half rests added to highlight the upper line of the double stop
51.4–52.1	Soprano	Tie between the two E 5s incomplete in manuscript as these two measures are on separate pages:
		the tie does not appear at the end of m. 51 but does appear at the beginning of m. 52
53.1	Alto	Natural sign for E4 missing in manuscript
53.4	Soprano	Manuscript indicates Gb4; substituting F#4 clarifies voice leading
55.2–3	Soprano	Tie between the two C5s and the stem for the quarter note C5 on beat 3 missing in manuscript
55.3	Tenor	Half rest missing in manuscript
59.2–3	Tenor	Tie between the two F4s missing in manuscript
60	Soprano	Erroneous double whole rest in manuscript; it seems that Ravel simply wrote around this
		incorrect rest
66.4	Bass	D\(\psi\)s appear in the tenor and soprano parts in beats 1 and 2; parentheses added to the accidental on
		Db3 to clarify its role as a courtesy accidental, which confirms the composer's intentions
72	Alto	Breve in manuscript replaced by a double whole note
77.4–78.1	Alto	Tie between the two F4s missing in manuscript
84.4–85.1	Alto	Tie between the two F4s incomplete in manuscript as these two measures are on separate pages;
		the tie does not appear at the end of m. 84 but does appear at the beginning of m. 85
85.3–87.2	Alto, Bass	Crescendo marks added beneath alto and bass parts as those in manuscript only appear beneath
		soprano and tenor parts
87.2	Soprano	Natural sign for D5 missing in manuscript
96–98.2	Alto, Tenor, Bass	Decrescendo marks added beneath alto, tenor, and bass parts as those in manuscript only appear
		beneath soprano part in m. 96 and above soprano part in mm. 97 and 98
96.3	Soprano	Natural sign for D5 missing in manuscript
98.1–2	Bass	Half rests added to highlight the upper line of the double stop
99–100	All	Added double bar line to mark the beginning of the coda and to emphasize the change in mode
		from F minor to F major
100	Soprano	Key signature in manuscript off by one staff line
107	All	Breves in manuscript replaced by double whole notes

## MAURICE RAVEL FUGUE IN F MINOR

World Premiere Recording April 15, 2010 Northwestern University

Juliette Cucunato and Lee Sheehan, violin Adam Neeley, viola Halie Morris, cello

Recording produced by WFMT and reproduced with permission.

Sound engineer: Ryan Albrecht

Producer: Carolyn Paulin

