Louis Vierne and the Evolution of His Modal Consciousness

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Abstract

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During my years of organ study I have always been perplexed by the harmonic language of Louis Vierne (1870-1937), particularly in his *24 Pièces de Fantaisie.* After reading a breadth of literature on the organ music of France after the French Revolution, the Paris Conservatoire, the progression of organ construction, the subsequent development of symphonic organ composition and improvisation, organ scholars have not discussed how to approach this music in terms of analysis, nor created a system to outline such an approach. Throughout Vierne's *Mémoires* he constantly recalls his desire (and the desire of his colleagues), to escape French compositional norms and employ a new form of "daring modernism." In Rollin Smith's book, *Louis Vierne: Organist of Notre-Dame Cathedral*, the author mentions that Vierne's harmonic language has been codified in the modes of limited transposition. To date, scholars have not found any harmonic or analytical evidence to verify that this apparent modal consciousness is, in fact, true. Thus, the purpose of this dissertation will trace this harmonic evolution through Vierne's life and education, the organs of Cavaillé-Coll, and through Vierne's compositions. My analysis of Vierne's selected compositions will illustrate that this modal awareness is plausible. By briefly analyzing the "Scherzo" from the *6ème Symphonie*, it seems that this once loosely used modal writing (at least for Vierne) began to evolve and become more logical. Not only does this help to prove Smith's point, but it will also give organists a new look at Vierne's music through a harmonic, analytical lens, one that has not been attempted before.

Preface

The organ music of Louis Vierne, particularly his *24 Pièces de Fantaisie*, have long since been a source of fascination for me as a growing musician and organist. Throughout my years of education and training I have grown rather obsessed with this composer and the aforementioned set of compositions.[1] One of the biggest questions that has always captivated my mind is: How is Louis Vierne able to create these wonderful effects of imagery and color in the *24 Pièces de Fantaisie*? In my research I have found virtually no analytical treatment of this collection. Even the great book of Rollin Smith, *Louis Vierne: Organist of Notre-Dame Cathedral* does not provide much insight on this subject. However, Smith's book planted a seed for me early on.

While discussing these pieces, Smith mentions vaguely that Vierne's innovative harmonic usages were eventually codified as parts of the modes of limited transposition. However, no source is cited for this assertion. Organists seem to be content with calling Vierne's music "highly chromatic," and appear satisfied with identifying his composition practices simply as "chromatic writing." This has become a hackneyed generalization. If organists want to understand a composer they must work diligently to understand the history encompassing their lives and art. This seems to be common sense—it is often overlooked (in my experience). Michael Murray agrees:

[1] The *24 Pièces de Fantaisie* were composed over the course of two summers. Books 1 and 2 were composed in Dinard, France during the months of August and September, 1926. Note that the "Toccata" from Book 2 was completed in Paris in December, 1926. Books 3 and 4 were composed in Luchon, France during the months of July and August, 1927. All four volumes were published by Henry Lemoine & C^{ie}. Book 1 was published in 1926, and Books 2-4 were published in 1927.

> And this means that one must first of all search out every detail of the composer's method, and try to seize on every nuance of his thought. We must not merely attend to every mark in the score, but also, since work and score are by no means the same thing, to every scrap of biographical data and to the fine points of every tradition.[2]

Likewise, organists should be more interested in finding out how Vierne's music is harmonically constructed. If Rollin Smith can boldly state that Vierne's harmonies have been codified in the modes of limited transposition, why then has no one ventured into this realm and published (or at least presented) any analysis? Has Rollin Smith made a harmonic analysis of Vierne's music, particularly his *24 Pièces de Fantaisie*? One would assume so since he has made such a bold statement. However, in my years of education, it was not apparent to me that the modes of limited transposition could be used for analysis regarding Vierne's organ music. Many believe that the modes of limited transposition apply solely to the music of Olivier Messiaen. My dissertation will analyze three compositions from the *24 Pièces de Fantaisie*, and the "Scherzo" from his *6ème Symphonie* to illustrate the progression of his modal usage. In order for me to undertake this analysis, the knowledge of the modes of limited transposition is necessary. Consequently, one discovers that Vierne possessed some form of modal awareness prior to Messiaen's codification.

The first chapter of this dissertation is a discussion outlining the progressive development of organ music in Paris, starting with the Paris Conservatoire guided by the teachings of Franck, Widor, and Guilmant. It is important to understand Vierne's relationships with these three men

[2] Michael Murray, *French Masters of the Organ: Saint-Saëns, Franck, Widor, Vierne, Dupré, Langlais, Messiaen* (New Haven: Yale University Press, 1998), 6.

and various elements in his life. In doing so, one constantly finds traces of Vierne's fascination and desire to break away from the strict practices of harmony through this progressive development at the Conservatoire.

In addition, Aristide Cavaillé-Coll, the most prominent organ builder in French history, will be discussed, with specific reference to the organs of St.-Denis and Notre-Dame. It is known that Vierne's instrument at Notre-Dame had been heavily altered throughout its magnificent history. However, rather than discussing what the organ has become today, the focus will be on its symphonic transformation via Cavaillé-Coll in 1868.

Through this progression of education, aided by the magnificent, revolutionary instruments built by Cavaillé-Coll, organ music began to evolve into an entirely new style, in which the organ could imitate the dynamic ranges commonly heard by symphony orchestras. All of these events were of importance to Louis Vierne. This evolution of education and instrument building was vital for him to create some of the most important and popular organ music of his generation.

This dissertation contains four chapters. Chapter one will discuss the Paris Conservatoire and its educational progression beginning with César Franck (1872-1890), and conclude with Guilmant's term beginning in 1896. Chapter two will discuss Cavaillé-Coll and his instruments at St.-Denis and Notre-Dame. The third chapter provides a progressive, analytical panorama of three compositions from the *24 Pièces de Fantaisie*: "Feux Follets," "Fantômes," and "Cathédrales." In Chapter four, the "Scherzo" of Vierne's *6ème Symphonie* will show the evolution of his model awareness. These compositions represent a rich improvisational and compositional structure, resulting from this important educational development, and period of organ building during this eventful and tumultuous era in France.

Louis Vierne and the Paris Conservatoire:
The Preface to a New Daring Modernism

The evolution of the organ studio at the Paris Conservatoire occurred in three stages. The first stage (late1800s) was with César Franck. In 1890 his studio was radically changed by Widor and this new tradition of organ playing was due to his studies with Lemmens in Belgium. This new style was retained and intensified by the work of Guilmant, also a former student of Lemmens. However, during Guilmant's tenure Louis Vierne was one of the main figures in training these new students as well. Also, upon entering Franck's class in 1890, we read witness accounts of Vierne and his peers indicating a transitional period within the Conservatoire; the young organists were on a quest to find a new way to convey their musical thoughts that went beyond conventional harmony. This quest continued when Vierne briefly took over Guilmant's class in 1897. The primary teaching focus of Franck, Widor, and Guilmant, will be discussed in relation to Louis Vierne.

César Franck's organ studio at the Paris Conservatoire was not geared to the purpose of organ instruction, but that of improvisation.[3] Improvisation was a mandatory requirement of organists during this time. However, many do not realize that improvisation was essentially composition in practice. No organist could improvise well without understanding the

[3] The establishment of the Paris Conservatoire began as a result of a decision by the Directoire (the French Revolutionary government) to build the Conservatoire 1795-1799. This was a result of the merger of two existing music schools, the École Royale de Chant et de Déclamation (1784), and the Institut National de Musique (1793). The school charged students no tuition and depended upon the government for support. The first organ studio was led by Nicholas Séjan until 1802. There were no records of teaching practice until around 1835 during the peak of François Benoist's tenure. Benoist was the second organ professor in the history of the Conservatoire and built the program from his early years as professor of organ. Franck took over when Benoist retired after nearly 60 years of teaching.

fundamentals of composition. Due to this fact, Franck's class was not only for organists, but also for other musicians, such as Debussy.[4]

Documentation from Louis Vierne's *Mémoires* help illuminate what Franck was like as a teacher. As a preface, Vierne (who was born blind)[5] was completely captivated by Franck's playing when he first heard the master improvise in 1881. This concert put Vierne on a musical path and outlined the rest of his life.[6]

For the next 7 years (1881-1888), Vierne studied beyond his normal capacity in order to enter Franck's class at the Paris Conservatoire. Even though his classes at the Institut National des Jeunes Aveugles were intense and very strict on music and harmony, Vierne excelled—but not without immense difficulty.[7] One of the biggest setbacks in Vierne's life was the death of his father in 1886, which brought him into a severe state of depression. This occurred about a month

[4] Many sources note that Claude Debussy was in Franck's organ studio. Michael Murray, in his book, *Marcel Dupré: The Life of a Master Organist* (Boston: Northeastern University Press, 1985), states that "Debussy had studied organ with Franck, incidentally, and would refer to Franck as a 'modulating machine'" 30. Also, R. J. Stove's book, *César Franck: His Life and Times* (UK: Scarecrow Press, 2012), references Debussy when discussing Franck's studio classes.

[5] Vierne documents his childhood struggles in his *Mémoires*. He required two operations on November 12 and 17, 1877 to "restore enough sight for me to get about, recognize people, see objects at a short distance, and read large print at a very close range." Rollin Smith, *Louis Vierne: Organist of Notre-Dame Cathedral* (NY: Pendragon Press, 1999), 7. Problems with his vision continued throughout his life, particularly in 1916 when Vierne went to Switzerland to endure a painful procedure to restore his failing eyes due to glaucoma discovered in May, 1915. It was a four year period of pain, complications, isolation, and profound loss—he lost his eldest son Jacques, and his brother René in battles during the First World War. He returned to Paris in 1920. Ibid., 265.

[6] Vierne heard Franck play in April of 1881 at the church of Saint-Denis-du-Saint-Sacrement in Lille at the age of ten. The impact of this experience was certainly immense: "It's beautiful because it is beautiful. I don't know why, but it is so beautiful that I would like to play such music and die immediately afterwards." Vierne also indicates in his *Mémoires* that he was so moved by this experience that he was essentially rendered immobile and had to be helped into the carriage by his mother to go home. His father said that this reaction "proved my future lay in music" Smith, *Louis Vierne*, 10.

[7] The schedule of his school work was intense for a ten year old, especially since they were away from home and their parents: "two hours of piano practice, two of the other instrument (each student was required to play an orchestral instrument, Vierne chose violin), four hours of academic studies, one hour of solfège, and later of harmony; three hours of study to prepare exercises and learn lessons; a quarter of an hour for a piano lesson; a quarter of an hour for an instrumental lesson, one hour of reading aloud by a monitor or by the assistant director. We rose at 6:30 in the morning and went to bed at 9 at night" Smith, *Louis Vierne*, 18-19.

before a student music competition at the Institut, but with the help of the faculty, Vierne was able to surmount this hurdle, and did well when it was time to compete. It was certainly an enormous testament to Vierne's perseverance and passion for his art, even at the young age of 16.

Franck met Vierne again after his work at the competition, and was very impressed with his efforts and achievements at that point. He offered to take Vierne as a student when he was ready. Ultimately, through hard work, Vierne was able to audit Franck's class at the Conservatoire in 1888 while he was finishing his studies at the Institut.

Through his *Mémoires*, Vierne mentions several accounts of his difficulties regarding structured composition and counterpoint lessons at the Institut. His teacher used traditional and strict methods of teaching and presentation.[8] In the same fashion, Vierne made multiple claims of freeing himself from the strict rules of music and harmony. This was particularly evident when discussing his first year of harmony at the Institut:

> On the technical side of the subject, our teacher was a knowledgeable man; although he used only the old treatise by Augustin Savard, he helped us with a host of practical suggestions…But on the artistic side he was rather limited, for he went strictly by the rules. After three years of this instruction we wrote correctly, to be sure, but without the flexibility and freedom that make harmony an art. Later I had to work extremely hard to

[8] This observation becomes apparent when studying the analysis, playing, or listening to Vierne's organ music. No one can encounter his music without realizing that his preference is rooted in free form improvisation and a lack of traditional harmonic structure.

> acquire a "pen" in the modern sense of the word, and especially to enable me to teach in a really musical way.[9]

In 1889, Vierne and his peers were elated that Adolphe Marty took over the organ and composition classes.[10] He had a looser and more imaginative style of playing than his predecessor, Louis Lebel.[11] Vierne performed at his best when he was allowed some freedom. He was passionate about his teachers who were against the grain of formality:

> Adolphe Marty…took over the organ and composition classes in March 1889. He brought a breath of fresh air that would enliven the teaching in those areas. He opened undreamed-of horizons for us, especially in composition and improvisation, passing on with all the enthusiasm of a young proselyte the ideas absorbed from his teachers at the Conservatoire. We were with him heart and soul and, considering the general spirit of the school, we seemed like radicals—I might almost say revolutionaries.[12]

Vierne was very fond of Marty's music. Marty brought in some of his own compositions that the studio "found very modern" and greatly favored. According to Vierne:

> We worked on it like mad—so much so, in fact, that he [Marty] said to me one day, 'You're very kind and I'm quite touched, but you must learn something else; I don't want

[9] Smith, *Louis Vierne*, 21.

[10] After Lebel's death in 1888, Victor Paul was the interim professor of organ. Paul was the organist for the Lazaristes in the rue de Sères and the maître-de-chapelle of the Institut and also was influential in teaching Vierne harmony that was "much freer than those given by *le père* Hèry (Julien Hèry,) professor of solfège and harmony at the Institution." Smith, *Louis Vierne*, 21, 27.

[11] Lebel, a student of Lemmens, preceded Marius Gueit as the professor of organ at the Institut. According to Vierne, Lebel was "instinctively musical…but he knew nothing of any classical tradition. He never suspected that the organ was the most mathematical of instruments, and for technique was guided by his ears alone-ears which, like those of his colleagues, were not accustomed to particularly fastidious performances." Smith, *Louis Vierne*, 24-25.

[12] Smith, *Louis Vierne*, 29.

you to play that at the competition. Play some Bach; he belongs to all time, and from him you'll learn your profession best.'[13]

With the combination of Vierne's determination, his private harmony lessons with Victor Paul (see footnote 10), and Marty's new "modern" influence, Vierne graduated with top honors.[14] It is evident that Marty brought a more youthful and modern flavor to the organ studio. The desire to play this new music, to study harmony with less restrictions, and consequently, to improvise in a free style foreshadows Vierne's later compositional practice.

Upon entering Franck's class in 1890, Vierne adapted well to Franck's teaching style. One could probably venture that it was a "dream come true" for the talented young man. This is certainly evident based on Vierne's *Mémoires*: "I worshipped Franck with a combination of passionate admiration, filial affection, and profound respect. I experienced with intense joy, mixed with a certain mysterious awe, the almost magnetic fascination that emanated from that man, at once so simple, so natural, and so truly good."[15]

Vierne and the rest of his class also possessed the desire to be original and to do things that were not always the most common at the time.[16] Charles Tournemire was a prime example. According to Vierne, he was "A born improviser" and when competing in the 1890 competition where he was awarded "first accessit," Vierne remarked that the studio was "captivated by the

[13] Smith, *Louis Vierne*, 29.

[14] He won first prize in organ, piano, and composition. Smith, *Louis Vierne*, 32-33.

[15] Ibid., 32-33.

[16] Smith, *Louis Vierne*, 47.

harmonies he had discovered for the free theme."[17] Franck was also very impressed with Tournemire's abilities and his "original voice."

As previously stated, Franck's biggest concern and focus during his class was improvisation. Vierne states that all of Franck's classes were centered on both free form improvisation and fugue. Franck's logic for this form of instruction developed because of the Conservatoire's curriculum requirements for their student competitions each year.[18] He only devoted one additional hour to interpretation. Thus, actual repertoire was not of prime importance to Franck during his tenure at the Conservatoire.[19]

Regarding the yearly competitions, Franck took stock of all requirements and made his students diligently practice each of them to perfection.[20] Franck also insisted that his students bring him only their best work; large amounts of busy work were not acceptable to him. Franck told one of his students:

> Don't try to do a great deal, but rather seek to do *well,* no matter if only a little can be produced…bring me the results of *many* trials which you can honestly say represent the

[17] Smith, *Louis Vierne*, 47.

[18] Ibid., 44-47.

[19] According to Louis Vierne's *Mémoires,* "Of the six hours of class each week, the maître devoted at least five to improvisation, the most formidable test of the competition. Performance interested him little; when admitted as a student it was taken for granted that one possessed an instrumental technique sufficient for the interpretation of the complete Bach. Smith, *Louis Vierne*, 43.

[20] Students were required to accompany plainsong/chant, improvise a fugue on a given subject, perform a free improvisation on a given theme, and finally, perform from memory of an early or modern organ piece from the great repertoire. Ibid., 41-43.

very best you can do…don't think that you will learn from my correction *of faults of which you are aware,* unless you have strained every effort yourself to amend them.[21]

Even though students in Franck's studio were taught how to be artists at the organ, they were not educated in proper playing techniques. [22] Franck allowed students to find their own technique through private practice. Essentially, Franck expected each student to find his own weaknesses and would not bother to mention them: "…He seemed to think us perfectly capable of being aware of the weak points in our playing and thought it futile to tell us."[23] There was no attention to detail regarding console management, manipulation of stops, or even selecting appropriate registrations, "Franck drew the stops and worked the *pédales de combinaison* and the expression pedal. Everything was simplified, reduced merely to playing on the keyboards and to the observance of style."[24] Regarding this style, Franck was very fond of tempo rubato—or taking leniencies with the rhythm of a given composition.

This passion for tempo rubato would be a serious issue when Widor would take over the organ studio after Franck's death in 1890. Another problematic deficiency was the lack of pedagogy with regards to playing the organ pedals. This was something Vierne and his pupils would soon regret.

[21] Stove, *César Franck,* 205.

[22] R. J. Stove writes: "Sometimes, it must be admitted, Franck proved too comforting a pedagogue for his students' good. In his eagerness to stress the artistic side of organ playing, he tended overmuch to let the mechanical side take care of itself." Stove, *César Franck,* 206.

[23] Quote was taken from a Swiss organist Édouard Bopp. He attended Franck's class for about a year, although which year was not specified by Stove's publication. Ibid., 206.

[24] Smith, *Louis Vierne,* 45.

In November of 1890, Franck died from an illness he had contracted after an accident.[25] Franck's studio was in a morbid state of despair. The entire studio did not want to be subjected to anyone else as their teacher: "…we all decided to resign from the class. To see again that hall, that organ, the place formerly occupied by the dearly departed, taken by another? Never!"[26] What made matters worse was the Conservatoire's immediate appointment of Charles-Marie Widor as Franck's successor. According to Vierne, "When replacing a deceased professor, it is customary to let some time elapse before choosing the new incumbent."[27] Immediately, the students were not pleased with this new appointment. After the first class with Widor, their familiar world would be reduced to a bitter memory. Widor's style was much more intensive and involved than Franck's. Widor was a student of Jacques-Nicolas Lemmens, a Belgian organist who had taken the organ world of Paris by storm in the 1850s.

Lemmens was educated in the Brussels Conservatory (1839-1847) where he learned the works of J. S. Bach from his teacher, Christian F. J. Girschner. Lemmens was educated in counterpoint and fugue by François-Joseph Fétis, the director of the Brussels Conservatory. During this time he also studied organ with Adolf Hesse in Breslau. These studies with Hesse would soon become his link to Paris.[28] This link was the famous organ builder Aristide Cavaillé-

[25] Franck was in a carriage accident in May of 1890, and for the next 5 months he battled with healing from his injuries. It seemed as though he was recovering well, despite a cold contracted in October, thus his death was shocking since Vierne states: "We hardly suspected it, for Franck was in excellent health." From this point forward, the class was suspended until further notice. Smith, *Louis Vierne*, 49.

[26] Smith, *Louis Vierne*, 53.

[27] Ibid., 53.

[28] Lawrence Archbold and William J. Peterson, *French Organ Music from the Revolution to Franck and Widor* (NY: University of Rochester Press, 1995), 54. Lemmens' study with Hesse was made possible by a grant provided by Fétis. "Fétis, procured from the Ministry (the Ministère de l'Intérieur) a stipend to enable young Lemmens to study with Hesse "the traditions of the art of Johann Sebastian Bach…Lemmens was awarded 750 francs to permit him to "complete his musical studies…"

Coll. This occurred due to his contact with Hesse and also with Fétis, who gave him a grant to study with Hesse in the first place. Fétis actually recommended Lemmens to Cavaillé-Coll in 1850.[29]

Due to the immense talent of Lemmens and his deep understanding of music, Cavaillé-Coll viewed him as a very prominent figure in the organ world. Cavaillé-Coll knew "…that the future of serious organ playing lay, to a large extent, in his hands."[30] As a result of this, he would later recommend two students in France to go to Belgium to study with Lemmens. They were Charles-Marie Widor and Alexandre Guilmant.[31]

Lemmens' teaching style was incredibly precise. He often used his knowledge of the works of Bach and also, Mendelssohn to instruct his students. Lemmens would not use any form of rubato. Thus his students were required to use a precise attack and would need to execute the music with exact values for all notes and rests indicated in the score. Also, absolute legato (no staccato or haphazard detached articulations) in all voices of polyphony including finger substitutions and *notes communes* was required by every student.[32]

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[29] Fenner Douglass, *Cavaillé-Coll and the French Romantic Tradition* (New Haven: Yale University Press, 1999), 76. "…Fétis, Director of the Royal Conservatory at Brussels…wrote to Cavaillé-Coll introducing the young professor before Lemmens' first trip to Paris in the spring of 1850. Accordingly, Cavaillé-Coll scheduled his visit, chose the organs he would play, and selected the audiences who would hear him, for there was no public recital."

[30] Douglass, *Cavaillé-Coll*, 77.

[31] By this time, Lemmens was beginning to supersede Lefébure-Wély (the premiere organist in France at this time) since Cavaillé-Coll put emphasis on these two aspiring students to study with Lemmens "…in order to learn the new legato style, apparently sensing that Lemmens, and not Lefébure-Wély, would set the standard of French performance on the organ for generations to come." Ibid., 77.

[32] This information can be validated through the writings of Daniel Roth, found in Lawrence Archbold and William J. Peterson, *French Organ Music*, 193. A *notes commune* is the practice of holding repeated notes over into the next measure; they are not to be replayed even though they are not tied together.

For these reasons, Widor's pedagogical approach was a massive shock to the students of Franck, who were accustomed to a more forgiving and free style of playing. Widor, who was trained in a strict and relentless playing style, also placed the music of J. S. Bach on the highest tier of the musical spectrum. Bach's music was mandatory for all organ students in Widor's class to play and perform. Widor was very specific in his demands regarding notational awareness and note values. No freedom was permitted. According to Vierne, "Strict legato in all parts, precise articulation of repeated notes, tying of common notes, punctuation, breathing, phrasing, shading by degrees, all was dissected, explained, and justified with marvelous clarity."[33] Many of Franck's students were very much against this new way of interpretation and were left very frustrated and dismayed.[34]

Vierne states that all of Widor's students were required to work with the Lemmens method for both the manuals and the pedals. Regarding the manual work, "…it was necessary and not pleasant."[35] Regarding the use of the pedals, Widor was relentless:

> We were asked to review minutely all the pedal exercises in Lemmens's method, including scales. The latter, with several pedaling variants, had to be memorized so well that the *patron* could spring any one of them on us in any tempo he chose. He added

[33] Smith, *Louis Vierne*, 61.

[34] Charles Tournemire, one of Vierne's classmates remarked to him: "Well, old man…it's clear: we don't know anything. If we have to do everything all over we'll have a weird competition. The prize is done for!" Vierne himself goes on to remember that Widor's training "…was very hard on us. He seemed to be trying to make us think just as he did, and to submit us to a training, the import of which, for the moment, we could not understand." Ibid., 61, 63.

[35] Smith, *Louis Vierne*, 69. The "Lemmens method" refers to his *École d'orgue* (1862).

exercises to practice wide stretches in rapid tempos, and also very ingenious pedaling for the chromatic scale…Trills, arpeggios, and double notes for each foot…[36]

Once the initial shock subsided the students were able to regain their focus and adapt to Widor's new and intensive style. Through their adaptation and acceptance, Vierne and his peers would undergo a form of transformation with this new style of teaching. This was particularly evident with Louis Vierne.[37]

Students realized that the use of Widor's methods would create a performance they and their listeners had never heard before. This became even more evident when the students observed Widor's playing. Music itself made the most impact. The magic was in the musical phrasing and articulations, of which Widor was the master.[38] Widor explained that

> Music is a specialized language, granted, but it has its requirements of expression just as spoken language does. On the organ, repeated notes must be articulated precisely…Failure to do this will produce gaps in the melodic thread…Have an overall interpretive scheme rather than apply haphazard touches…[39]

Regarding improvisation, Widor required all of his students to have a good understanding of form and the proper development of various thematic material. Franck would normally write

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[36] Smith, *Louis Vierne*, 73.

[37] According to Charles Tournemire, "Vierne…thoroughly assimilated Lemmens's pure technique transmitted by Widor; in addition, his gifts as an improviser and composer were not late in manifesting themselves in various already flamboyant works. In class, he was the absolute submissive vis-à-vis his maître, to whom he was extremely devoted. That explains [Widor's] great influence on his early works." Smith, *Louis Vierne*, 68.

[38] In his *Mémoires*, Vierne goes into enormous detail regarding Widor's explanations of phrasing, tempo choices, articulations, and rhythm. Widor virtually left "no stone unturned" when it came to the interpretation of music. Everything was analyzed and scrutinized in painstaking detail.

[39] Smith, *Louis Vierne*, 76.

out certain themes of his own composition and choosing, while Widor took his themes from wherever he could find them, such as church music, folk tunes, and even themes from piano or symphonic music. He wanted all of his students to "think outside the box" and make something more out of the material they were given. Widor wanted his students to not just compose, i.e., improvise variations on the thematic material, but to make fugues out of them, and even go so far as to change their rhythmic integrity to do so: "In contrast to Franck's method of bringing us subjects especially prepared for the class, Widor would take them from anywhere, from the classics as well as from plainsong, and transform them rhythmically into free themes or fugue subjects."[40] Vierne recollects the main differences in his *Mémoires* regarding his studies with Widor at the Conservatoire in detail:

> …If I compare Franck's teaching of improvisation with Widor's, the former was interested above all in detail: melodic invention, harmonic discoveries, subtle modulations, elegant figurations—in a word, everything that touches upon purely musical expression. The latter, on the contrary, spent most of his time on the formal side: construction and logical development."[41] [42]

Through dint of hard work, Vierne impressed Widor enough to be appointed as a supply organist for St.-Sulpice in 1892.[43] This appointment was a true honor for Vierne, which required

[40] Smith, *Louis Vierne*, 65.

[41] Ibid., 65.

[42] However, oddly enough, Widor was not as intensive on fugal composition. Franck on the other hand was much more stringent in this regard, at least in the opinion of Louis Vierne who attributed Franck's emphasis on fugue to his study with Anton Reicha, a Czech composer and theoretician who taught counterpoint and fugue at the Paris Conservatoire beginning in 1818. Vierne made recollections of this in his *Mémoires*. Ibid., 64-65.

[43] Vierne was now Widor's substitute at St.-Sulpice when the need arose. Since Vierne had little knowledge of this enormous instrument, Widor worked with him privately to ensure his success. Widor encouraged Vierne to come and work with him in the tribune adjacent to the organ loft in order to fully understand how to make music on the

him to work virtually endless hours in order to master the command of the instrument. Widor took it upon himself to coach Vierne until he was able to play the instrument on his own without any help. Vierne's success marked a milestone in his life, and proved all the more that Widor was an enormous inspiration to him. Vierne was a student who could push himself to the limit to meet Widor's high bar of expectations.

In December of 1896, circumstances at the Conservatoire would change yet again. Widor would move on to become the new professor of composition, and he encouraged the Conservatoire to appoint his friend and colleague Alexandre Guilmant as the new instructor of organ. Vierne was virtually guaranteed a space in Guilmant's studio at the recommendation of Widor—Vierne had actually been serving as Widor's "assistant" since 1891.

In 1891, Vierne's newly appointed task was to prepare a group of auditors for Widor's organ class. In the course of this preparation, Vierne screened these students to determine their potential and their needs. He worked with them to resolve any remedial problems with technique before they were admitted into Widor's class. For Widor, all this screening would "…save me time by allowing me to go more deeply into matters of style…"[44] Vierne took his work seriously and he used all of his experience and knowledge thus far to get the students ready. Luckily, they took to Vierne and his methods and his position of auditor was successful: "I applied myself eagerly to it, and my recruits responded magnificently to my expectations…It was a success!"[45] Due to this success, and to the close bond Widor had to his pupil, Widor made sure that

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massive instrument at St.-Sulpice: "The best way to train yourself is to come to my tribune as often as possible and to take notes as you do in class. I'll explain everything that you're unsure of." Smith, *Louis Vierne*, 89. It was this close and intense relationship that would aid Vierne in becoming a successful organist in Paris, and soon, earn him the position of Organiste Titulaire de Notre-Dame in 1900.

[44] Smith, *Louis Vierne*, 87.

[45] Smith, *Louis Vierne*, 89.

Guilmant would keep Vierne as a tutor during this next phase of the evolution of the Paris Conservatoire.[46]

While Alexandre Guilmant was a new figure at the Conservatoire (in 1896), he was also a student of Lemmens. Thus, nothing really changed regarding instruction and playing style—the strict and intensive adherence to the written score was closely observed. Guilmant was also an advocate of using different timbres in his works.[47] However his approach to improvisation seemed more "old fashioned," compared to that of his new students, who seemed to be moving forward "toward a more daring modernism."[48] Guilmant was more focused on fugue and was able to give intensive instruction on their episode construction, and use of dominant pedal points, the use of stretto, and countersubjects.

Regarding free form improvisation practice he was quite "vague" according to Vierne: "His imagination was incomparably less fertile than Widor's."[49] It was actually Vierne who helped the students improvise at this stage of instruction at the Conservatoire. Vierne "…assigned [himself] the role of maintaining the Franck-Widor tradition, and the pupils agreed with me enthusiastically."[50]

[46] In Vierne's *Mémoires* he indicated that upon having a conversation in which Widor told him, "I'll recommend Guilmant to the Superior Council, on condition, of course, that he retains you as his tutor. I think he'll want to do that, and will realize how much you can help him because of your familiarity with the school's special curriculum." Smith, *Louis Vierne*, 117. Luckily this is exactly how the events transpired and Guilmant became Widor's successor.

[47] Vierne indicated that Guilmant really changed nothing regarding playing technique, just "…a few additional points of articulation in certain Bach preludes and fugues, certain tempos a bit faster." Ibid., 117.

[48] Smith, *Louis Vierne*, 119.

[49] Ibid., 117.

[50] Ibid., 119.

Despite Guilmant's lack of ideas for free form improvisation, he allowed his students to have an active imagination and be creative…but he was not an advocate of adopting these new modern harmonies (or wild imaginative passages) himself. Vierne also mentioned that Guilmant was not often enthusiastic about how wild his students were becoming, especially during free improvisations. In his *Mémoires*, Vierne recalls Guilmant's words of concern: "…that's a little disturbing, but it's interesting" or, regarding Vierne's personal recollection: "Ideas accompanying the principal theme were pretty daring."[51]

Even though Guilmant was not enthusiastic about this "daring modernism," in 1897, when he left to go on a concert tour in America, he allowed Vierne to take over the organ studio. Guilmant was very trusting of Vierne, as they seemed to share the same ideas of intensity and focus for the curriculum of the Conservatoire. They both wanted to keep the level of instruction very high, and also, kept improvisation at a very high standard for the student competitions.[52] Vierne's appointment as professor (albeit temporary) is when improvisation moved towards this new "daring modernism."

Upon Vierne's notification of this appointment, he was excited that he would be able to teach his own ideas without hindrances:

> I should have to prepare them for the January trimester examination and give the grades…I was a little uneasy about such a responsibility but, at the same time, delighted

[51] Smith, *Louis Vierne*, 119.

[52] "…the custom of intense work established by Widor remained in force. Guilmant and I saw eye to eye on that, and the average remained at a very high level." Smith, *Louis Vierne*, 121. Guilmant and Vierne also spoke at length during a meeting at Guilmant's residence to discuss the examinations given to the students. Both of these men revised the plainsong and fugue exams, thus broadening them to more conventional means.

to be able to express unrestrained my own ideas on free improvisation. We would 'whoop it up' with modern harmonies.[53]

The resulting comments of the jury indicated that this was a brave move. Theodore Dubois, an organist and also the director of the Conservatoire at this time was impressed with the confidence, imagination, and bravado of the students of Guilmant/Vierne, albeit a bit cynical: "A little too daring, a little extreme, but interesting just the same…you should avoid excess."[54] The comments from Vierne and his students proved the same, but with appreciation and pleasure as this was not the norm; something they all desired to escape.[55]

The three tiers of educational progression at the Paris Conservatoire greatly influenced Vierne and his peers. They were able to build pedal technique and better understand the organ's capabilities, combinations of sound, and proper registrations through Widor (via Lemmens). Each student became more informed with regards to interpretation of organ repertoire. In terms of improvisation, they would become more "radical" and would progress towards a new form of daring and highly imaginative harmonizations of thematic material. This was due to Widor's intensive instruction on building fugues from virtually impossible themes, and from Vierne's later instruction on improvisation during Guilmant's absence.

The magnificent and versatile organs built by Aristide Cavaillé-Coll served as the implementing link in the development of education of Vierne and his peers. His instruments

[53] Smith, *Louis Vierne*, 125.

[54] Ibid., 125.

[55] One cannot help but read in amusement the sheer fact that when Guilmant returned to his post in March of 1898, the studio was just as he had left it. All signs of Vierne's wild coaching on improvisation were instantaneously reverted back to the status quo. One can only imagine how cunning Vierne and "his" students were in being able to do this without any sign of culpability. Smith, *Louis Vierne*, 127.

allowed the artists to play varied repertoire, and thus gradually shifted the organ from its role strictly as accompaniment to the Mass to full-fledged status as a concert instrument. Further, the richness in his instruments encouraged a new form of symphonic improvisation, one which inspired the use of far-reaching harmonic sonorities intensified by his innovative stoplists. For Louis Vierne, this was exemplified by the organ at the Cathedral of Notre-Dame.

St.-Denis and Notre-Dame:
Vierne's Implementation of Daring Modernism

Cavaillé-Coll's new advances in organ building were essential for the creation of new music on the organ; music that was more orchestral in nature, and certainly more expressive due to the redesigns of the instrument, its pipes, and its mechanics. When Cavaillé-Coll produced his instruments on a large scale, the organ scene in France expanded from the church to the stage, as his instruments now allowed a new style of playing, one that was symphonic in nature, and would create an entirely new realm of sound. This building practice was prefaced by St.-Denis (1840), and exemplified in the organs of St.-Sulpice (1862), and Notre-Dame (1868). Both of these instruments were important for Vierne and his musical influence.

There was a long hiatus of organ building in France after the Reign of Terror. During the time span of 1789-1801, there was no use for organists or organ builders since there was no church usage permitted and organs were commonly destroyed and used to make bullets for the armies. Regarding the specific number of churches and instruments affected by the Revolution, the damage was substantial:

> …there were around two thousand organs in France in 1789. After ecclesiastical estates were taken over by the government, the possessions of monastic establishments were sold. Five hundred twenty-two organs were put on the auction block; 418 of them perished…The other 104 survived because they were repurchased by parishes at bargain prices. In 1795 the National Convention decreed that the sale of organs belonging to the

> Republic would continue…Some organs were saved because the organists played music for the festivals held every ten days.[56]

Even if organs were spared, they were still at risk: "The organs spared were often the victims of other problems: lack of maintenance; lack of protection from the elements in buildings that had been damaged; and vandalism. Some organs had been moved from place to place for use in civic ceremonies."[57] The remnant of these surviving instruments was barren compared to their former glory:

> Churches were still in the hands of the government when the nineteenth century opened. Some had been closed for more than a decade; others had been used (and often misused) for secular purposes. Some organs had been put in storage; some remained in place but were not playable; others had been destroyed or vandalized beyond repair.[58]

To make matters worse, there were no longer any standards in place regarding organ playing and liturgical use:

> …by the early decades of the nineteenth century an idiomatic technique of organ playing had almost entirely ceased to exist in France owing to the serious blows the Revolution had dealt institutions where the art of the organ had been demonstrated and taught to young musicians for several centuries, for their choir schools were discontinued and major churches closed under the Terror.[59]

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[56] Orpha Osche, *Organists and Organ Playing in Nineteenth-Century France and Belgium* (Bloomington and Indianapolis: Indiana University Press, 1994), 3-4.

[57] Ibid., 4.

[58] Osche, *Organists and Organ Playing*, 10.

[59] Lawrence Archbold and William J. Peterson, *French Organ Music*, 27.

Even after this treacherous time period reached its conclusion, the restorations of instruments that were intact (albeit severely damaged) were permanently altered by the work of builders with no real foundations in organ building.[60] Once an organ's original voicing was lost, the instruments would never again sound the same.

Also, during the 1800s the Industrial Revolution found its way to France and other instruments were beginning to be constructed at a very fast rate. The most influential instrument was the piano. The popularity of this instrument superseded the harpsichord as musicians during this time were on a quest for expression and desired an instrument that could have multiple sonorities that were easily accessible to the player. It was this expressive desire that fueled Cavaillé-Coll's imagination and innovation to take organ building to an entirely new level.

Cavaillé-Coll's organs used virtually every new revolutionary concept at the time (the early 1800s). His organs required a much larger volume of air than previously used; this was due to a new form of pipe construction which was harmonic in design. These pipes were essential in creating a much larger and rich sonority, to be discussed in detail later. Also, due to the larger size of these pipes, and the greater volume of wind required for their speech, there was a serious consequence: the organ would be virtually impossible to play without an assist to aid the organist in using the entire sonority of sound the instrument provided. This assist was the Barker machine. Also, certain divisions of the organ were able to be played "under expression." That is, they were enclosed in their own box, with a set of shades allowing the organist to vary the dynamics of these divisions. Furthermore, each division of the organ was on a divided windchest, which allowed pipes to be drawn but not played until the organist required them. As a result, a new form of combination system, the *jeux de combinaison* was invented.

[60] "Enormous sums were allocated to the brothers Claude, of Mirecourt, whose deplorable activities contributed more to the destruction of French organs than to their preservation." Douglass, *Cavaillé-Coll*, 1.

The end result of Cavaillé-Coll's work was an organ that was not limited by older wind systems and key actions. This new type of organ allowed the organist to create large seamless crescendos and diminuendos effortlessly. The organ would now have resources similar to a symphony orchestra. Thus, the organist could transform their methods of improvisation and composition due to these remarkable new attributes found in these instruments. St.-Denis was the first organ that displayed Cavaillé-Coll's ideas. Using the organ of St.-Denis as a model, one will better understand the key aspects of Cavaillé-Coll's new building ideas.

It was remarkable that Cavaillé-Coll was awarded the contract to build this instrument at St.-Denis. He was new to France, and did not have an organ workshop. He also did not have a formidable reputation to vouch for his abilities as a successful organ builder. Cavaillé-Coll won the contract, and this was a major blow to builders in Paris who were already established and had instruments to their credit.[61]

The entire organ project at St.-Denis would take nearly seven years to complete (1833-1840), and during this time Cavaillé-Coll also worked on other contracts awarded to him at Notre-Dame-de-Lorette in Paris, Lorient, Pontivy, and Dinan. His ideas were allowed to come to fruition, and the success of these other instruments would prove to strengthen his skills as an organ builder of the utmost importance. However, according to Fenner Douglass, St.-Denis was

[61] "Henri Berton was a professor at the Conservatoire de Musique and conductor of the orchestra at the Théâtre Italien, where Rossini had been director from 1824-1826." Rossini was influential at getting Cavaillé-Coll to Paris due to his construction of an organ in the theater for an opera by Meyerbeer, "Robert le Diable" in 1832. Rossini urged Cavaillé-Coll to go to Paris where, so it seemed, that the contract virtually fell into his lap. Berton was then "named president of a special commission from the Academy of Fine Arts, to choose the builder of a large organ for the Royal Church of St.-Denis." Douglass, *Cavaillé-Coll*, 10. The "organ" here is actually a form of harmonium that Cavaillé-Coll brought to fruition, the Poikilorgue. This instrument was essential in initiating his career.

one of the most crucial for the launch of Cavaillé-Coll's career due to the instrument's immense size and importance.[62]

Cavaillé-Coll made some of the most impressive changes in the great organ of St.-Denis, such as larger, more refined bellows, and a completely new wind system. Cavaillé-Coll wanted to have a full and consecutive supply of air delivered at all times. The old wedge-style bellows used during the Baroque era in France did not adequately allow these new pipes to speak properly. The wind was "choppy" since the larger pipes caused immense stress on the old wind system. Cavaillé-Coll's newly designed bellows were certainly more stable than the older style. They were modified internally and externally to allow smooth and even operation to avoid any hiccups in the wind delivery,

> A series of improvements that we have made in reservoir construction enable us to achieve the requisite evenness of pressure: an iron pantograph mechanism of our design, fitted to each reservoir, makes its movement even and as free as possible from friction; and a set of levers, also of our design, fitted inside the reservoirs causes the ribs to open simultaneously: the variation in pressure once caused by their weight is cancelled by this new device.[63]

These new bellows were referred to as a "parallel system," where the large rectangular bellows were able to push together from their weighted top in a uniform style. Since the old wedge bellows had more of a triangle shape, they were more limited in the amount of air they could

[62] Kurt Leuders also mentioned an interesting fact in this regard during one of his discussions in *The Genius of Cavaillé-Coll*, directed by Will Fraser (UK: Fugue State Films, 2012), DVD: He stated that new research has shown that Cavaillé-Coll and his family were actually members of the Freemasons. This involvement certainly played a role in the young Aristide getting this contract, but Leuders vigorously emphasized that it was in no way the only reason. Cavaillé-Coll was a brilliant, young, and aspiring builder with a supreme gift that was recognized the by committee.

[63] Douglass, *Cavaillé-Coll*, 19.

produce. Cavaillé-Coll's new design completely fixed this problem, and a viable new system for his instruments was created.

The new air delivery system allowed an increase of wind pressure, thus allowing a more powerful and rich sonority. This allowed Cavaillé-Coll to increase the wind pressure to five times that of previous instruments. He also employed an additional system of tiered bellows to keep the pressure consistent for a particular set of pipes. For example, the flue pipes only required perhaps 10 or 15 cm. of air pressure, while the reed pipes required 50 cm. These different bellows were linked together and fed by the same air generation source, but they were not able to contradict each other due to a new form of internal valve linkage that kept the wind supplied, but would not allow more air than the pipes could process.[64] This increased pressure for different divisions within the instrument did wonders for the organ's sound. This was particularly evident with the organ's reed chorus, and also for the large scale flue pipes.

The sound result of Cavaillé-Coll's organs was dependent on the scaling of these flue pipes. He referred to these pipes as harmonic, or even, overblown pipes. While this concept may sound a bit strange, it is something that worked to his (and the organ world's) advantage. Essentially, a standard (non-harmonic) pipe is normally at its maximum height indicated by its primary pitch. Thus, an 8' stop is 8 feet tall at its lowest fundamental pitch, 16' is 16 feet at its lowest pitch and so on. However, Cavaillé-Coll made an astute observation about these pipes: "In the low register, these stops possess adequate tone; but the higher the pitch, the thinner and shriller their tone becomes. This shortcoming…results from the design of the pipes themselves, as these pipes have always been made."[65] Obviously, this type of shrill, thin sound was not

[64] Douglass, *Cavaillé-Coll*, 19-20.

[65] Ibid., 20-21.

something Cavaillé-Coll desired in his quest for expression and a full rich sonority. He found his solution in this harmonic design.

Harmonic pipes are actually built to be twice the normal length of the pipe's fundamental pitch. The harmonic flute stop comprises a series of widely scaled pipes (thus to allow more wind to feed them) starting at its normal fundamental (8 feet at its lowest point for an 8 foot stop); then, once tenor F or G is reached, the aforementioned pipe doubled its normal speaking length. This large pipe has a hole pierced slightly halfway up the pipe body to allow it to overblow, and speak its normal, fundamental pitch. The sound of the pipe was much more substantial due to the larger column, (i.e., length of the pipe) and also, the larger volume of air required to make the pipe speak properly. Douglass quotes Cavaillé-Coll's complex explanation of this process:

> As we have already commented, the low notes in the various stops produce a suitable volume of sound, by means of the fundamental pitch of each pipe. However, in the tenor and treble ranges, the notes lose fullness and volume as the pitch rise. To remedy this defect, we have made several stops as follows: the lowest octave speaks the fundamental; the next octave, the first harmonic; and the third octave, the second harmonic; the fourth, the third harmonic, and so forth. Thus, as the pitches rise, the air columns become larger in proportion, and the tone quality is made uniform throughout the compass of the stop.[66]

The diameter of harmonic pipes was much greater than ones of previous design, therefore, the larger volume of air required for their successful tone production was essential. The organ would gain an immense amount of power and richness of sound that had never been produced before.

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[66] Douglass, *Cavaillé-Coll*, 22.

"Not only would the power of the organ be doubled by their use, but the tone would possess an immediacy and purity which cannot be obtained by conventional methods."[67] Not only would the harmonic flue pipes gain a much bolder and beautiful voice, but the reeds would gain an entirely new nature, one that would bring organ improvisation and music composition to a whole new light.[68]

Given that all these new stops require more air, and the pipes are larger than ones built previously (and that there were more pipes and divisions than before), the mechanical action of these instruments would be significantly harder for the organist to play. Cavaillé-Coll states: "Organists and builders generally agree that the larger the organ the stiffer the key action."[69] It would be virtually impossible for a person of average (or even significant) strength to play these instruments effectively. The answer to this problem lay in Cavaillé-Coll's discovery of a device that would make his building ideas possible; one that had never been employed before. It would become complete revelation for organs and organists during the 1900s. This was the Barker machine.[70]

The Barker machine was a device that could make playing the large organ at St.-Denis, and all of Cavaillé-Coll's other large instruments, significantly easier to play. The Barker machine served as an assist to the keyboard's action, and the organist would play the organ

[67] Ibid., 22.

[68] The reeds in Cavaillé-Coll's organs were generally built by former builders such as Cliquot when referring to the organs of St.-Sulpice and Notre-Dame. However, for St.-Denis, they were of his own design and employed a form of the harmonic principle discussed above.

[69] Ibid., 22.

[70] This device was designed and patented by the Englishman, Charles Spachman Barker. He designed this machine for the very purpose Cavaillé-Coll needed: to reduce the key weight of a large organ. Oddly enough, he found little favor in England and took his idea (along with his patent) to Paris, France to find a buyer in 1839. This was a massive stroke of luck for Cavaillé-Coll, since his ideas would be futile without this invention.

through this device. The machine was powered by the air of the bellows system. Its operation was described by Cavaillé-Coll in great detail:

> Instead of [the organist] directly overcoming the resistance of the pallet each key serves as a kind of trigger or detent controlling the action of this device, which in turn opens and closes the pallet. For each manual key there is provided a small bellows, connected to the pulldown of a pallet in the chest. These little bellows are so designed that when a key is depressed, the corresponding bellows fills with wind from the main supply. Since air is elastic, the little bellows immediately fills with wind, and it opens the pallet connected to it. When the key is released, the little bellows collapses, and the pallet immediately closes.[71]

He goes on to praise the device stating:

> This new device not only allows us to decrease the stiffness of the key action; it also allows us to increase the size of the pallets and thus to supply the pipes with all the wind they need to speak with characteristic power…this device is [also] a valuable resource where the action of coupled manuals is concerned.[72]

This machine served as an essential device to make the organ easier to play, and thus allowed the organist to use the organ to its full potential—to achieve a symphonic sound with expressive capabilities.

Cavaillé-Coll also used the *jeux expressifs*, or expressive boxes that contain entire divisions of pipes. While it was not completely uncommon to have organs with certain ranks of

[71] Douglass, *Cavaillé-Coll*, 23.

[72] Ibid., 23.

pipes enclosed in boxes, he aimed to place the entire division within the confines of this expression box. On a French organ, this division was the *Récit*, which would have within its ranks the "stops of the greatest power."[73] Thus, enclosing them in this box would be a great advancement on the quest for expression in organ playing. He believed that this "…new construction method" would "give this division much more power and greater range of expression than is possible by conventional means."[74] However, Cavaillé-Coll was faced with a slight dilemma: his new harmonic pipes and reed chorus would be considerably more powerful than ones previously constructed. Therefore, a new box would need to be created that would fit the character of these new pipes. Douglass documents his proposal in great detail:

> The walls of the box comprise two panels with a space between, the space being filled with sawdust or any other sound-insulating material. The box also possesses two sets of shutters arranged in such a way that one opens before the other, thus allowing every possible gradation of volume. Since the walls of the box are impervious to sound waves, the volume may be reduced or augmented as much as may be desired.[75]

Cavaillé-Coll believed that "…the stops in this division take on all the expressive qualities of orchestra instruments: by virtue of their compass and power, their qualities seem to influence all the stops in the organ, when the latter are played together with the stops under expression."[76] His

[73] Douglass, *Cavaillé-Coll*, 25. Cavaillé-Coll actually extended the *Récit* manual of the organ of St.-Denis, so it would now have 54 notes, thus matching the *Grand Orgue*. Originally the organ had a shortened *Récit*, only 37 notes, something that was common on the organs in France during the Baroque era. The reason for this extension was to give the solo stops more range, and to allow more power to be given to the full organ sonority. This building practice he would continuously employ throughout his career; it would prove invaluable.

[74] Ibid., 25.

[75] Ibid., 25.

[76] Ibid., 25

new version of this expressive division would prove invaluable for organists and organ music in France.

His fifth invention was the *jeux de combinaison*. Each division of the organ would have its own pallet box for mutations, mixtures and reed stops. The purpose of this separation from the foundation stops of 16, 8 and 4 foot pitch was to allow these particular stops to be added via a foot pedal (*appel*) by the organist to form a crescendo, or decrescendo when the music requires them to do so. This type of system was not unique to the large instruments of St.-Sulpice, and Notre-Dame, but was built into all of Cavaillé-Coll's instruments to that date.

> Even in his earliest instruments, Cavaillé-Coll built the wind chests for the various divisions in two parts: a pallet box for the foundations, which speak as soon as their registers are drawn, and another for the *jeux de combinaison* (mutations, mixtures and reeds), which can be prepared in advance and only speak when the corresponding lever or *cuillère* is pressed down.[77]

This new system was so effective that it quickly gained wide use by organists to bring the music of this great instrument to a whole new level of performance. This was a major change to organ playing for several reasons.

Formerly, the organs in France were only able to produce two forms of full organ, the principal chorus, or *Plein jeu*, and the reed chorus, or *Grand jeu*. The organist was unable to play reed and mixture pipes simultaneously due to the lack of wind pressure, thus it was not an appropriate playing style since the organ would sound dreadful and out of tune. Furthermore, it was impossible to form a crescendo since adding more stops beyond the organ's capabilities

[77] Douglass, *Cavaillé-Coll*, 35-36.

resulted in poor sound quality due to the lack of wind. However, due to Cavaillé-Coll's improvements, this was no longer an issue.[78] Thus, the new symphonic crescendo became possible. Later we will discuss how this crescendo can be executed.

The organ of St.-Denis was a required prototype where Cavaillé-Coll implemented his new ideas. He would later capitalize on the success of this instrument and go on to build some of the most impressive and important instruments in the history of France (and the world). The organs of St.-Sulpice and Notre-Dame were two of his most important instruments, particularly for the work of Louis Vierne. He often expressed his passion for both of them: "My organ music was influenced by the instruments at Saint-Sulpice and Notre-Dame; my first separate pieces and my first symphony came from Saint-Sulpice, while Notre-Dame inspired the rest."[79] Regarding the last remark, Notre-Dame is where he spent the most productive years of his career (1900-1937). Therefore, this instrument warrants some discussion.

The massive organ at the Cathedral of Notre-Dame in Paris is legendary. It is virtually impossible for any organist, organ enthusiast, or general music aficionado to be unaware of this instrument. Today, Olivier Latry, one of the Cathedral's Titular Organists has brought the organ and its historical significance into focus. The organ has undergone enormous changes since its initial construction by François Thierry in 1733. It was rebuilt and enlarged by Cliquot in 1788, and then, revised and built into the symphonic tradition by Cavaillé-Coll in 1868.

[78] Cavaillé-Coll also utilized a coupling pedal that would allow the organist to couple manuals without having to remove their hands from the keyboard. This system was in place for St.-Denis as well. Actually, it was one of his first inventions while apprenticing for his father at age 18. Douglass, *Cavaillé-Coll*, 9.

[79] Pierre-François Dub-Attenti and Daniel Roth, *The Neoclassical Organ and the Great Aristide-Cavaillé-Coll Organ of Saint-Sulpice, Paris* (London: Rhinegold Publishing Ltd., 2014), 39.

However, revision of this instrument did not end with Cavaillé-Coll. There were numerous modern building projects that started with work proposed by Louis Vierne in 1903: "Vierne, with the aid of Guilmant, added some stops to the *Récit* of the organ which helped thicken its previous thin presence."[80] These new stops were not constructed by Cavaillé-Coll, but by Charles Mutin, the new owner of the Cavaillé-Coll firm. Another change was in 1932, this time by Joseph Beuchet. This restoration project actually rearranged the keyboards in the same fashion as St.-Sulpice in 1903.[81] The modern rebuilds of 1957, 1992, and 2012, respectively, will not be discussed as they are not relevant to the material and research in question. However, the original instrument can still be aurally witnessed today, as many of the original stops from Thierry, Cliquot, and Cavaillé-Coll still remain. The versatility, sound, and incredible brilliance of this organ is beyond written description.[82]

The reeds of the organ of Notre-Dame, primarily the *Trompet* and *Cromorne* are from Cliquot, as is the *Grand jeu*. When Cavaillé-Coll renovated the organ in 1868, he created pipes using the entire mutation series to aid in the balance of these enormous reeds from Cliquot.[83]

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[80] Smith, *Louis Vierne*, 249.

[81] The *Récit* division was originally located on the highest keyboard. This became extremely problematic as the repertoire began to develop and this division became important for its use by the organist. In its original position, this keyboard was impossible to play while employing a complex pedal line. Thus, the *Récit* was lowered by one keyboard, inducing a cascading series of changes to the remaining manuals. The new order from the top down was now *Solo* (formerly *Bombarde*), *Récit*, *Positif, Grand Orgue, Grand Chœur* (as compared to the former: *Récit, Positif, Bombarde, Grand Orgue, Grand Chœur*).

[82] Kurt Leuders states that: "Unlike St.-Sulpice, Notre-Dame was a National Cathedral. Therefore, the organ had to be grandiose, powerful and an organ that jumped at you; a very fast response from the keyboards. The organ is almost military in tonal resources, and the depth of expression found in its foundations express the grandeur of France." Fraser, *The Genius of Cavaillé-Coll.*

[83] The entire mutation series is the full length diminution of stops from lowest pitch to highest: 16, 8, 4, 2, 2 2/3, 1 3/5, 1 1/3, and 1. These stops are found throughout the compass of the instrument, even in the pedal. These mutation stops would prove to be important in the organ music of Louis Vierne, particularly pieces that were scherzo-like in nature, such as "Feux Follets."

These mutation stops also helped in making the volume even in both the treble and bass registers of the instrument.

An important feature of the organ at Notre-Dame is its mixture stops. They are also harmonic in design. An additional rank of pipes is added at each octave, which creates a similar gain in volume (like the harmonic flue pipes and reeds) as the pitch is raised on each ascending octave. When one views the stoplist and sees the full 16', 8', and 4' *Cromorne* chorus and 4 divisions of *Flûte Harmoniques*, it is understandable that this instrument requires a massive pedal division to keep the instrument grounded. The huge 32' *Contre-Bombarde* gives an aural sense of timpani in the cathedral. Even the 32' flue stop (*Principal-Basse*) when combined with the pedal mutations can create this same aural effect.

The arrangement of divisions within the organ case of Notre-Dame is also unique. Typically, organ pipes (each individual stop is specified as a "rank") are arranged in two sides: the C side and the C# side. However, for Notre-Dame, this practice is not followed. Here the pipes for each division are not divided. Instead, they are placed in a particular part of the organ's case in their entirety: The *Bombarde* is installed in the right side of the organ case; the *Positif* on the left side; the *Grand Orgue* is placed in the middle of the case; the *Grand Chœur* is above the *Grand Orgue*; and the *Récit* is placed behind the *Grand Orgue*. The only exception is the *Pédale*, which is divided and placed on either side of the *Récit*.[84]

The organ of Notre-Dame also has an incredible grade of crescendo. The stable harmonic structure of the organ and the stability of the bass and treble sound progression from the lowest registers of the instrument to the highest are virtually seamless, and increase in brilliance and

[84] Olivier Latry makes a specific reference that Pierre Cochereau was also very fond of this layout for his improvisations. Quote from Fraser, *The Genius of Cavaillé-Coll*.

power through each addition of stop classes. From the 8' foundations, to the addition of the 16' and 4' foundations, then the addition of chorus reeds first in the *Récit* (behind the enclosed shades), the gradual opening of the shades, then, the addition of reeds in order from the *Positif*, *Solo*, then finally, the *Grand Orgue/Grand Chœur* and *Pédale* bring this organ from a warm rich sonority to a massive sound world of symphonic splendor.[85]

In France, regardless of whether one is playing repertoire or improvising, the approach to the organ will change, along with playing style according to the demands of the instrument, and the magnificent acoustics of the space where they are located. Cavaillé-Coll's organs serve as an important gateway to the past where one can experience the former realms of past artists, and consequently, bring this knowledge forward into the present, thus giving the current and future organ world endless insight to help shape the direction of organ playing indefinitely, as Cavaillé-Coll would have desired. Kurt Leuders remarks:

> Cavaillé-Coll's genius is an expression of form through content. Transcendental is a word that comes to mind. There is something in the soul of his sound, the conception, the coherence of his instruments that is simply beauty. And it is as some have written and said: music personified in the organ.[86]

This personification will certainly come into fruition regarding the organ works of Louis Vierne. As we discovered through the progression of Vierne's formative years at the Institut National des Jeunes Aveugles, his time at the Paris Conservatoire, and while organist at Notre-Dame, his ideas for composition seemed to be moving towards a new future; one of "daring

[85] To form a decrescendo, the process is reversed.

[86] Fraser, *The Genius of Cavaillé-Coll*. Quote is printed on the DVD case. Leuders also makes the quote personally during the documentary.

modernism." Michael Murray gives some insight on Vierne's educational and compositional amalgamation:

> Vierne's harmonies and rhythms grow naturally from Franck's and Widor's; Vierne lived well into the twentieth century, but he speaks a language of the late nineteenth. He feels the sway of Wagner, though he rejected the cult of Wagnerism, and feels Debussy's liberating power too; but he ignores the harmonic and rhythmic finds of Webern and Stravinsky, and remained aloof from the ensuing upheavals…genius wells up in his chromaticism, his syncopation, and his melody, not to mention his flair for contriving delectable turns of harmony by (as he once put it to his pupil Alexander Schreiner) "entering through the back door."[87]

Regarding the organs of Cavaillé-Coll, he continues:

> Timbre likewise Vierne inherits; he uses Cavaillé-Coll's tone colors much as Widor and Franck have done. Vierne's timbres consist in the main of foundations, foundations and mixtures, or foundations, mixtures, and reeds; of the solo cromorne, clarinette, trompette, hautbois, and flute harmonique; and of the voix céleste and gambe.[88]

All of this knowledge will bring about a new musical language for Vierne. This new language is exemplified in his organ music, filled with phantasmagorical images, architectural structures, and the personification of imaginary characters. This is clearly evident in the *24 Pièces de Fantaisie*, which is what we will now discuss in detail. These magnificent compositions would not be possible if it were not for the teachings at the Paris Conservatoire, the

[87] Michael Murray, *French Masters*, 125.

[88] Ibid.

magnificent organs of Aristide Cavaillé-Coll, and the remarkable brilliance of a man—one who was nearly blind, and one who was able to create these aural realms of fantasy.

Louis Vierne's *24 Pièces de Fantaisie*: Daring Modernism in Composition[89]

Many organists share affection for the French organist and composer, Louis Vierne. His organ music, particularly his *24 Pièces de Fantaisie* are filled with colorful sonorities, which are intensified and illuminated by a seemingly endless void of chromaticism. The biggest question I have asked myself as a performer and student is, "How is Vierne creating such beautiful sonorities?" It was this question that propelled me to analyze selections from this set of pieces to find out the answer.

The initial analysis of this music proved to be one of the most daunting tasks I have undertaken thus far in my musical career. Throughout the analysis, I have uncovered an impressive use of compositional tools that many composers associate solely, erroneously, with another organist of the French school, Olivier Messiaen. One of the most important tools is the fragmented use of the modes of limited transposition. I will touch upon three of these modes in detail as they are the ones most commonly employed in Vierne's *24 Pièces de Fantaisie*. The modes discovered in the analyzed compositions are Mode 1, Mode 3, and Mode 7.

Many believe that these modes were created by Messiaen and thus, always refer to them as *Messiaen's* modes of limited transposition. Messiaen, indeed, was responsible for writing them all out in a complete set. He harmonized each scale and used each mode in a strict fashion. Messiaen published some of these scales in *La Nativité du Seigneur* (1936), and later in his compositional treatise, *The Technique of My Musical Language* published in 1944.

[89] All scores in this section are used with kind permission of Bärenreiter-Verlag, Kassel.

The actual creators of the modes of limited transposition are largely unknown among many performers and scholars alike. Donald Street gives a little insight to this fact:

> Two common misconceptions have grown up concerning them: that the seven modes Messiaen describes are the only ones possible, and that they are all of his own invention. Although the ingenious, if perhaps a little subjective system of classification appears to be his, several of these modes have been employed independently by a wide variety of composers, and modes 1 and 2 in particular have quite a long history.[90]

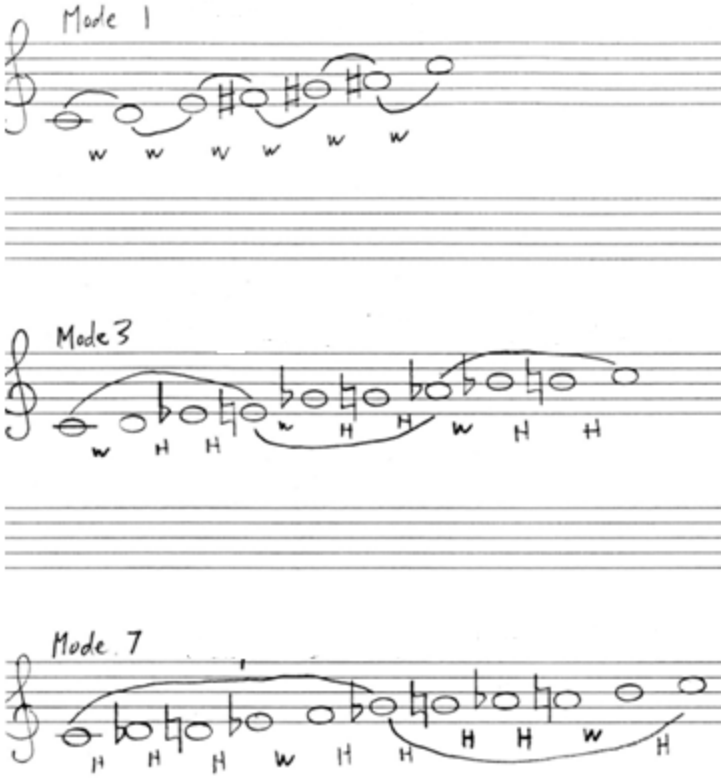
One also finds examples of Mode 1, also referred to as the whole-tone scale in the music of Debussy and Dukas. This mode is transposable twice: T1 starting on C and T2 starting on C#. According to Street, "Messiaen feels that its use by Debussy and Dukas is so remarkable as to have exhausted its possibilities…"[91] This next quote confirms that Messiaen learned about this mode and the others during his classes at the Paris Conservatoire, "…the emergence of a thoroughly original voice even before his studies were over. In the early 1930's it was the works written in the last couple of years in Dukas's class which were to form the basis of his reputation as a new voice in French music."[92] [93]

[90] Donald Street, "The modes of limited transposition," *The Musical Times,* Vol. 117, no. 1604 (October, 1976): 819.

[91] Street, 820.

[92] Peter Hill and Nigel Simeone, *Messiaen* (New Haven: Yale University Press, 2005), 25.

[93] Also, "Messiaen says he became fluent in his modes by often improvising on them in Dupré's class. But he takes no credit for contriving them all." Murray, *French Masters,* 188.



Mode 3 is transposable four times: T1 on C, T2 on C#, T3 on D, and T4 on D#.[94] It consists of three segments of four notes each containing the sequence of whole-step, half-step, half-step. Mode 3 is not used harmonically in Vierne's music, but rather loosely for effect or flavoring of these pieces. However, according to Street, "Mode 3 is of rare occurrence outside of Messiaen's music,"[95] but from my analysis, this mode is important to Vierne, since all of the aforementioned pieces up for analysis employ the use of it in some fashion. Street also remarks that in certain compositions of Bloch and Bartók make only slight uses of this mode: "a fleeting glimpse of it can be found in the second movement of Bloch's First string Quartet of 1916," and

[94] The numbering delineation comes from Messiaen. Current analytical methods use T0 to indicate the first level of transposition (starting with C). However, I kept the Messiaen's numbering intact. Thus, T1 will always be the first level of transposition (C).

[95] Street, 823.

"The canonic passage in the third movement of Bartók's Second Violin Concerto (bars 297-308) also establishes a close association with mode 3."[96]

Vierne uses Mode 7 frequently in his compositions. This mode is extremely versatile since one virtually has the entire chromatic compass of the keyboard at their disposal. Mode 7 comprises two large groups of six notes, each with the pattern of half-step, half-step, half-step, whole-step, half-step. It is transposable six times: T1 on C, T2 on C#, T3 on D, T4 on D#, T5 on E, and T6 on F. Even though Vierne enjoyed the versatility of Mode 7, Messiaen did not share this affection. Donald Street does give some insight into this:

> The attraction of the modes of limited transposition is in the tonal ambiguity which result from their symmetry, for, as Messiaen points out, a tonality can be emphasized or left unsettled. From this point of view, the greater the symmetry the greater the possibilities, and so those modes which are transposable six times are of less interest than those transposable two, three or four times…[97]

This quote underscores Messiaen's desire to limit broad access of harmonic material in his music—it compromises the element of tonal ambiguity. However, Vierne shares Messiaen's feelings on this ambiguity, since certain compositions found in the *24 Pièces de Fantaisie* lack a tonal center. Despite this, he constantly finds a way to bring a piece to a concrete conclusion.

Vierne employs a freedom of compositional structure regarding these modes; they are never used in such a strict fashion as in the music of Messiaen. Actually, Vierne's early usages are quite fragmented. However, given that these modes were not yet codified, this is not

[96] Ibid., 823.

[97] Street, 819.

surprising. Also, as discussed previously, Vierne was not an advocate of strictly adhering to the rules of composition and harmony.

If any form of voice leading is encountered, it is only at large points, such as dominant-tonic relationships. This is evident in the music of Messiaen as well: "…for most of the time constructional harmonic relationships play no part in Messiaen's music, except at certain points in some works where simple dominant-tonic or subdominant-tonic relationships become evident."[98] While Vierne's approach to harmony is a bit loose in the *24 Pièces de Fantaisie*, his use of modality is certainly extensive. He makes elaborate use of the Gregorian modes and will later juxtapose them with a respective mode of limited transposition. This juxtaposition also shows another important tool Vierne uses: common tone modulations.

Using this form of modulation, Vierne is able to switch between each Gregorian mode and mode of limited transposition effortlessly. There are plentiful examples of Vierne actually moving from differing levels of transposition by using common tones found in each respective scale. It is this constant changing of modes that gives his organ music its broad palette of color.[99]

The main analysis centers around three pieces from Vierne's collection of *24 Pièces de Fantaisie*. They are: "Feux Follets," "Fantômes" and "Cathédrales." The presentation explores the thematic movement through each one of the listed modes. Also, the important transitional sections that link one mode to another are analyzed in detail. In conclusion, the theme from the

[98] Robert Sherlaw Johnson, *Messiaen* (Los Angeles: University of California Press, 1975), 13.

[99] As stated previously, Rollin Smith also points out that Vierne's harmonies have some connection to the modes of limited transposition. "And then there were those "Fantastic Pieces." Their premiere performances were just plain unsuccessful. Their dissonance, their chromaticism, their strange melodic scales, some of which were later to be codified among Olivier Messiaen's modes of limited transposition, simply baffled American audiences." Smith, *Louis Vierne*, 418. Smith does not provide any information on how he came to this conclusion. If he is basing things on just Mode 1(since this is a mode we know was used in France during this time, see footnote 92) are their others? If so, how are they used?

"Scherzo" of Vierne's *6ème Symphonie* is analyzed to illustrate the evolution of Vierne's modal consciousness.

"Feux Follets"

"The space of the cathedral, flooded with sunlight through the stained-glass windows and the rosettes, was filled by the musical imagery that blended harmoniously with the 'streams of multicolored jewels that the glass panels wonderfully poured down crimson red upon us.'"[100]

"Feux Follets" was written in 1926. Its title (in English, "Foolish Fire") has its roots in folklore, particularly the phenomenon referred to as "will-o'-the-wisp," or the ghostly light seen by night travelers over marshes. This title also refers to a particular person, thing or object that is elusive and unconquerable (like the harmonic structure...or lack thereof). Even though there are no particular characters described by Vierne as in "Fantômes," one hears the two forces at play during this composition.

Vierne uses Mode 7 in all six levels of transposition throughout "Feux Follets." Due to Mode 7's close resemblance to the full chromatic scale, the listener hears many different tonalities throughout the composition.[101] However, based on my analysis, hearing tonalities is not truly necessary for the listener to understand this piece. This will be discussed later. First, I will touch upon some of the most important aspects of this composition in detail. The complete detailed analysis is located in the Appendix.

At first analytical glance, "Feux Follets" is a bewildering jumble of modal fragmentation. The first measure (which will set the tone as the protagonist of this piece: flickering lights in the

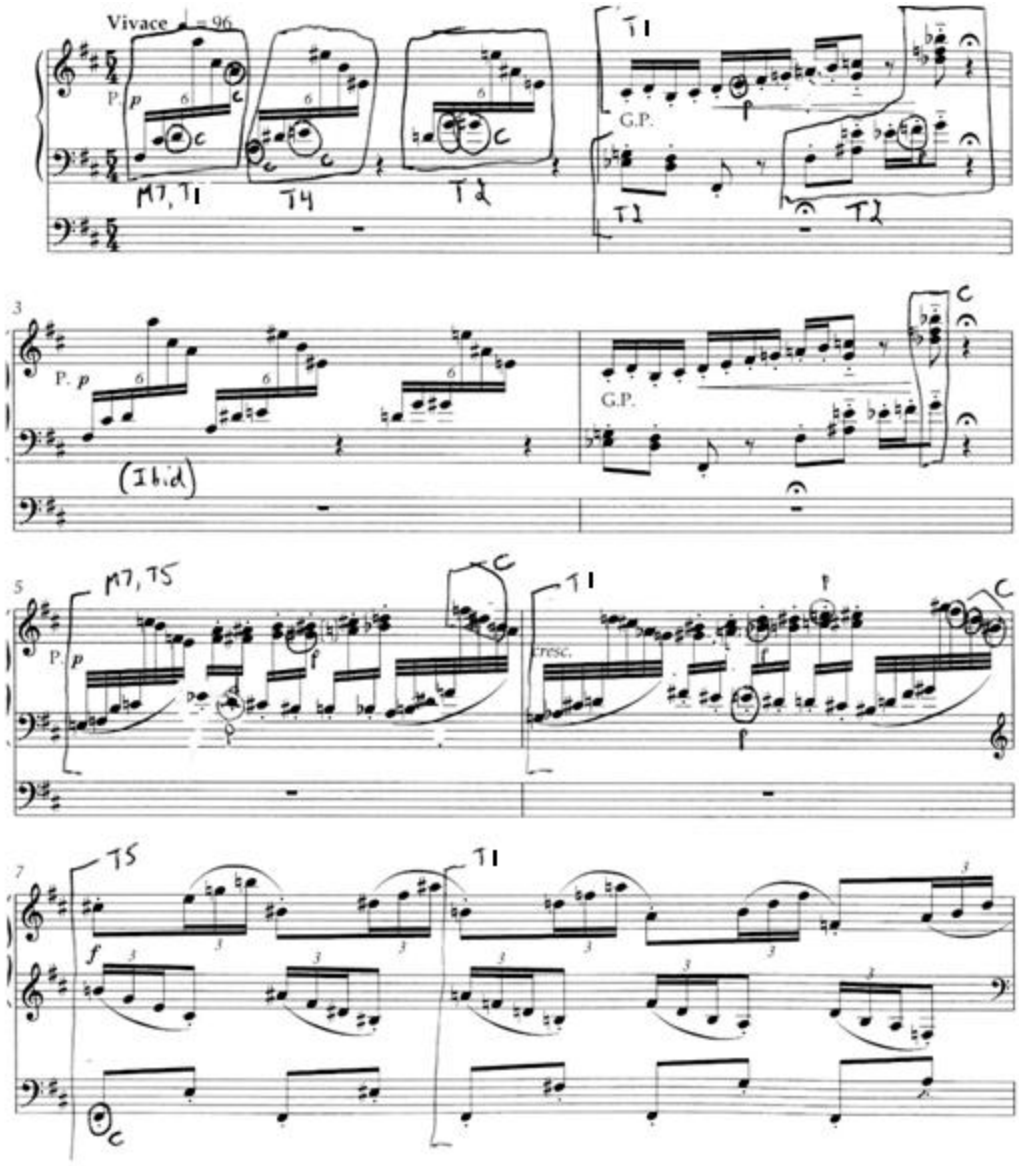
[100] Louis Vierne. *Pièces de Fantaisie en quatre suites,* Livre IIII Op. 54, ed. Helga Schauerte-Maubouet (Kassel: Bärenreiter-Verlag, 2008), XXII.

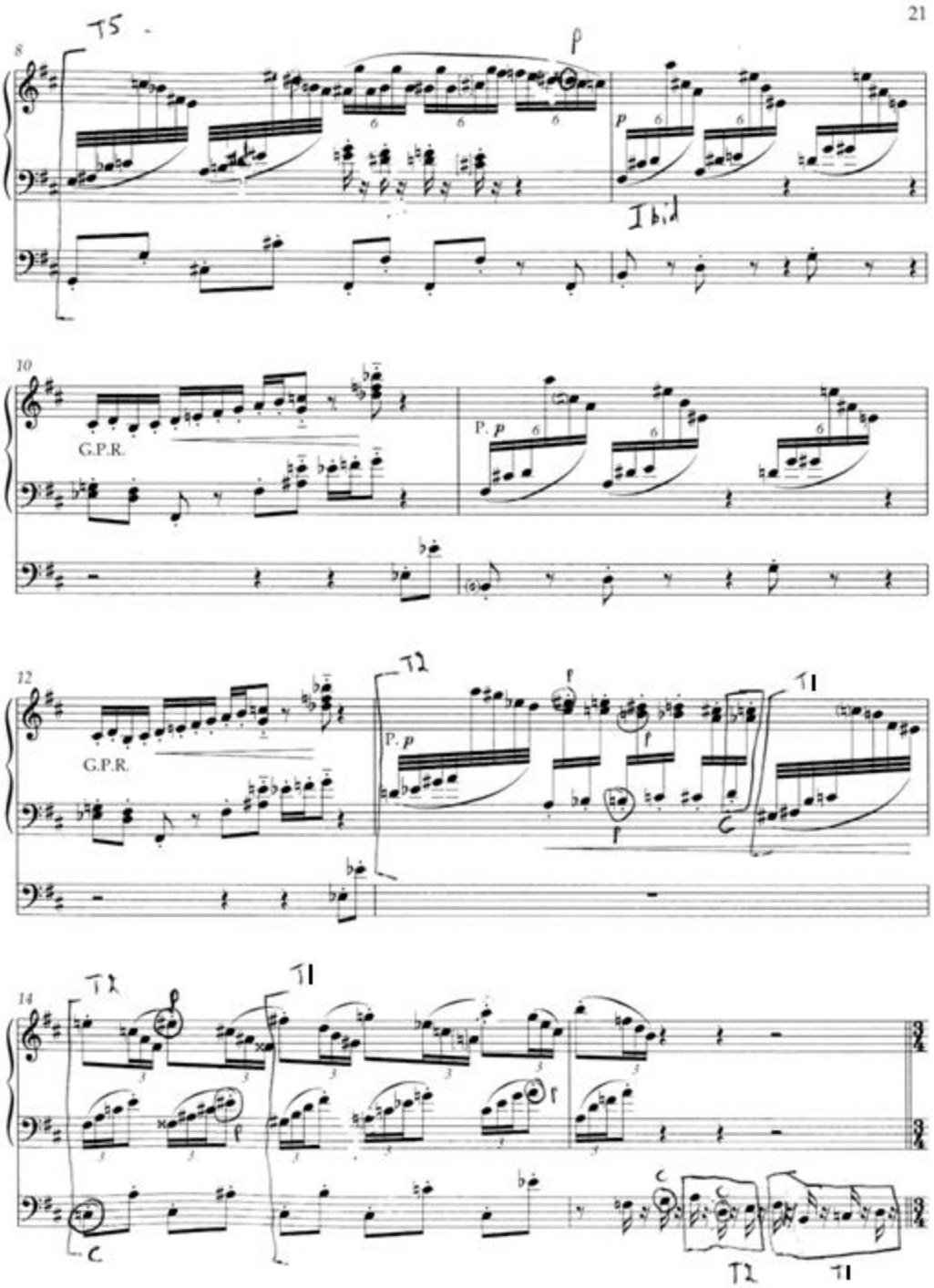
[101] The most complex part of this analysis is Mode 7's close relation to the chromatic scale. Thus, it is virtually impossible to hear Mode 7 in a pure, unaltered form for very long. However, the analysis is important to study for future reference and knowledge of this music.

darkness) is composed in three groups, each contains different transposition levels of Mode 7: T1, T4, and T2. The common tones that allow this modal shifting to occur are indicated by "C" in the annotated score. The second measure will set the tone of the weary traveler running towards the protagonist, but will stop quickly since the flickering lights vanish. This movement is composed of T1 in the right hand with a passing note of E, which gives the listener a sense of B Aeolian. This material is accompanied by T2 in the left hand.

As previously stated, the only way that this form of writing works is by common tones. This is evident in the last system of pg. 20. The hands mirror each other using Mode 7, T5 (heard first in measure 5) for the first two groups, then moves to T1 for the last three groups (previously heard in measure 6). The common tone of F# found in the pedal allows this combination to occur.

This common tone relationship continues on page 21, where the rapid upward rising figures of measure 8 from Mode 7, T5 gives way to the opening material in the exact same form in measures 9-12. Once measure 13 is reached, T2 returns and another mirroring interplay between T2 and T1 takes place until measure 15, where a pedal solo personifying a fascinated and bewildered traveler brings the music to the next section on page 22.


Vivace ♩ = 96
P.
p
M7, T1
T4
T2
T1
G.P.
T1
T2
3
P.
p
(Ibid)
G.P.
C
5
M7, T5
P.
p
C
T1
cresc.
f
C
7
T5
T1
f
C



On page 22, the primary theme of this composition is in groups of two notes in the left hand. The theme is divided into five groups:

The first group of eight notes: Measures 17-20 are part of Mode 7, T2 accompanied in the upper voice by Mode 7, T6 from measures 17-18, beat 1. Then in T5 from measure 19, beat 2 through Measure 20. The figuration in the accompaniment represents an aural image of flickering lights, while the theme indicates the wondering traveler pressing forward in earnest intoxication.

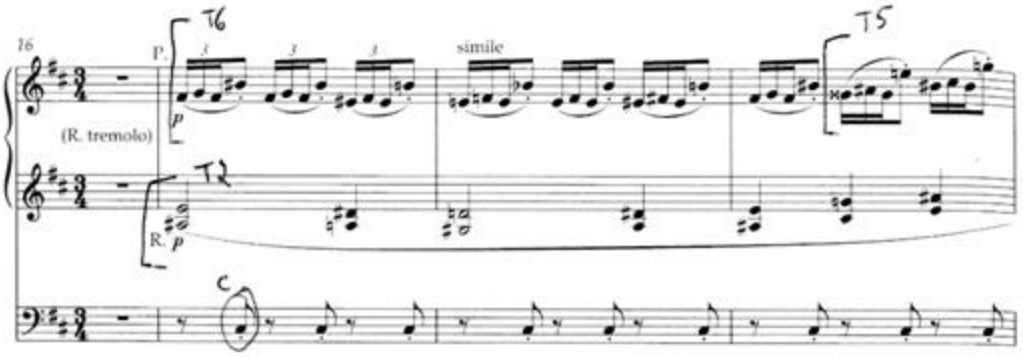
The second group of eight notes: Measures 21-24 is from T1, and are accompanied by notes from T4 and T3.

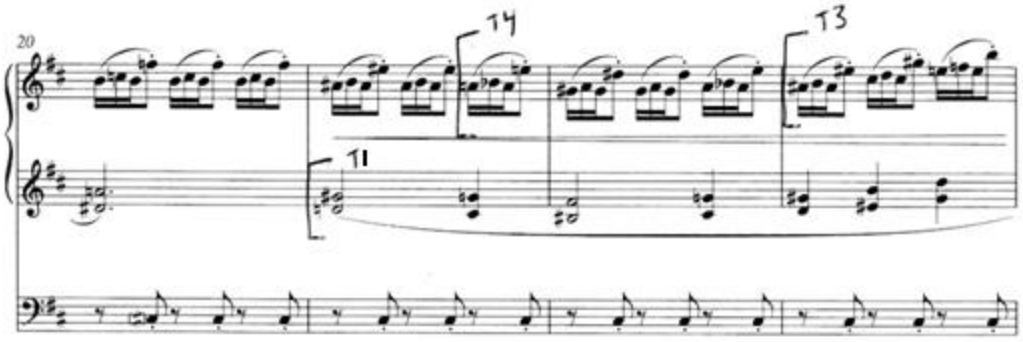
The third group of five notes: Measures 25-26 is from T2, and are accompanied by an alternation of T2 and T1.

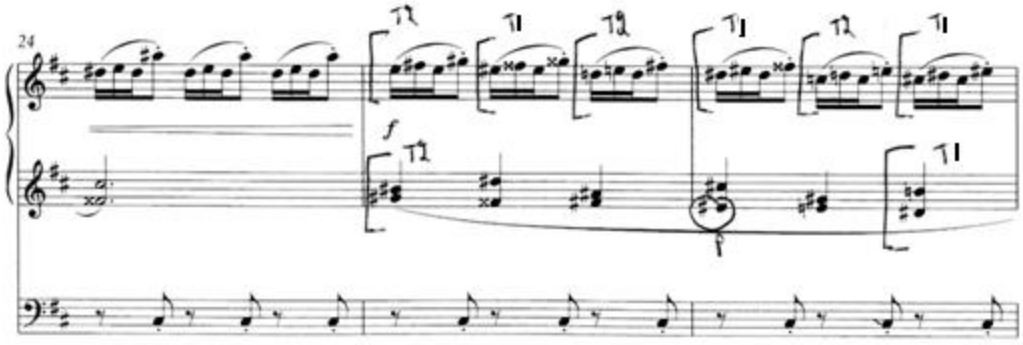
The fourth group of eight notes from the pickup to measure 27 through measure 29 is from T1, they are accompanied by the same alternations heard previously.

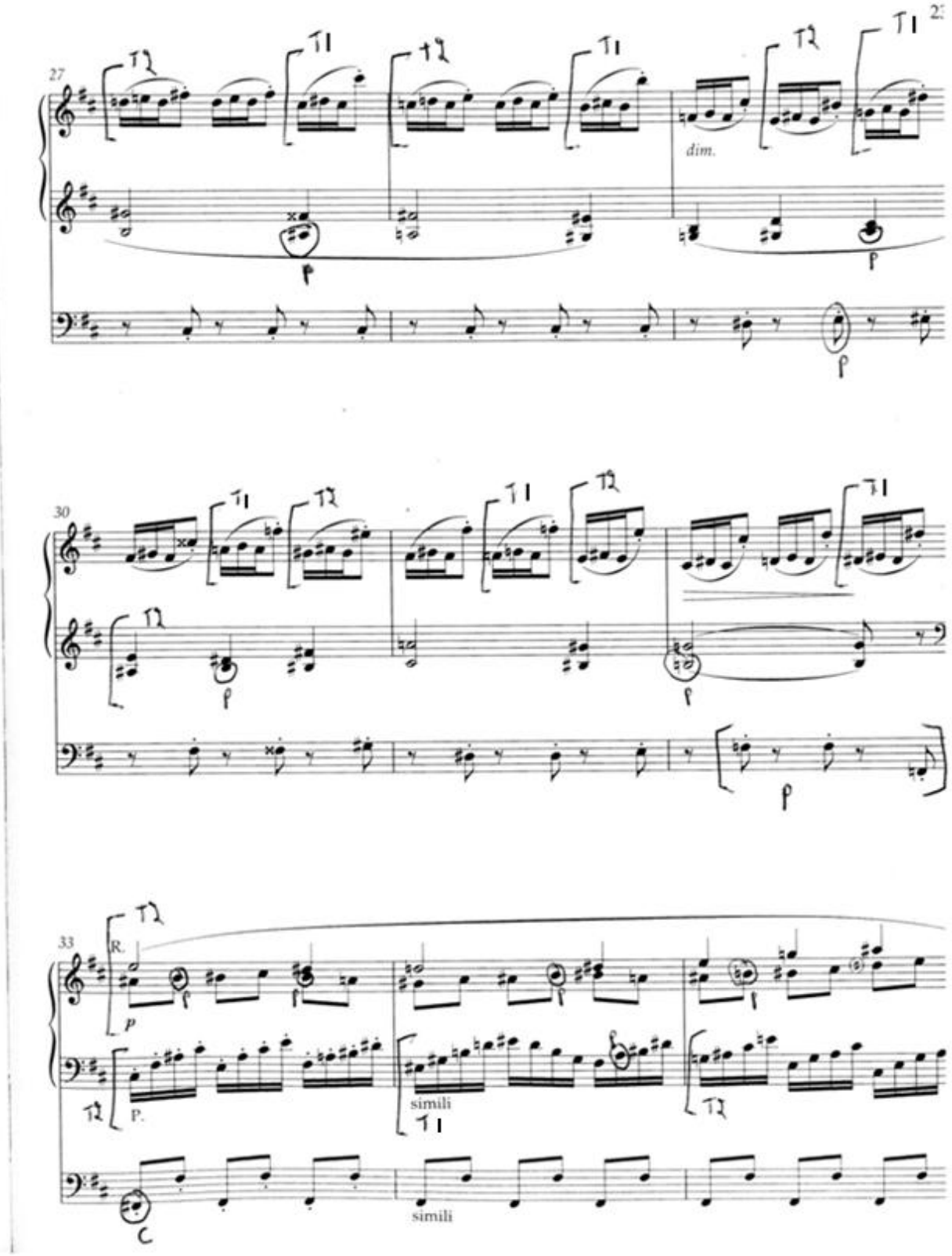
The fifth group of six notes is from T2 from measures 30-32. They are accompanied by the previously heard alternations.

Through the analysis of this theme, it is obvious that the common tone of C# in the pedal allows the use of this massive collection of pitches. Even the non-mode tones in the theme (indicated by "P" in the score) are virtually nonexistent aurally due to the grounding of the pedal point and to the constant shifts in the accompanying upper voices. These non-modal tones are indicators to the upcoming change of mode, as they are always found in the next collection employed by Vierne.


16
P.
(R. tremolo)
simile
R.
C


20

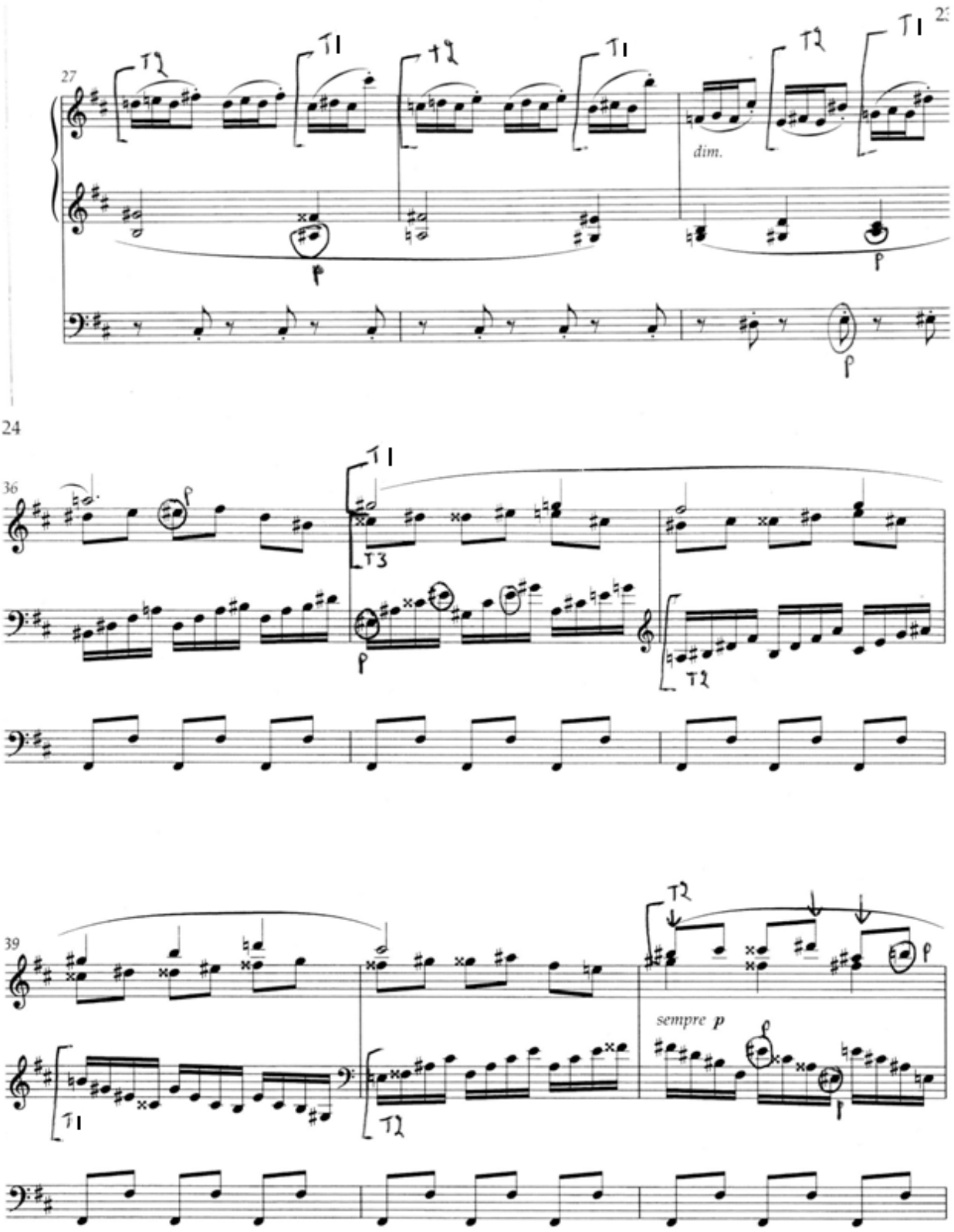

24
f

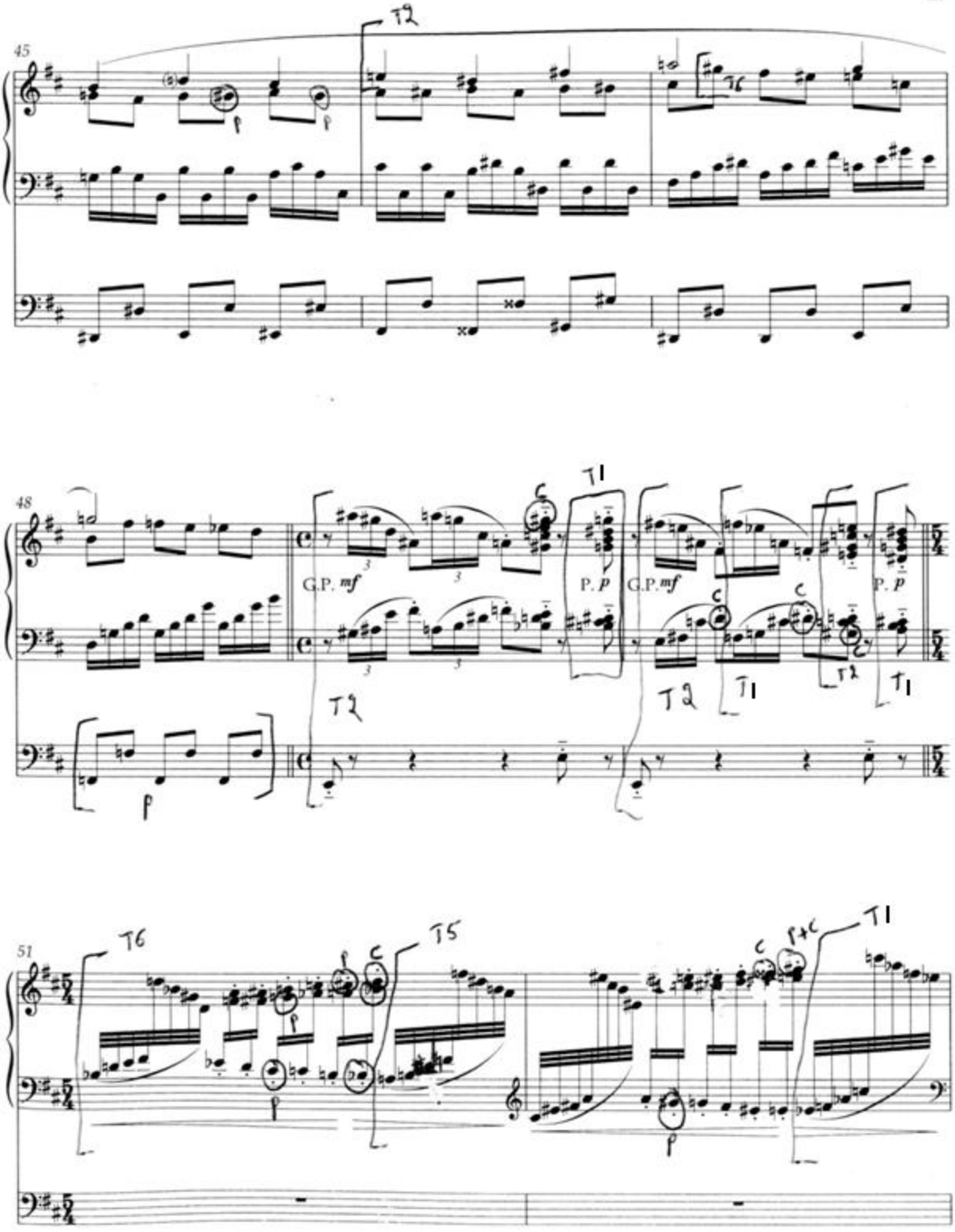

27
dim.
30
33
R.
P.
simili
simili

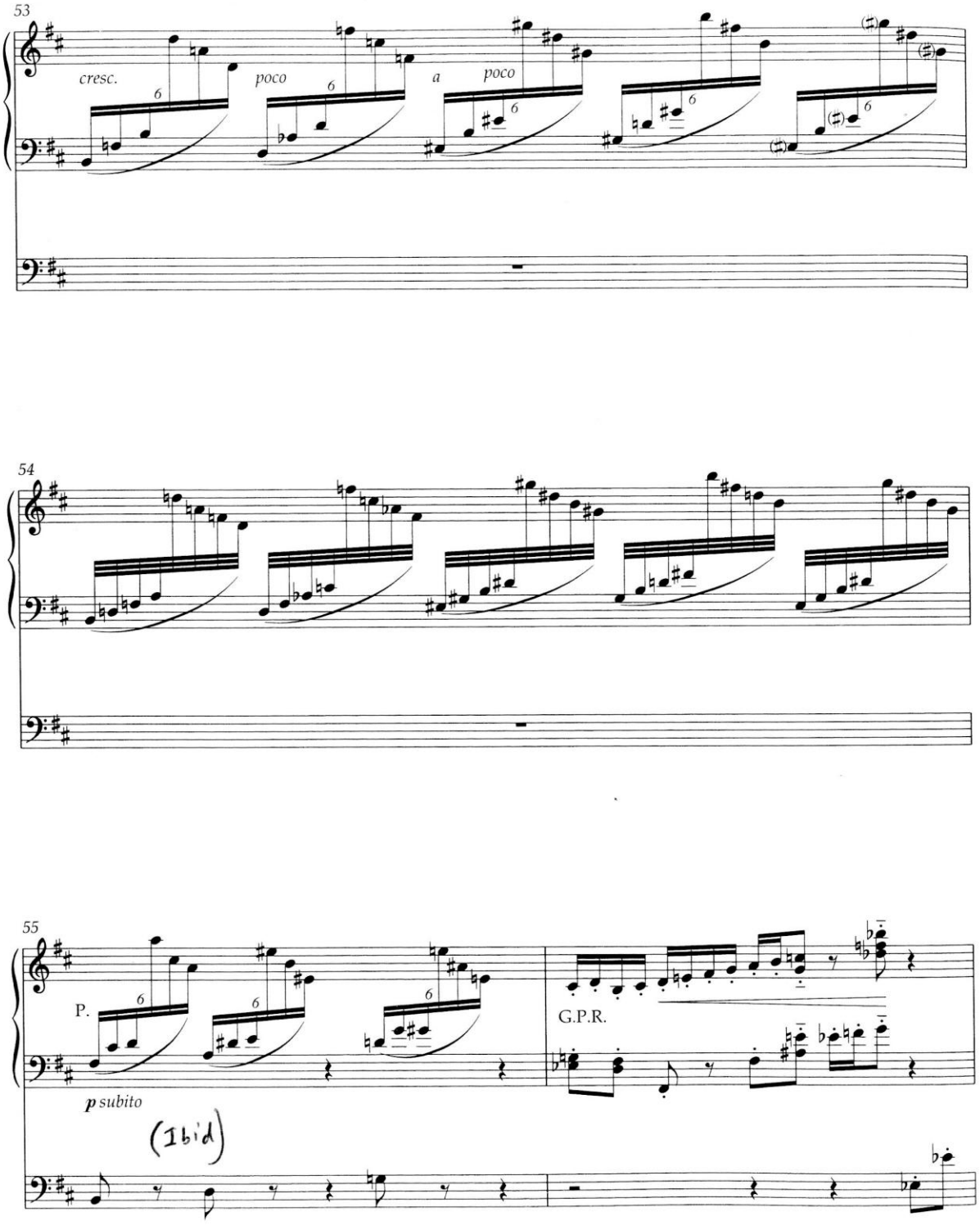
In measures 33-48, this theme transfers to the upper voice and is accompanied by upward moving arpeggiations from T2 and T1 in the left hand. The thematic groups maintain the same mode and transposition level viewed previously. This time the common tone of an F# pedal will ground the listener to keep all levels of transposition possible. One finds the addition of another mode which occurs in the right hand with the theme: a highly chromatic alto part which begins in Mode 7, T2, then moves to Mode 7, T3 in measure 37. The mode changes to T5 in measure 43, and concludes on T6 in measures 47-48.[102] The non-mode tones serve the same function as before, either chromatic passing tones, or indicators of an upcoming switch in harmonic material.

Measures 49-54 contain a small transitional section which returns to the mirror figuration heard previously. This transitional section eventually leads to the recapitulation of the opening material. In measures 49 and 50, the figuration is in alternating groups of T2 and T1 as indicated in the score. Measures 51 and 52 employ the upward rising figurations of T6, T5, and T1. This last transposition holds firmly in place in measures 53 and 54 until the unaltered opening material returns in measure 55.

[102] The indications (↓) in the score beginning in measure 41 show the original theme heard previously. Notes between the indicators are embellishments. Some of these embellishments are found in the represented mode, while others are non-modal (indicated by "P").


27
T2
T1
T2
T1
T2
T1
dim.
p
p
p
24
36
T1
p
T3
T2
39
T2
sempre p
T1
T2
p


45
T2
48
G.P. mf
P. p
G.P. mf
P. p
T1
T2
T1
T2
T1
51
T6
T5
T1


53
cresc.
poco
a
poco
54
55
P.
p subito
(Ibid)
G.P.R.

The next analyzed section is the second statement of the primary theme in measure 64 in the pedal division of the organ. Although the theme has the same aural effect, the groups change completely; there are now only four groups, each have more notes than before. They are also in new transposition levels accompanied by different figurations and transpositions. This new accompaniment is derived from material heard in the opening measures. This time they are locked into one transposition level, rather than divided between the two hands. Note the following:

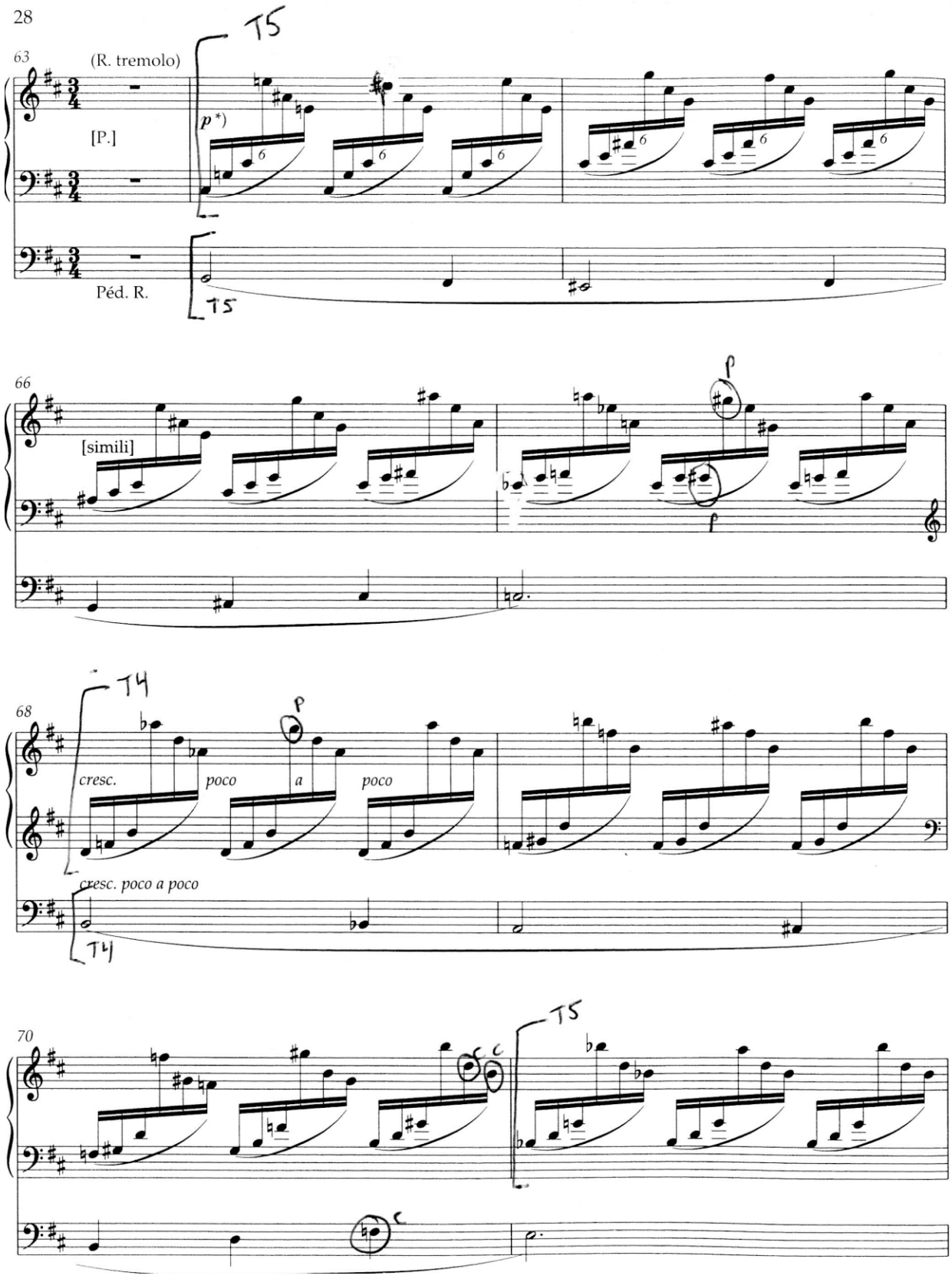
Group 1, eight notes, measures 64-67: Mode 7, T5, this time accompanied by T5.

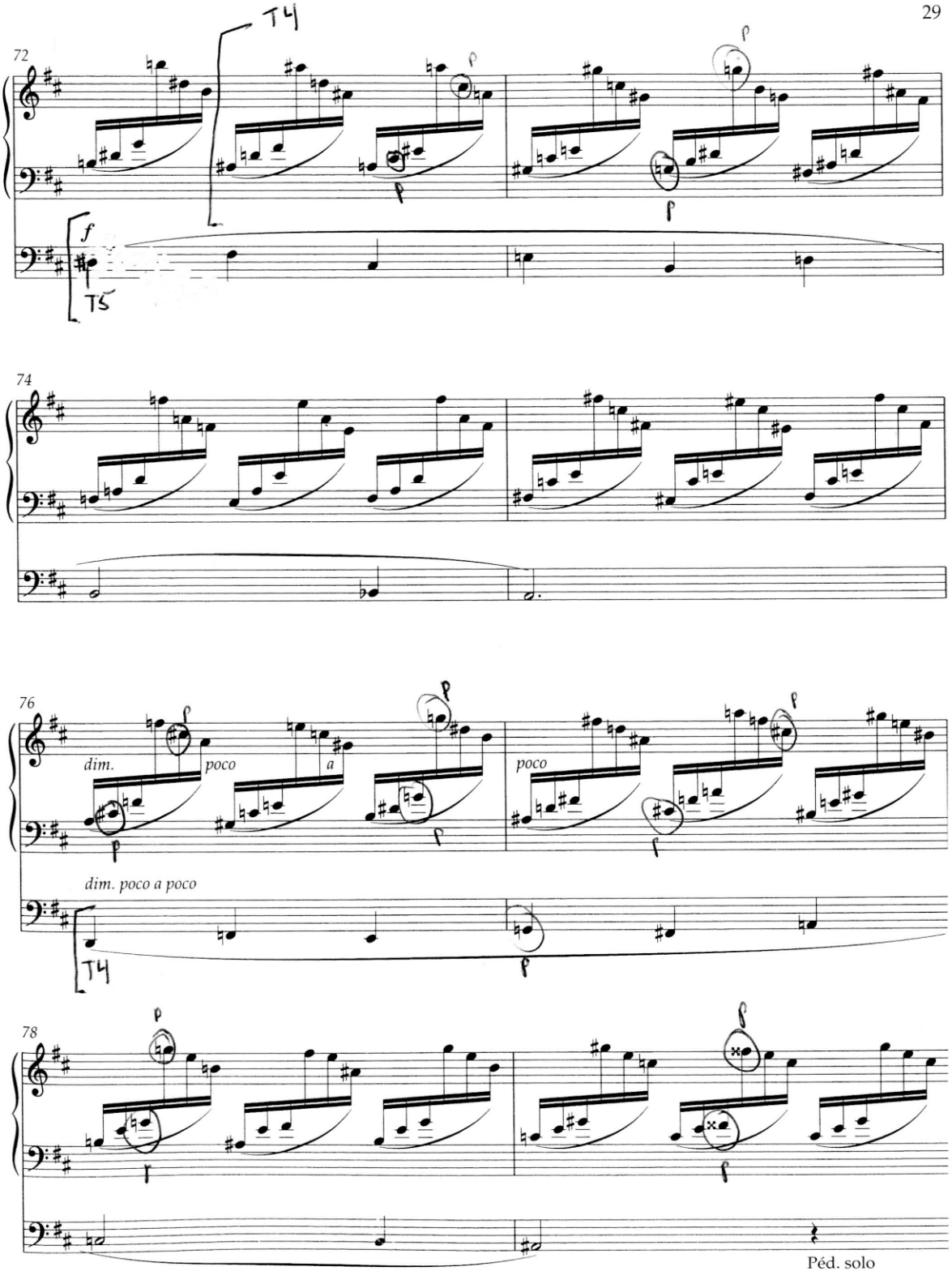
Group 2, eight notes, measures 68-71: T4 also accompanied by T4 until measure 71, where they change to T5.

Group 3, nine notes, measures 72-75: T5, accompanied by T5 then T4.

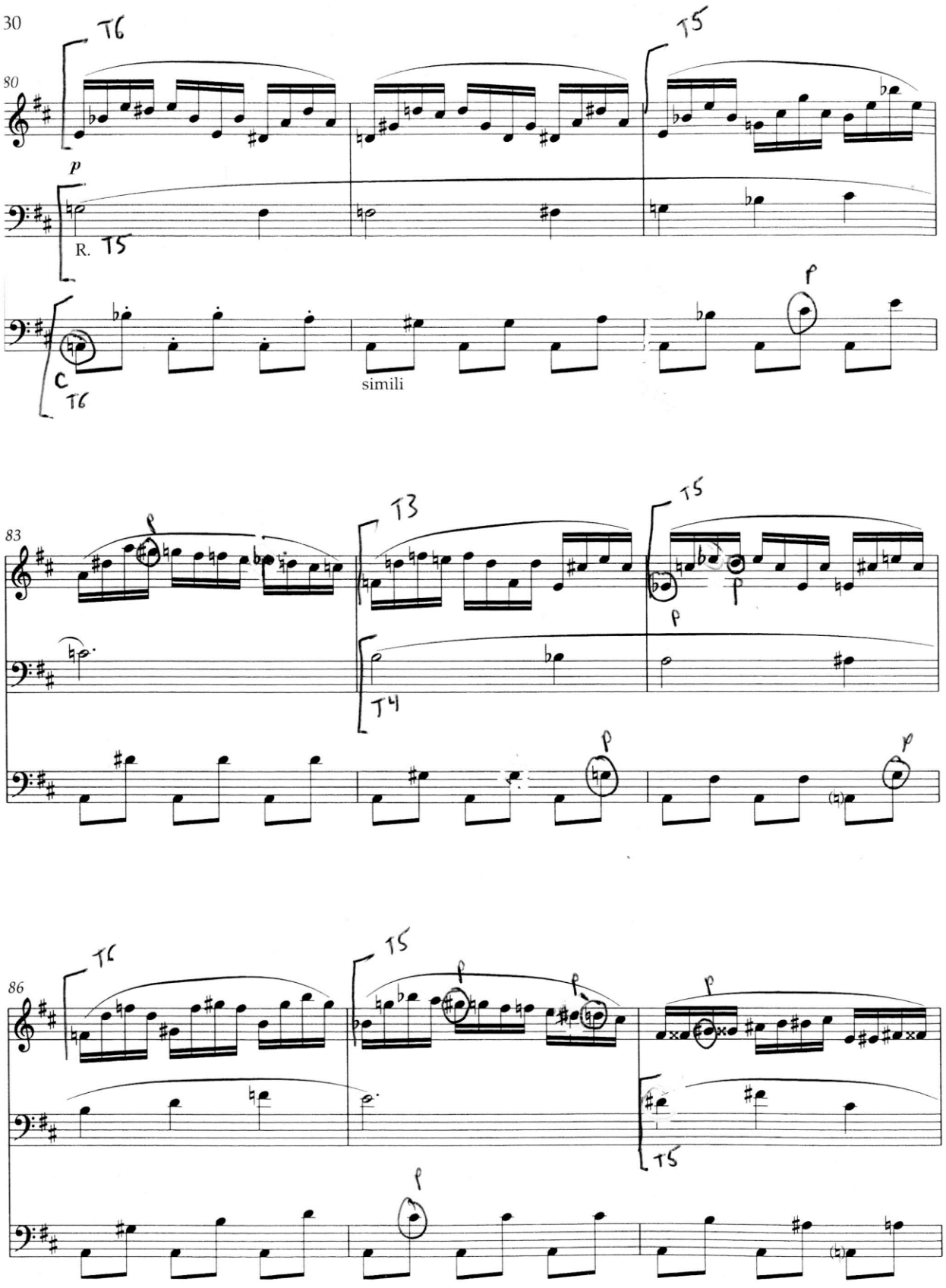
Group 4, nine notes, measures 76-79: T4 accompanied by T4.

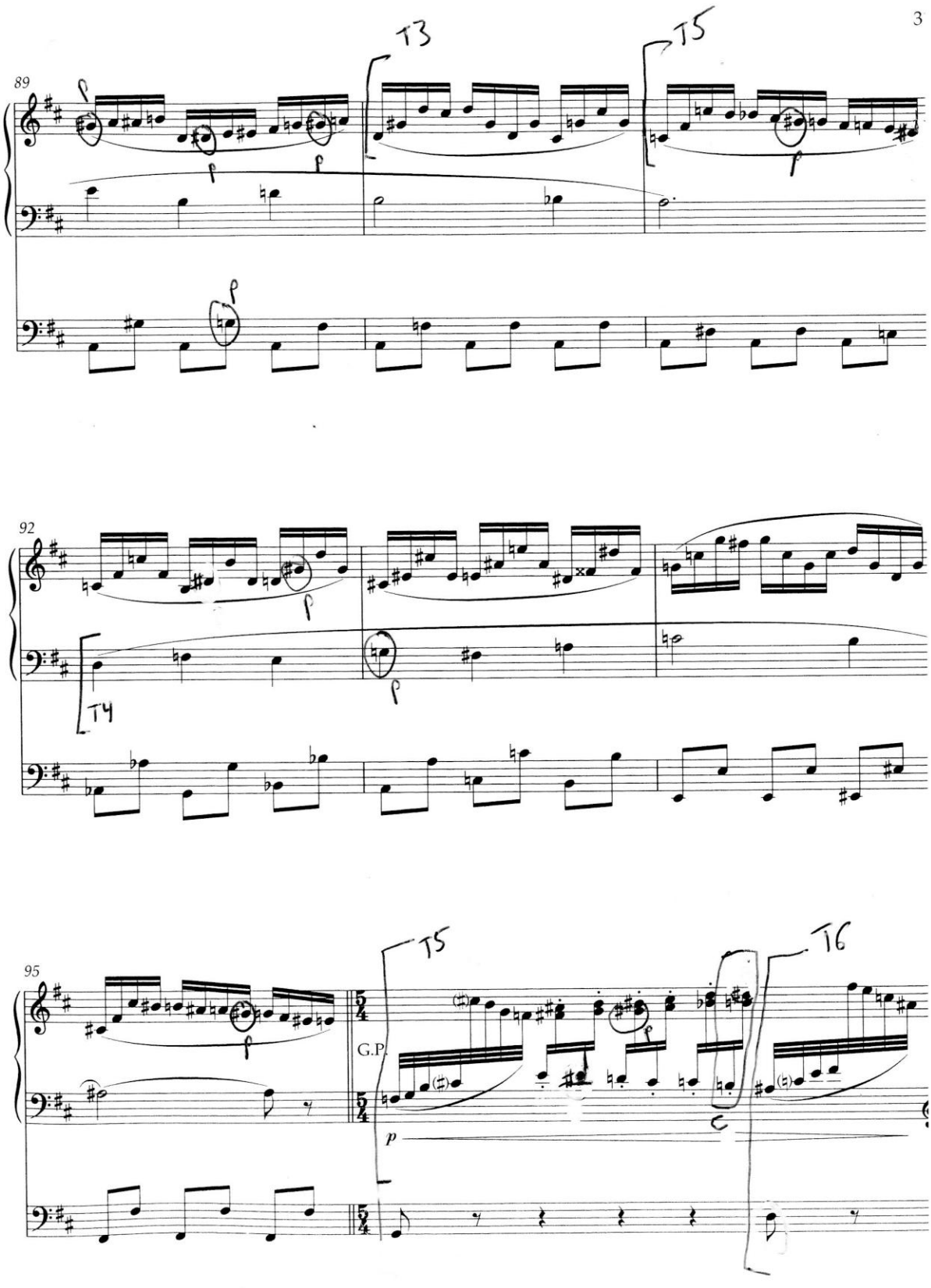
There are some non-mode tones that function as passing tones, or tones that just add harmonic richness to the accompaniment figurations. Since they are so infrequent and move quickly, it is not necessary to completely change to a different transposition level for one group. The non-mode tones in the theme also indicate an upcoming move to a new level of transposition.


28
63
(R. tremolo)
[P.]
Péd. R.
T5
p *)
66
[simili]
p
68
T4
cresc.
poco
a
poco
cresc. poco a poco
70
T5
c


72
T4
f
T5
74
76
dim.
poco
a
poco
dim. poco a poco
T4
78
Péd. solo

In measures 80-95 there is another restatement of the theme, this time in the tenor voice. This material is identical to what was encountered previously; the groupings and modes do not change. The accompanying figurations do change, however. This time the common tone of A serves as a pedal point to keep the listener grounded and allow the use of all of this material. The downward chromatic scales from the various transpositions of Mode 7 give the listener a sense of the weary traveler looking up and down as the flickering light cascades around him.


30
80
T6
T5
p
R.
T5
C
T6
simili
f
83
T3
T5
p
T4
p
p
86
T6
T5
f
f
p
T5
p


89
T3
T5
92
T4
95
T5
T6
G.P.

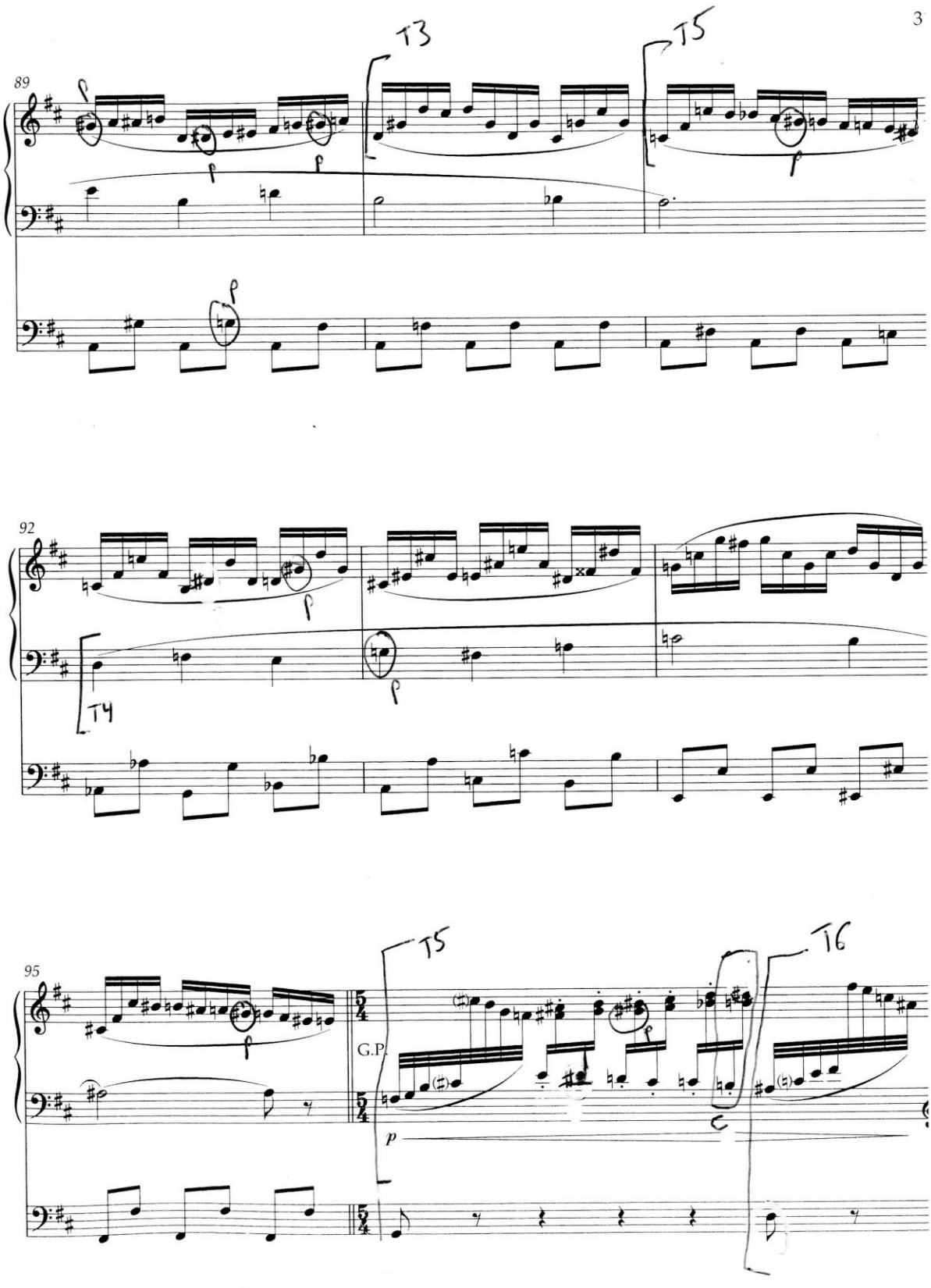
In the approach to the closing section beginning in measure 100, a massive interplay unfolds between levels T5, T6, and T1. The sudden emergence of T1 (on beat five of measure 98) signals an imminent transformation of the thematic material. T1 indicates a compete shift from the craziness encountered previously. Now a more stable harmonic platform begins in measure 100; T1 and T2 have the strongest presence.[103]

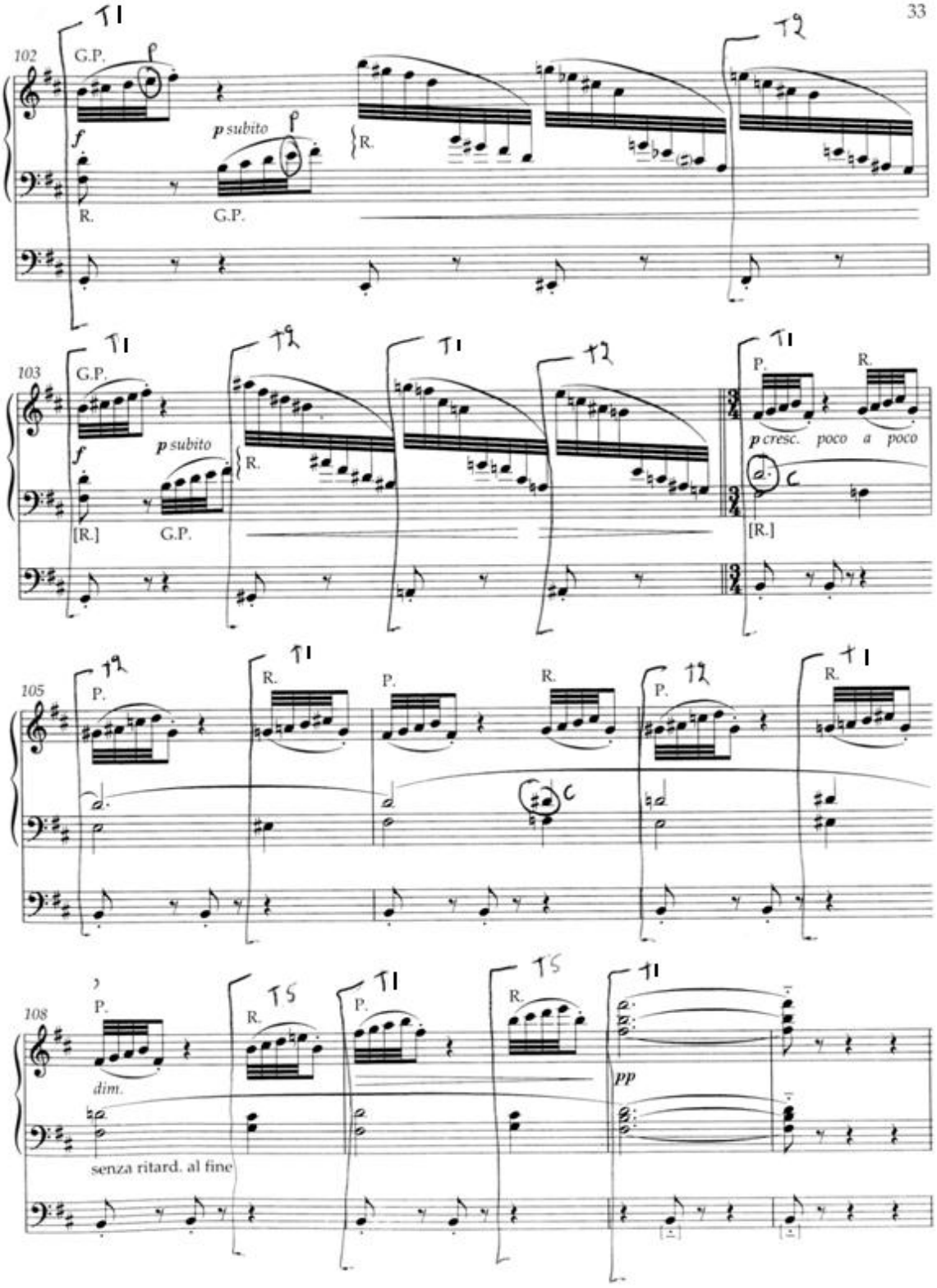
In measure 101 the two upward rising five note groups in the right hand serve as a launching point for the closing material. The first is in T1, the second, in T2. This progressive interplay begins on page 33, measure 104.

The first two groups of this measure are in Mode 7, T1. In measure 105, beat 1, the first group of the right hand changes to T2, and the next group falls back to T1 on beat 3. This is possible due to the G and G# common tones between both levels of transposition. In measure 106, the upward figures again employ T1 for both groupings before changing back to T2 on the downbeat of measure 107. On beat 3 of the same measure, there is a return to T1 which remains in place for the rest of the composition. Again, the common tones of G and G# allow this movement.

The top notes of the left hand in this entire closing section are important to observe: D, D# and C#. They all sound at various times and are common tones from both aforementioned transposition levels of Mode 7. The B pedal point serves as an anchor for the listener, which keeps them locked into T1, the final transposition level to conclude the composition. This gives the closing chord a true sense of finality.

[103] There is an introduction of a small five note group from T5 on beat three of measure 108, and again on beat three of measure 109. The non-mode tone of E cannot be regarded as a passing tone here (as it was in the first beat of measure 102) since it is displaced too sharply by the leap of a fourth. Thus, this requires a transposition change. Since this transposition has been heard previously, it is not an unusual or unreasonable occurrence.


89
T3
T5
92
T4
95
T5
T6
G.P.


102
G.P.
f
p subito
f
R.
G.P.
R.
103
G.P.
p subito
f
[R.]
G.P.
P.
R.
p cresc. poco a poco
[R.]
105
P.
R.
P.
R.
P.
R.
108
P.
dim.
R.
P.
R.
pp
senza ritard. al fine

"Feux Follets" is certainly an analytical jumble—and for good reason. This piece is one of the early compositions in this set of 24. It gives the impression that Vierne is just learning the extent of how far he can go with this type of writing. There is not enough connective tissue to hold the primary analysis together by conventional means. Instead, one is left with a crazy-quilt patchwork of Mode 7 forms. However, the difficulty of analysis is instructive. From my understanding of this music, Vierne does not expect his listeners to understand his harmonic writing or language perfectly. Rather, the main purpose of this composition is to force listeners to put themselves in the place of a weary evening traveler, whose attraction to the bewildering flickers of light draw him farther and farther away from his intended path of travel. After the traveler continuously chases these sporadic flickers, they will suddenly vanish, thus leaving him completely alone, scared, and deserted in an unfamiliar place, far from his intended travel path, now in complete darkness.

"Fantômes"

"The stylistic development of organ music takes place in the sense of the tonal coloring; the diversity of timbres at their disposal has led organists to increasingly enrich their tonal palette. That which is composed today for organ is-naturally presupposing its independence-orchestral music in the true sense of the word."[104]

"Fantômes", composed in 1927 was not intended by the composer to be used for anything other than concert performance. Rollin Smith describes "Fantômes" in a perfect way: "the most fantastic piece in the set…is a phantasmagorical essay in which seven characters weave in and out…"[105] "Fantômes" is best thought of as a form of play, where the primary character referred to as The Evocator states (and continuously restates) the question: "Who then is preparing the

[104] Louis Vierne. *Pièces de Fantaisie en quatre suites,* Livre IV Op. 55, ed. Helga Schauerte-Maubouet (Kassel: Bärenreiter-Verlag, 2008), XXIII.

[105] Smith, *Louis Vierne,* 554.

future?" This question is answered by six additional characters, each with his (or her) own personal opinion: First is the Young Esthete with his answer: "It's me…I'm free!" Next the Old Pedant: "It's me…I uphold tradition!" This is followed by the Negro: "The future belongs to the dancer." The Monkey: "The future is fantasy." The Beggar (playing the street organ): "It belongs to misery, 'Solo mio.'" The final character to offer their opinion is Fate, who gives the ultimate and final answer: "It is nowhere and everywhere." Each of these characters is represented by a different rhythmic scheme and a certain mode; some from the Gregorian modes, others from the modes of limited transposition. Another interesting interpretation: "In Vierne's score, each ghost receives a tonal and stylistic identity. The music itself does not display development in the classical sense. The continuous change of timbres corresponds to the programmatic interplay of the dialogues."[106]

The analysis of this composition is where things get harmonically interesting…and bizarre. The most curious aspect of this particular composition is the way in which Vierne constantly shifts back and forth from one mode to another and still makes everything fit together effortlessly. In this connection, Johnson's characterization of the modes of limited transposition is particularly apropos. He refers to them as: "artificial, and have no connection with the modes of folk-music or plainchant."[107] However, he goes on to say that: "the initial notes of these modes…are not intended to be 'finals' or tonics; no note takes precedence over any other in this respect. The modes themselves do not imply a particular tonality, but they can be made to slip easily from one tonality to another without any real sense of modulation."[108] Vierne

[106] Louis Vierne. *Pièces de Fantaisie en quatre suites,* Livre III Op. 54, ed. Helga Schauerte-Maubouet (Kassel: Bärenreiter-Verlag, 2008), XXIII.

[107] Johnson, *Messiaen*, 16.

[108] Ibid., 16-17.

accomplishes this by using the common tone modulations discussed earlier. Even though there is so much modal material, he locks everything together in one virtually perfect composition. This indicates the start of Vierne's modal evolution.

Further proving this point is Vierne's use of rhythmic groupings. Each character in "Fantômes" has a particular rhythmic group, which gives them their musical personality. This is easily recognizable as each one of the characters is identified via their rhythms upon their return throughout the composition. Vierne does this in "Feux Follets" too, but it is much more effective in this later composition. He also employs this method of writing for many other works in the *24 Pièces de Fantaisie*. Vierne's method is similar to a contemporaneous account of Messiaen's practice, transmitted in one case by an observer of Messiaen's composition class at Tanglewood in 1949:

> …one of the theories he [Messiaen] imparts to the pupils is that certain rhythmic groups have a character of their own-much as human beings have character. He thinks of rhythmic groupings as changing during the course of a composition, developing their characters as do the protagonists of a play. […] Messiaen emphasizes, however, that the principles behind this music were not discovered by reason alone and then used as the basis of his work. The act of composition came first. 'The principles came instinctively, almost physically; he says. 'I analyzed them later.'[109]

[109] Hill and Simeone, *Messiaen,* 189-190.

The reasoning behind this similarity of rhythmic writing is quite simple: since there is such a large absence of formal harmonic structure, rhythm is one of the best ways for the listener to grasp what is actually happening throughout the musical composition.[110]

"Fantômes" uses the three aforementioned modes of limited transposition throughout. Rather than writing a description of this piece, it is prudent to make a short list for easy reference (a full analysis is in the Appendix).

L'Evocateur (1)

Page 32, measures 1-2 and 5-6: Mode 1: T1 and T2.

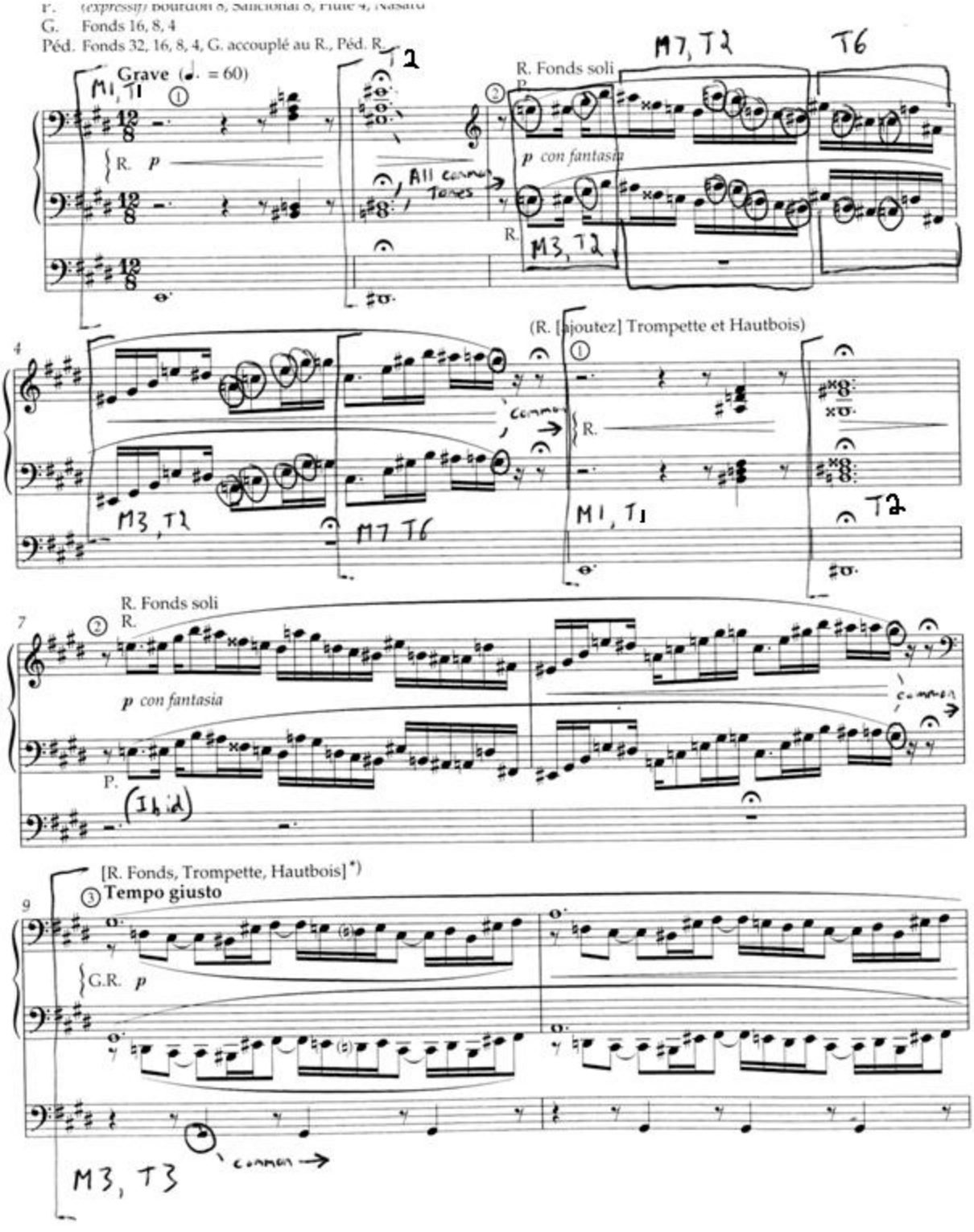
Page 33, measures 14-15: Mode 1: T1 and T2.

Measures 18-22: Ibid measures 14-15. However, note the change from Mode 1 to Mode 7, T2 via the pedal point of D on measure 21.

Page 37 measures 48-51: Ibid measures 1-6.

Page 40, measures 76-80: Mode 7 T2 and T5 reached via the C pedal point common tone.

[110] As previously stated, this rhythmic concept can be applied to "Feux Follets." However, it is still too fragmented to make a cohesive analysis.


P. (expressif) Bourdon 8, Salicional 8, Flute 4, Nasard
G. Fonds 16, 8, 4
Péd. Fonds 32, 16, 8, 4, G. accouplé au R., Péd. R.
Grave (♩. = 60)
R. Fonds soli
p con fantasia
(R. [ajoutez] Trompette et Hautbois)
R. Fonds soli
p con fantasia
(Ibid)
[R. Fonds, Trompette, Hautbois] *)
Tempo giusto
G.R. p
M1, T1
M3, T2
M7, T2
T6
T2
M7 T6
M3, T3

Le Jeune Esthete (2)

The character of Le Jeune Esthete is complicated to analyze due to the dense chromatic writing. This character's thematic material is in 5 sections. The first contains four notes from Mode 3, T2. The second group of nine notes is from Mode 7, T2. The third group of six notes is from Mode 7, T6. The fourth group of ten notes is from Mode 3, T2, and the last group of seven notes is from Mode 7, T6. The highly chromatic motion used for this character is logical and serves to enrich this character, as he is "free" (note his description by Vierne stated above). Vierne also writes "con fantasia" within the measure as well. Le Jeune Esthete is the only character whose thematic material will remain completely unchanged throughout the composition.

Le Vieux Pedant (3)

Page 32, measure 9: Mode 3, T3. The modal transposition shifts to T1 in measure 11, then back to T3 via the common tone of G# in the pedal, and also the B# in the middle of the measure which is shared between the modes. This entrance of the character ends with Mode 7, T1 in measures 12-13 (note the common tones in measure 13 and how they relate back to the Evocator's entrance in measure 14).

Page 34, measure 23: Mode 3, T4. This transposes to T1 in measure 24, then back to T4 in the middle of measure 25. The moving pedal theme in measure 25 is in Mode 7, T2 and then T1.

Page 38, measure 54: Mode 3, T3 is in the inner voices. The top notes of this character belong to Mode 7, T3. It is the only way to explain the shocking movement from G# to G natural in measure 55. This new mode configuration is justifiable since this

mode will lock in measure 56. The G# and A# pedal points create the common tones to allow this arrival of M7, T3.

Le Negre (4)

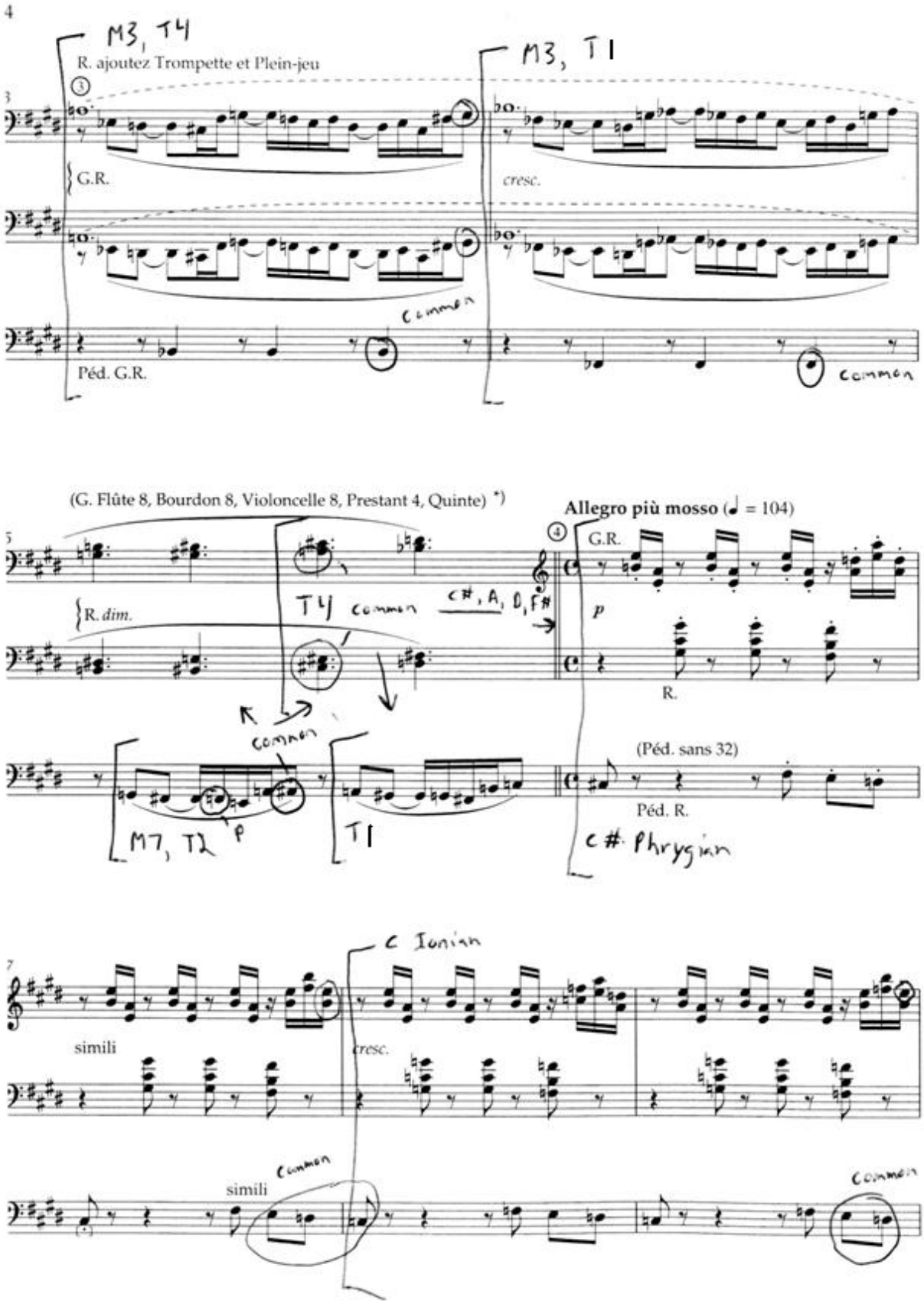
Page 34, measure 26: C# Phrygian. Measure 28: C Ionian, note the common tones from measure 27.

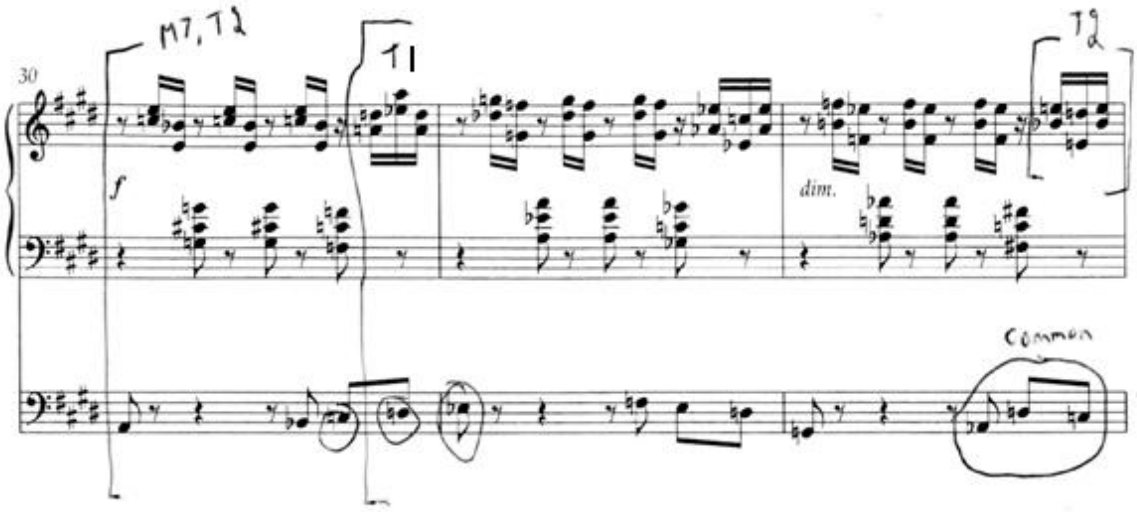
Page 35, measure 30: Mode 7, T2. Measure 31-33: T1 (with a brief interjection of T2 in the last section of measure 32). Again, note all common tones from the indicated penultimate measures.

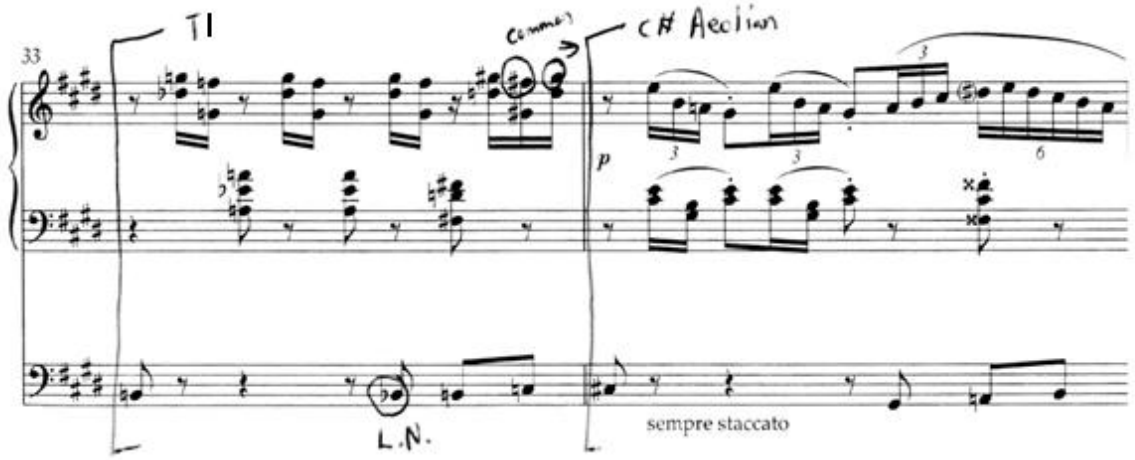
Measure 34: C# Aeolian. Measure 35: B Locrian.

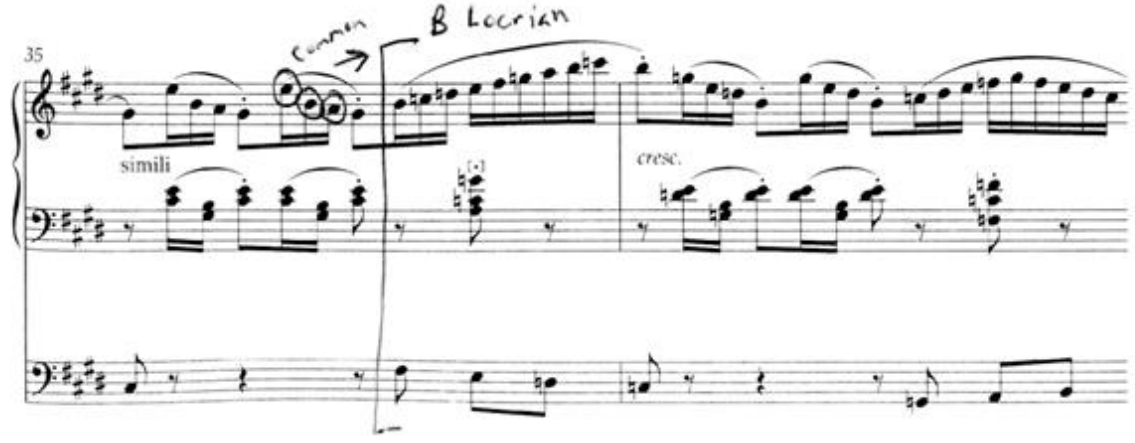
Page 36, measure 37-38, pull to M7, T1 via the introduced F# and D#. Mode 7 is fully realized by measure 39.

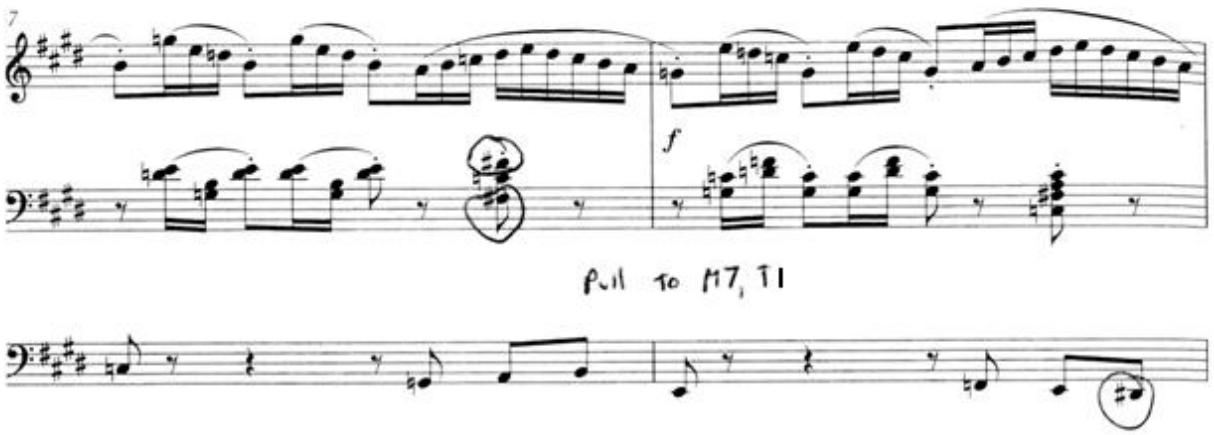
In measure 40, Vierne begins to superimpose different kinds of material upon one another. The upper voice is in Mode 3, T4 (the most obviously heard notes are indicated in the score (↓)). The non-mode tones are simply ornamental. The lower voices accompany the upper voice in Mode 7, T2. The transposition changes on Measure 42 to T1, then back to T2 on Measure 43. Interestingly, by the end of measure 44 there is a sudden return to the four notes of Mode 3, T2 previously used by Le Jeune Esthete. If one is following this composition as a play, Le Negre is mocking Le Jeune Esthete by stealing his musical material!

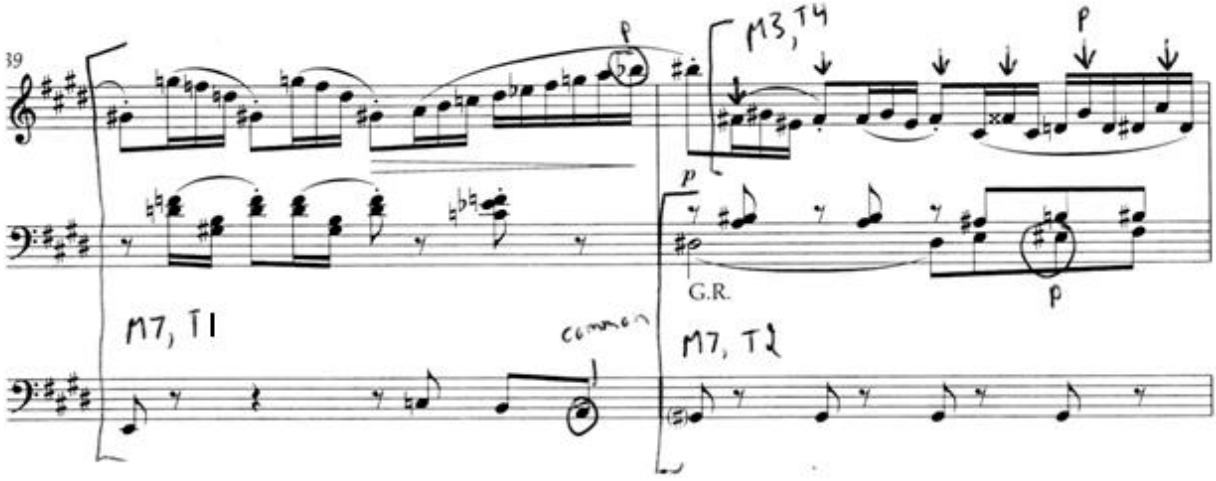

M3, T4
R. ajoutez Trompette et Plein-jeu
M3, T1
G.R.
cresc.
Péd. G.R.
(G. Flûte 8, Bourdon 8, Violoncelle 8, Prestant 4, Quinte) *)
Allegro più mosso (♩ = 104)
G.R.
R. dim.
T4
common
C#, A, D, F#
p
R.
(Péd. sans 32)
Péd. R.
M7, T2
T1
C# Phrygian
C Ionian
simili
cresc.
simili

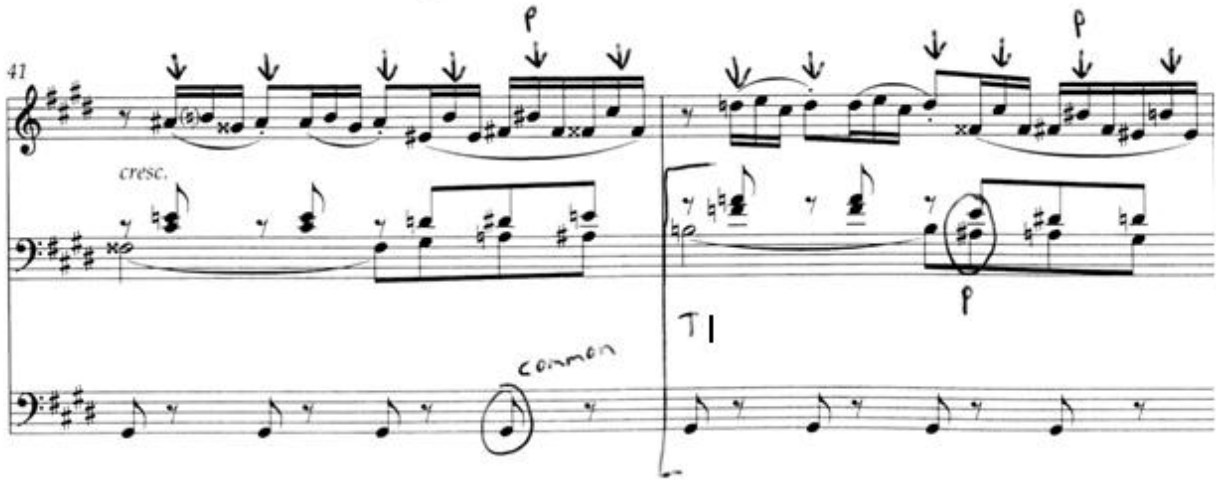

M7, T2
T1
T2
30
f
dim.
Common

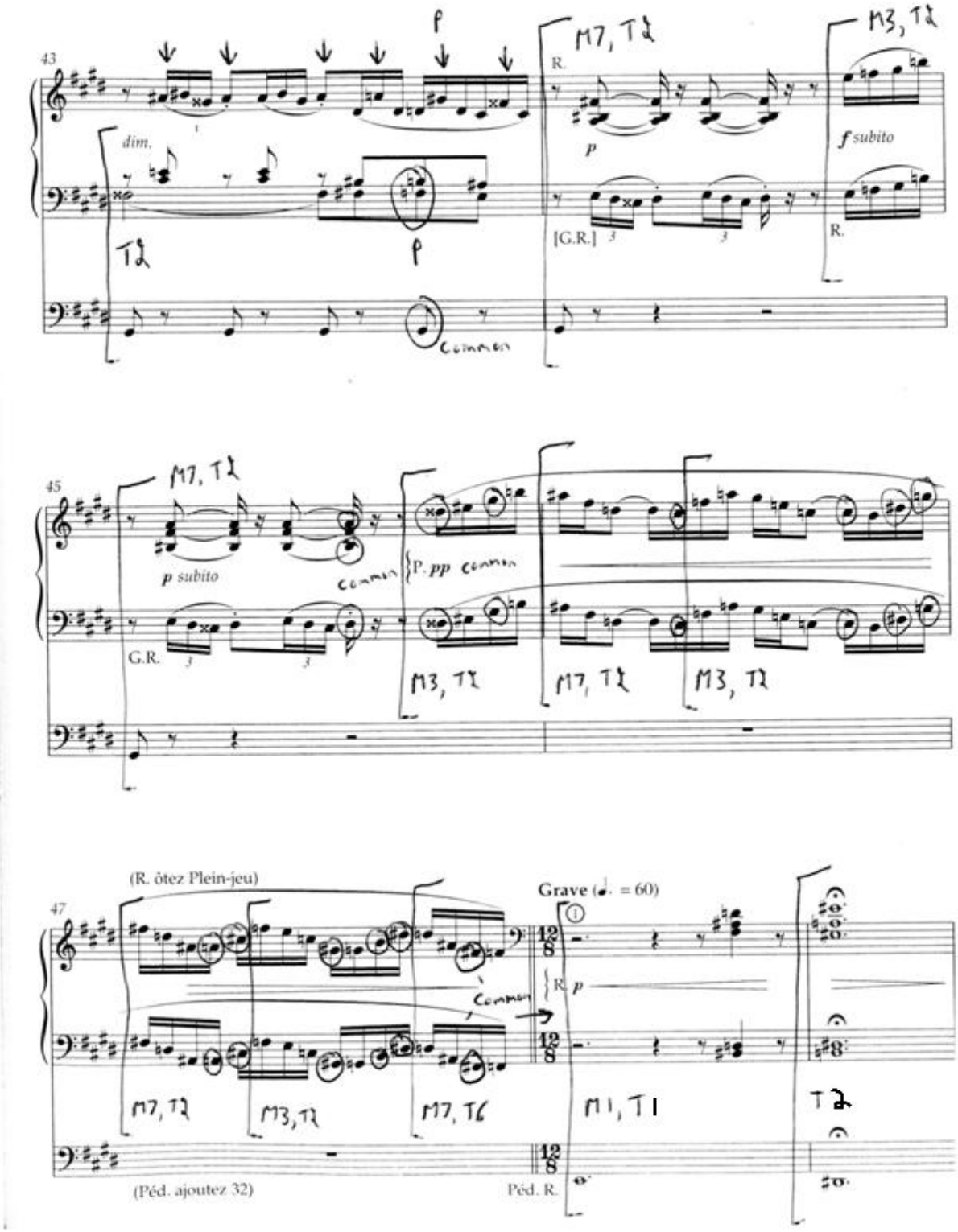

T1
Common
C# Aeolian
33
p
3
3
3
6
L.N.
sempre staccato


Common
B Locrian
35
simili
cresc.


7
f
Pull to M7, T1


39
p
M3, T4
p
p
G.R.
M7, T1
common
M7, T2


41
p
p
cresc.
p
T1
common


43
dim.
p
M7, T2
R.
p
M3, T2
f subito
[G.R.]
R.
45
M7, T2
p subito
Comm.
P. pp Comm.
G.R.
M3, T2
M7, T2
M3, T2
(R. ôtez Plein-jeu)
47
Comm.
M7, T2
M3, T2
M7, T6
Grave (♩. = 60)
R. p
M1, T1
T2
(Péd. ajoutez 32)
Péd. R.

Le Singe (5)

The modal material reflects the character of a monkey, as it jumps around frequently.

Measure 59: Mode 3, T3. The last chord of the right hand moves to Mode 7, T1 and thus begins to accompany the character.

Measure 60: Mode 7, T5 the upper parts still accompanying in T1 of Mode 7.

Measure 65: Mode 7, T5 again accompanied by T1.

Measure 66: Mode 7, T1.

Measure 71: Mode 7, T2. Note how the accompaniment shifts from T2 to T1.

Measure 73: Mode 7, T5 accompanied by Mode 7, T1.

Le Mendiant (6)

Measure 61: The upper voice is in Mode 3, T1 accompanied by Mode 7, T1 in the voices below.

Measure 67: The same as measure 61.

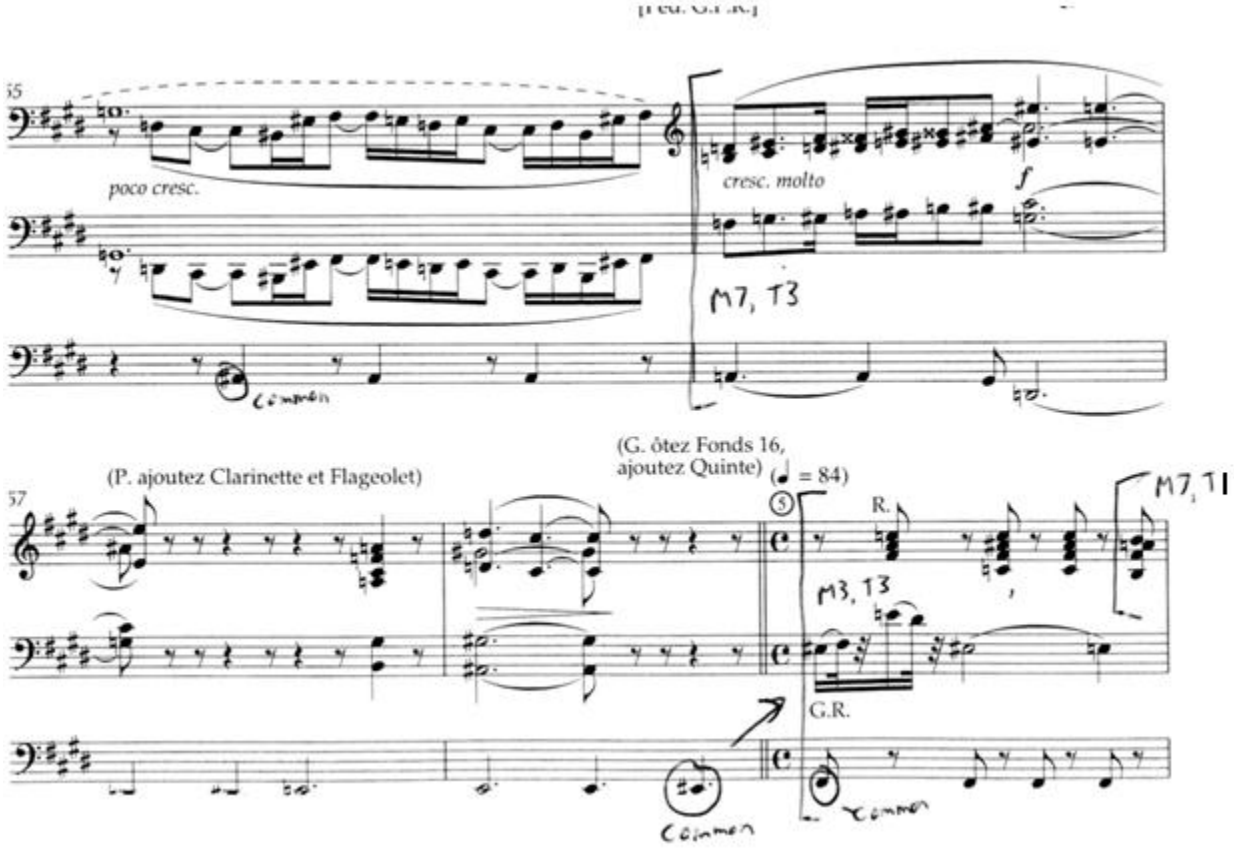
Measure 68: The upper voice shifts to Mode 3, T4 while the Mode 7, T1 accompaniment remains. The very end of this section in Measure 70 moves suddenly to Mode 7, T2 to allow for the dialog entrance of Le Singe which was occurring the entire time.

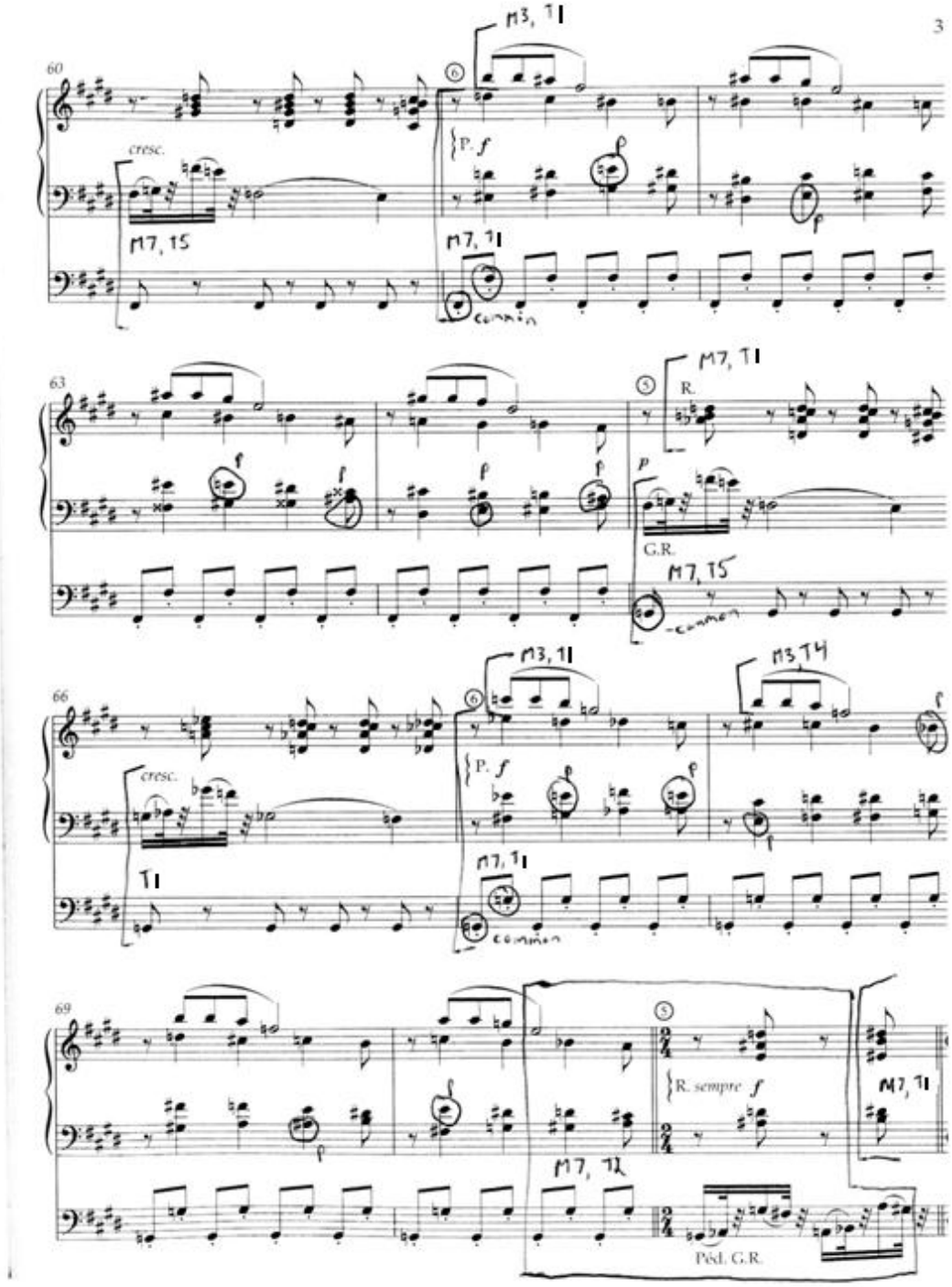
Measure 72: Mode 3, T2 in the upper voice again accompanied by Mode 7, T1.

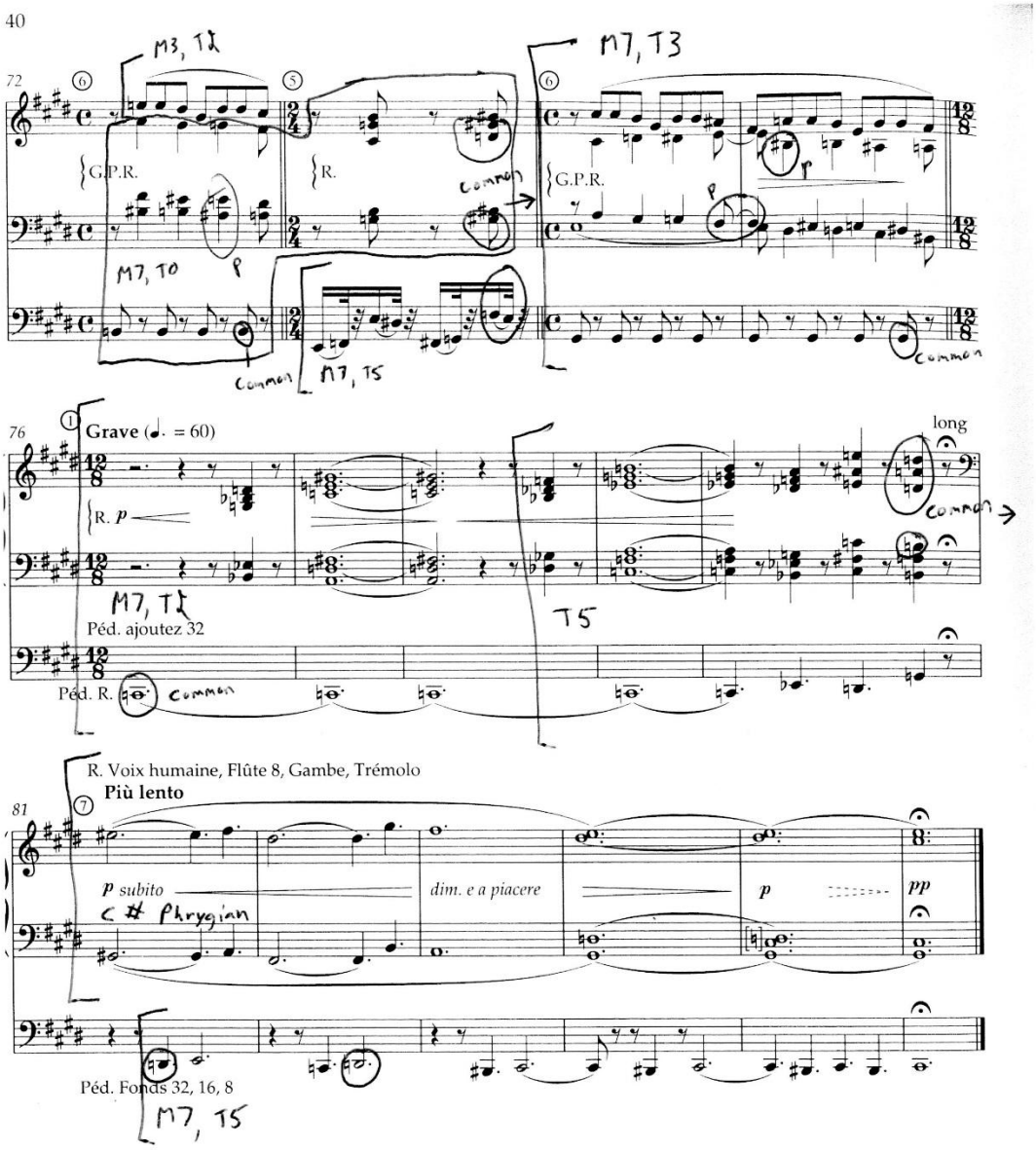
Measures 74-75: All parts are now in Mode 7, T3. Note the non-mode passing tones in the inner voices.

Le Destin (7)

Page 40, measures 81-86: C# Phrygian. The pedal is in Mode 7, T5, left over from measure 76.




60
M3, T1
cresc.
P. f
M7, T5
M7, T1
63
M7, T1
R.
G.R.
M7, T5
66
M3, T1
M3 T4
cresc.
P. f
T1
M7, T1
69
R. sempre f
M7, T1
M7, T2
Ped. G.R.



L'EVOCATEUR: ① Qui donc prépare l'avenir? …
LE JEUNE ESTHETE: ② C'est moi … Je suis libre!
LE VIEUX PEDANT: ③ C'est moi … Je garde la tradition!
LE NEGRE: ④ L'avenir est au danseur.
LE SINGE: ⑤ L'avenir est à la fantaisie …
LE MENDIANT (joueur d'Orgue de Barbarie): ⑥ Il est à la misère ..... « Solo Mio ».
LE DESTIN: ⑦ Il n'est nulle part et partout.

The characters get more harmonically complex as they progress through this play. The organ's registrations are important in regards to this progression. This is apparent if one understands the premise of this type of play; it is one that creates a competitive interplay between the characters with each one trying to impose his beliefs on the others. For instance, the character of L'Evocateur begins in Mode 1 and concludes in Mode 7. This makes sense when one observes all of the insanity going on around him with the annoyingly cantankerous Young Esthete, a highly energetic dancer, a jumping monkey etc…L'Evocateur is completely overwhelmed and is no longer able to maintain a sense of his original question, and his final statement is one of fragmented despair.

The character of Le Vieux Pedant who is constantly harassed by Le Jeune Esthete and Le Negre is no longer capable of knowing his facts and he is virtually hurtled into a state of bewilderment…since his material is so twisted harmonically by measure 55.

Le Negre is a dancer, and has the ability to move all through the Gregorian modes and modes of limited transposition without giving the listener any sense of modulation. The analysis of this character leaves little doubt that he is a very virtuosic and talented dancer! His material is the longest in the entire piece: 22 measures.

The interplay between Le Singe and Le Mendiant on pages 39-40 is certainly humorous if one considers the monkey jumping around and exclaiming how the future belongs to fantasy and how Le Mendiant is standing in the middle of the street, telling the crowds how miserable his life is, all while playing his hurdy-gurdy. The monkey gains in intensity as the organ's registrations darken for this character indicating that he is getting more and more insistent. The beggar's upper melodic material is composed higher and higher and changes to different divisions of the

organ, allowing the magnificent foundation stops of Cavaillé-Coll to bring his intensifying words into pretend fruition.

The character of Le Jeune Esthete never changes, and never develops beyond what is initially heard. This makes sense if one understands the nature of an Esthete, someone who is passionate about art and freedoms. These are incredibly strong feelings of human emotion that generally never change.

Obviously, Le Destin needs virtually no mention here, since his answer to the proposed question is what brings this piece to an ominous and rather bone-chilling conclusion. The unsettling pedal part rocking back and forth creates an uncomfortable tension for this character. This gives the listener a sense that the future is always uncertain. No matter who or what influences someone, fate has the final say, and the end result it is not always what someone initially expects, regardless of the premise on fact or fantasy. Vierne conveys this impression very well.

"Cathédrales"

"What more can be said about the admirable architecture than that a great musician comprehended at the medieval master builder's idea and executed it in a highly masterful manner."[111]

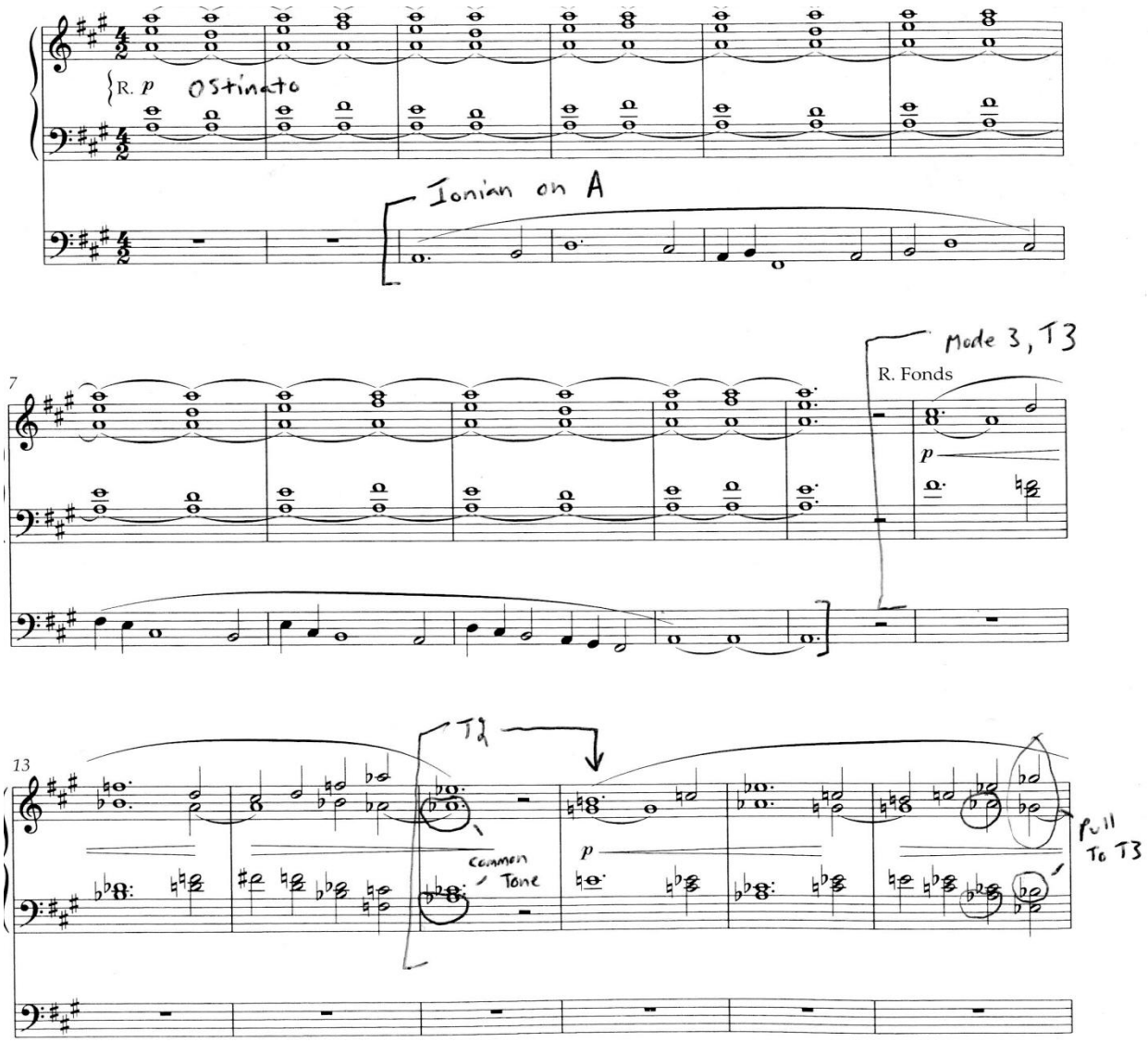
"Cathédrales" was composed in 1927, and it represents a much more coherent use of modal material. Thus, Vierne's writing is maturing throughout his compositional practice. He played this piece at Notre-Dame in 1932 at the re-inauguration of the rebuilt organ (see footnote 81).[112] This piece is configured as a series of theme and interlude juxtapositions. Each statement

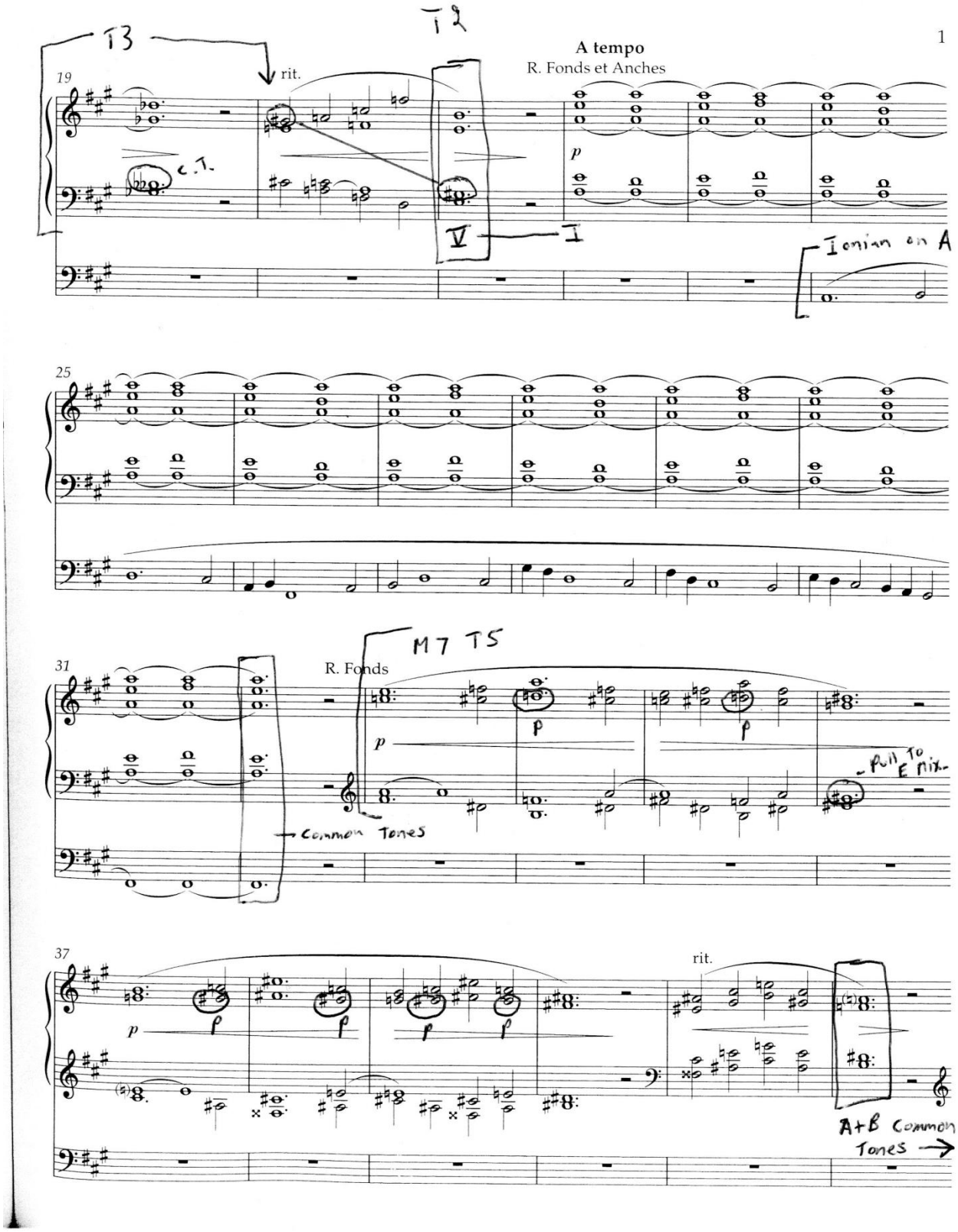
[111] Quote by Amédée de Montrichard regarding "Cathédrales." Louis Vierne. *Pièces de Fantaisie en quatre suites,* Livre IV Op. 55, ed. Helga Schauerte-Maubouet (Kassel: Bärenreiter-Verlag, 2008), XXIII.

[112] Ibid., XXIII.

of the primary theme is in the Ionian mode. Each interlude is stated in Mode 3, and later, Mode 7. This is visible on the first two pages of this composition. The opening theme in the Ionian mode on A is heard in the bass over an ostinato of open 5ths and octaves.[113] The first interlude uses Mode 3, T3 in measure 8. The next part of the interlude, in measure 15, is now in T2. Vierne creates this with the common tone of G# (written A-flat) from the previous measure. The next change occurs in measure 19, there is a return to T3 by the use of the common tone of A (written B double-flat). Arriving at measure 21 (T2 via the G# common tone), this chord functions as a dominant V going to I in the Ionian mode, which begins again on the opening of measure 22.

[113] When I played this piece in a masterclass at the Oberlin Conservatory in 2007, Michel Bourvard, Professor of Organ at the Paris Conservatoire made the statement that these open fifth chords give the impression of the massive grandeur of Notre-Dame's architecture. The moving fifths represent the large vaulted ceiling of the cathedral. I also believe that the open fifths and octaves represent the ancient forms of music and organum that took place centuries earlier as part of the cathedral's rich and extensive music history.

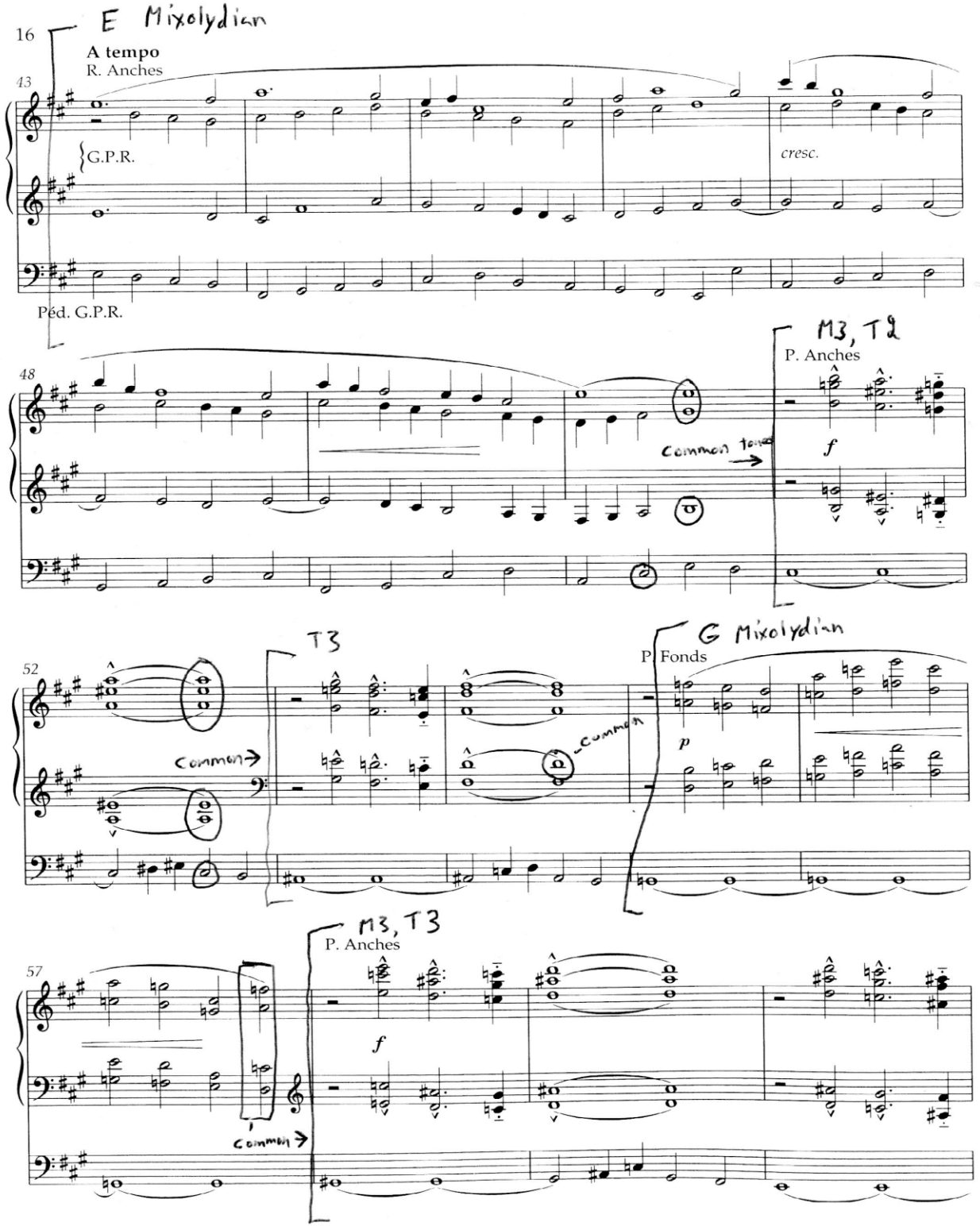

R. p
Ostinato
Ionian on A
7
Mode 3, T3
R. Fonds
p
13
T2
Common Tone
p
Pull To T3

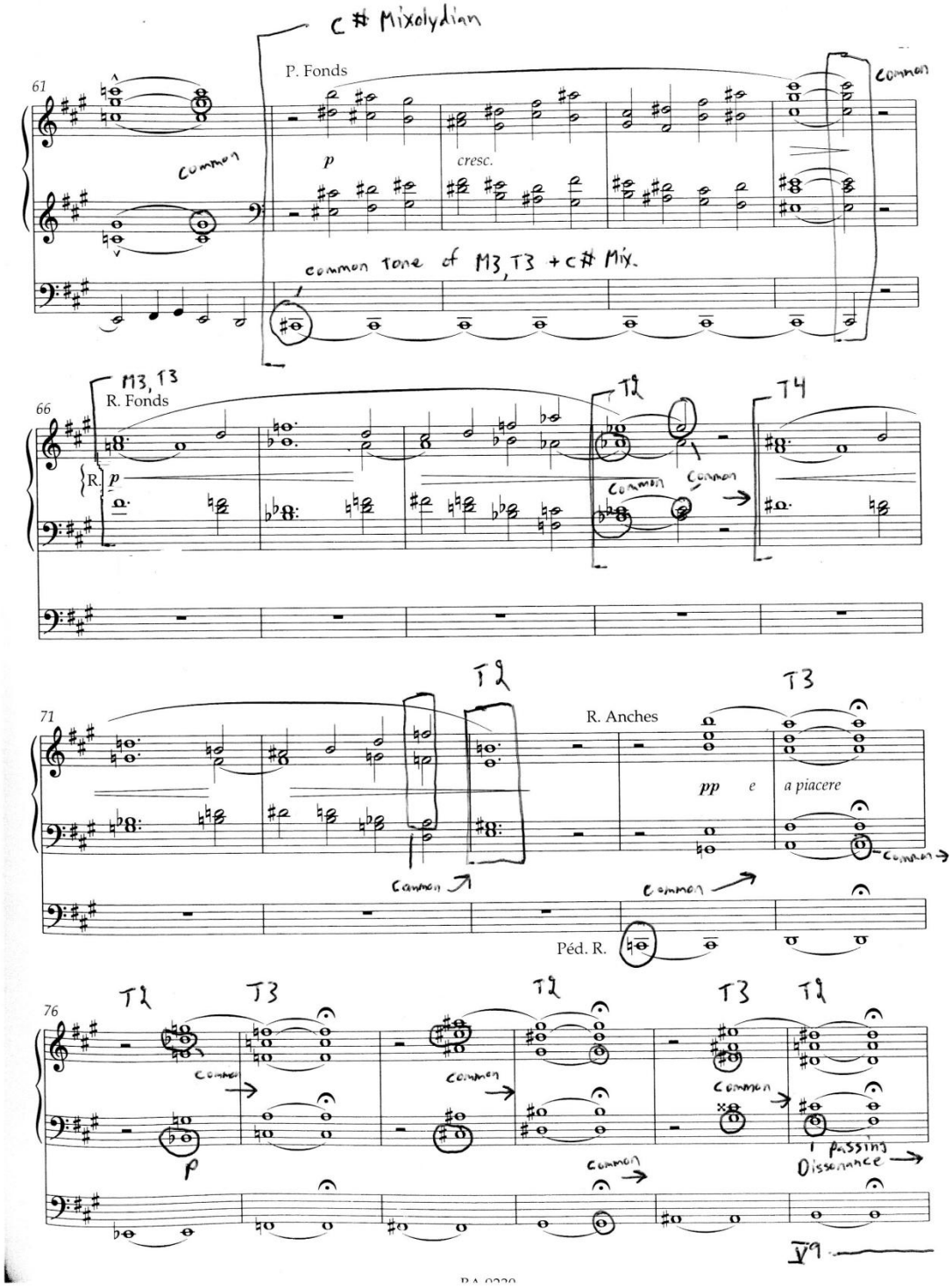

T3
T2
1
A tempo
R. Fonds et Anches
19
rit.
c.T.
V
I
Ionian on A
25
31
R. Fonds
M7 T5
Common Tones
pull to E mix
37
rit.
A+B Common Tones

The next interlude is in measure 33. It is best explained in terms of Mode 7, T5. The non-modal tones of D and G# begin to give way to the next large section of "Cathédrales:" E Mixolydian, on the next page.[114] Note that the final chord on measure 42 contains the B and A common tones of the E Mixolydian (Gregorian) mode.

On pg. 16 (beginning with measure 43) through page 17 of "Cathédrales," Vierne employs the Mixolydian mode, first on E, then G, and finally concludes on C#. Each interlude uses Mode 3 with T2, or T3. T4 is heard for the final interlude before the bridge. All of this movement is made possible via common tones. Note that on measures 66-68, Vierne superimposes Mode 3, T3 and T4 between both hands before they unite on T2 via the G# common tone (notated A-flat in measure 68).

[114] D and G# are from the E Mixolydian mode, so they sound out of place when used in conjunction with Mode 7, T5.


E Mixolydian
16
A tempo
R. Anches
43
G.P.R.
cresc.
Péd. G.P.R.
48
M3, T2
P. Anches
f
Common tone
52
T3
Common
Common
P. Fonds
G Mixolydian
p
57
M3, T3
P. Anches
f
Common

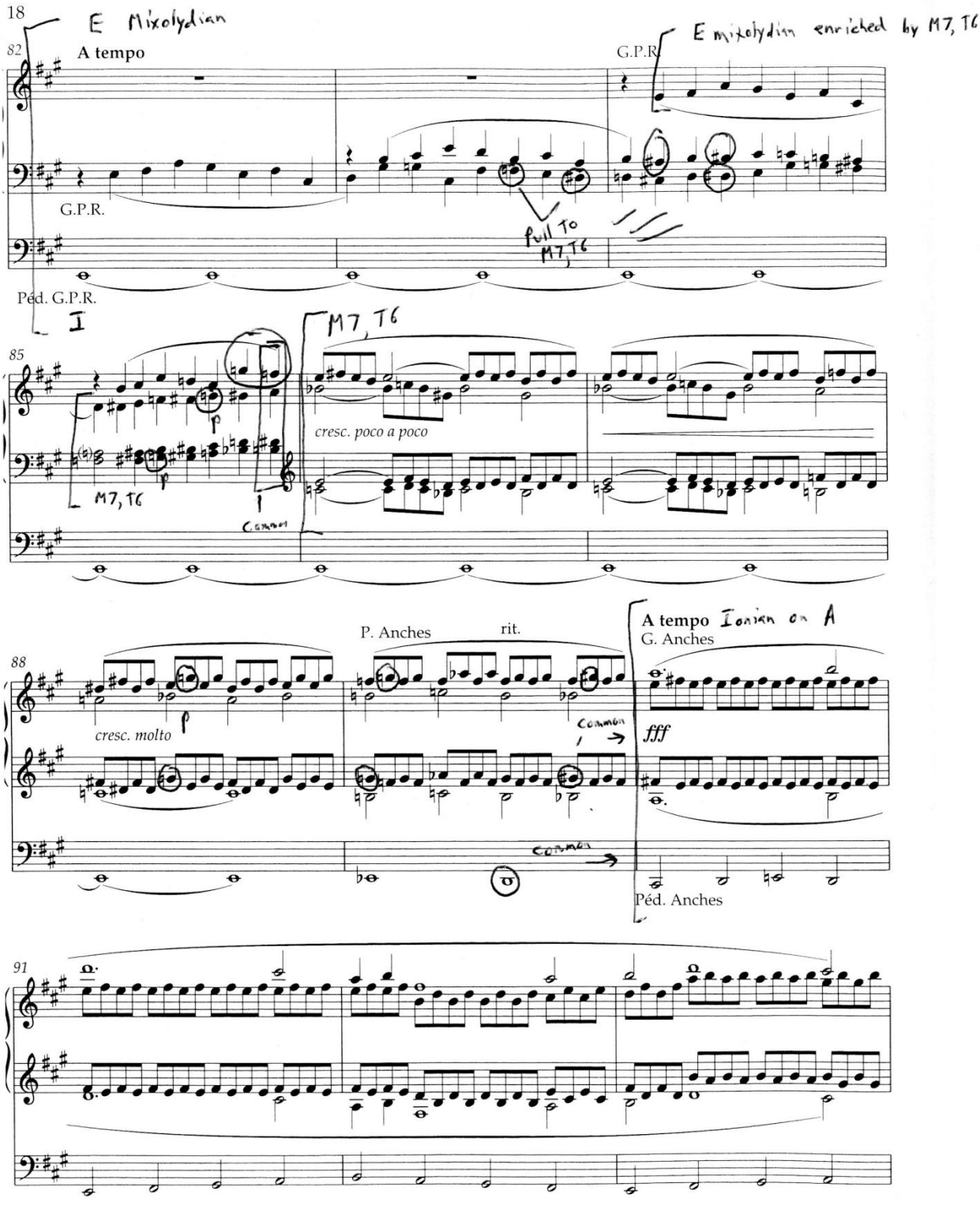

C# Mixolydian
P. Fonds
61
Common
p
cresc.
Common
common tone of M3, T3 + C# Mix.
M3, T3
R. Fonds
66
T2
T4
R.
p
Common
Common
T2
T3
71
R. Anches
pp
e
a piacere
Common
Common
Common
Péd. R.
T2
T3
T2
T3
T2
76
Common
Common
Common
p
Common
passing
Dissonance
V9

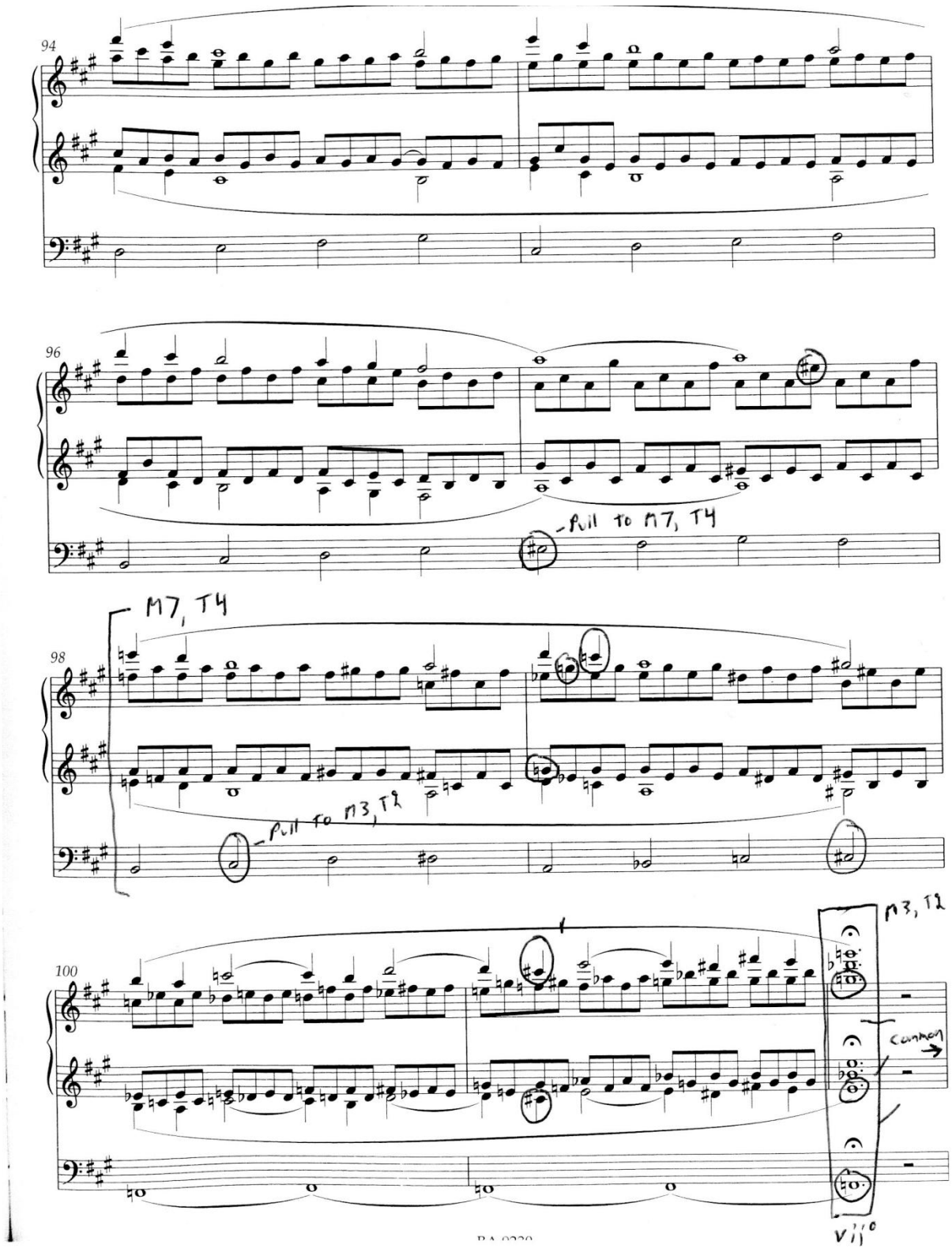
The bridge on pg 17, which begins in measure 74, is a set of alternating chords from Mode 3, T2 and T3 respectively. This ends in the last measure of pg. 17, where the respective collections form a B major V9 chord which leads to the root of the Mixolydian mode on E, where the next transitional section begins in measure 82.

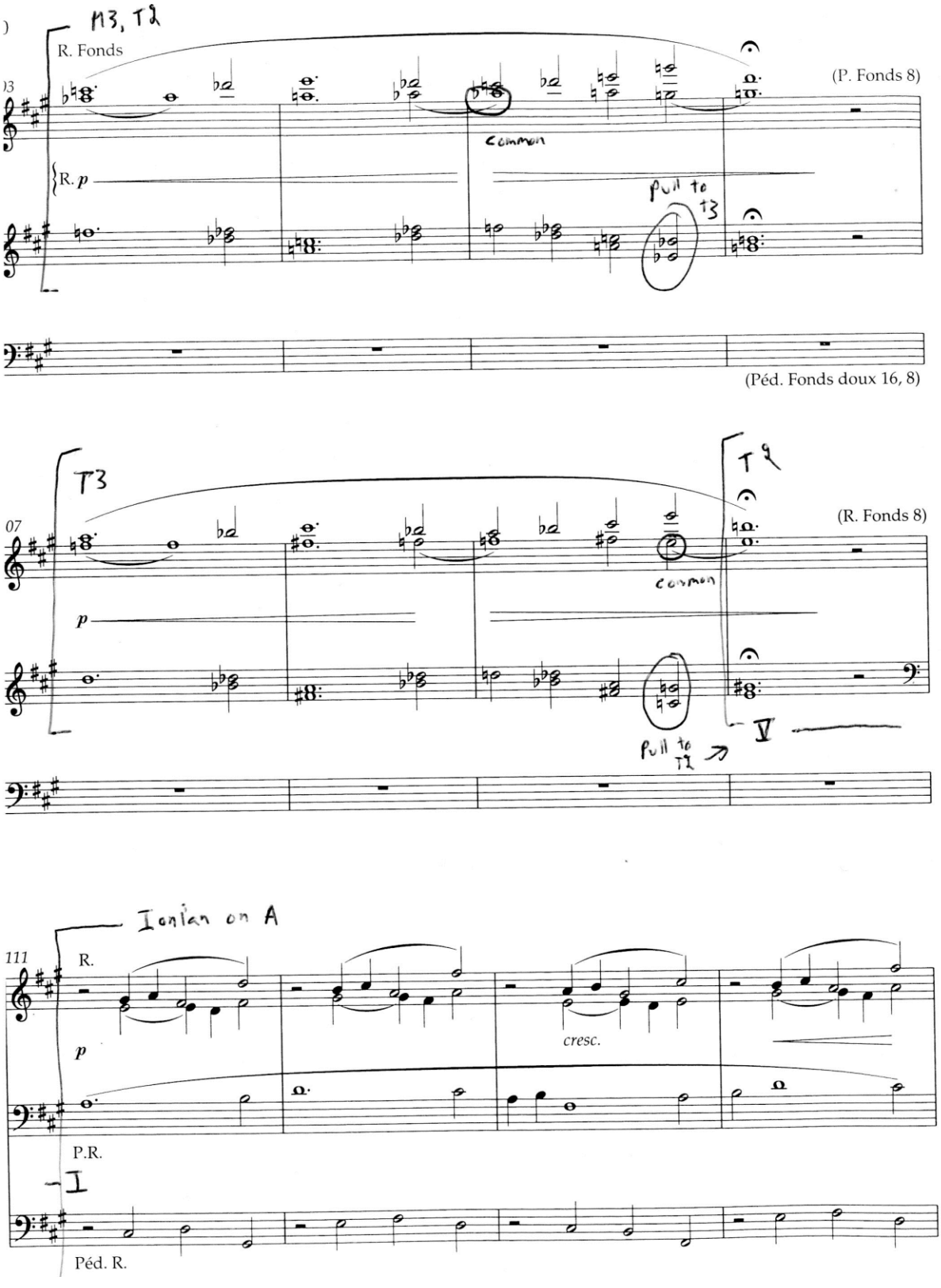
Some things appear remarkably out of place upon the arrival of the E Mixolydian mode. By measure 83, the G natural, F natural, and D# begin to pull to Mode 7, T6. This reaches its full potential in measure 86. There are some non-mode tones such as the G natural. However, Vierne uses the G natural as a form of passing note heard via a rocking motion. This motion builds up chromatic intensity as the dynamic level rises and builds to a climax. This climax is reached on measure 90; a recapitulation of the opening material again heard in the Ionian mode on A, stated in octaves in the outer voices.[115]

As this recapitulation continues through page 19, the non-A Ionian tones are visible in measure 97. The E# initiates a move to Mode 7, T4 which distorts the main theme of this composition in measure 98. However, Vierne does not allow the listener to hear this transposition level for very long. The immediate introduction of a C#, followed by G natural, indicates that something else will soon occur—the climatic section of this piece comes to an abrupt conclusion in measure 103 with a stark, fully diminished vii chord (formed on G over an F pedal point) from the Ionian mode on A. This chord is from M3, T2 which fits the F pedal point common tone. After this chord, the music leads to a familiar interlude heard in this very mode: Mode 3, T2, and then T3 in measure 107.

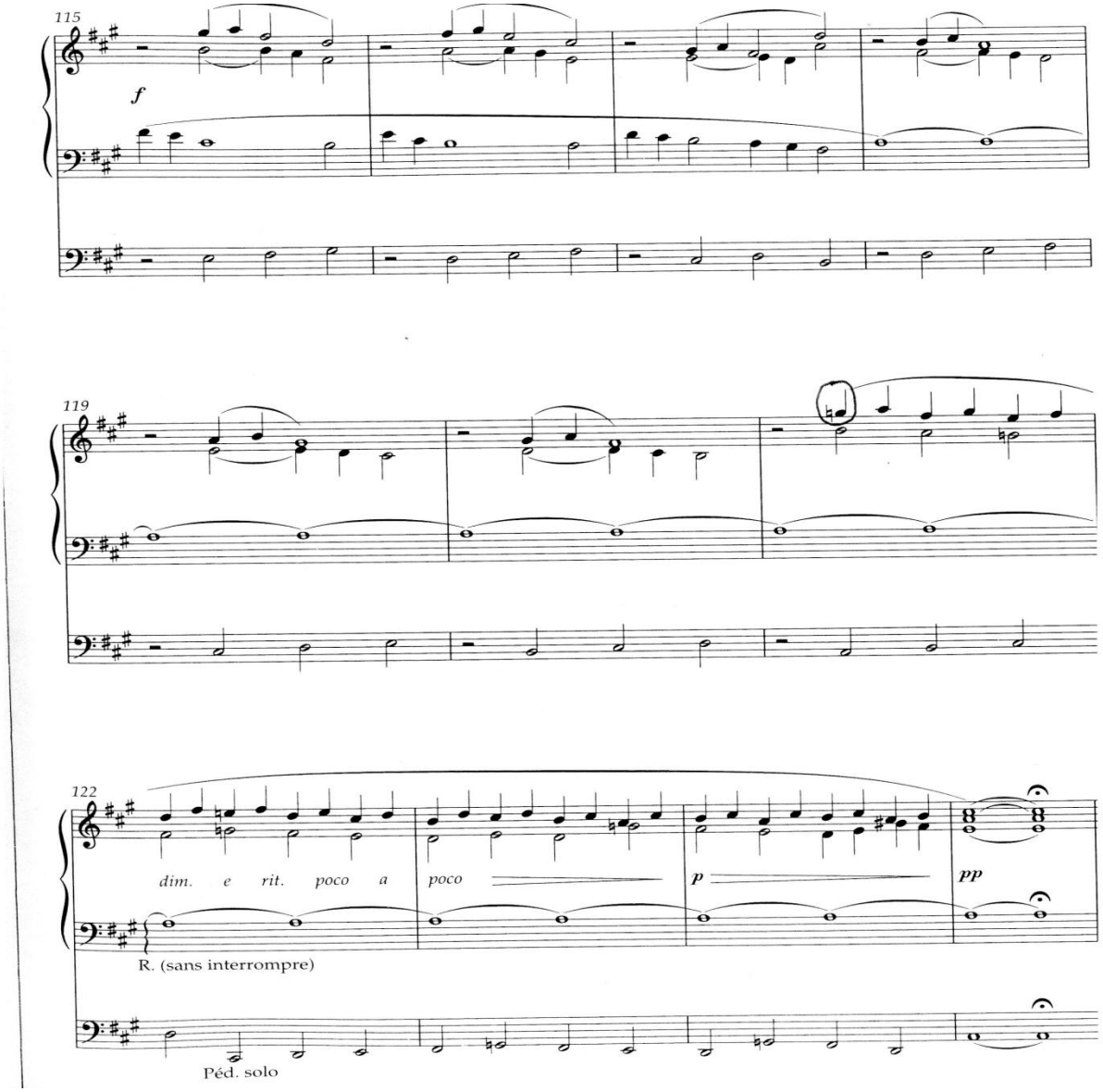
[115] The climax of this piece makes use of the symphonic crescendo made possible by Cavaillé-Coll's instruments. As discussed previously, music of this nature would not be possible if it were not for his revolutionary ideas in organ building.


18
E Mixolydian
82
A tempo
G.P.R.
E mixolydian enriched by M7, T6
G.P.R.
full to M7, T6
Péd. G.P.R.
I
85
M7, T6
cresc. poco a poco
M7, T6
I
Common
88
P. Anches
rit.
A tempo Ionian on A
G. Anches
cresc. molto
Common
fff
Common
Péd. Anches
91


94
96
- pull to M7, T4
M7, T4
98
- pull to M3, T2
M3, T2
100
common
vii°


M3, T2
R. Fonds
(P. Fonds 8)
common
R. p
pull to T3
(Péd. Fonds doux 16, 8)
T3
T9
(R. Fonds 8)
common
p
pull to T2
V
Ionian on A
R.
p
cresc.
P.R.
I
Péd. R.

The closing section of “Cathédrales” occurs in measure 111. Vierne leads the listener back to the Ionian mode on A with the opening theme in the tenor. He reaches this via measure 110. Vierne uses M3, T2 to form the V-I movement observed previously. Interestingly, the G natural heard in measure 121 and the constant use of the D major chord suggests a new mode: the Ionian mode on D. This is appropriate since the D resolving eventually to A produces the equivalent of a IV-I plagal “Amen” cadence.



Vierne had remarkable musical intuition. His knowledge of the Gregorian modes, as well as his modal consciousness regarding some of the later codified modes of limited transposition, was crucial in his harmonic language. Vierne was able to go anywhere harmonically, from any key or mode to a new one without any loss of thematic serenity or musical line. This indicates that Vierne was ahead of his time: "In 1927 the liberation of the organ from its tonal immobility was still a long way off. The differentiated change of registrations-in Vierne still an exceptional experimental situation-becomes the norm only a generation later in Olivier Messiaen and Jehan Alain."[116] It is plausible, then, that Vierne's countless hours of practice, improvisation, and composition of his music allowed the music itself to become codified in his personal techniques, both on the keyboard and at the composition table. Through this personal codification he transcribed this imagery into music, some of the most remarkable and stunning compositions that his modern-day admirers will enjoy for generations to come.

[116] Louis Vierne. *Pièces de Fantaisie en quatre suites,* Livre III Op. 54, ed. Helga Schauerte-Maubouet (Kassel: Bärenreiter-Verlag, 2008), XXIII.

Looking Forward:
The Evolution of Daring Modernism

6ème Symphonie

"Scherzo"

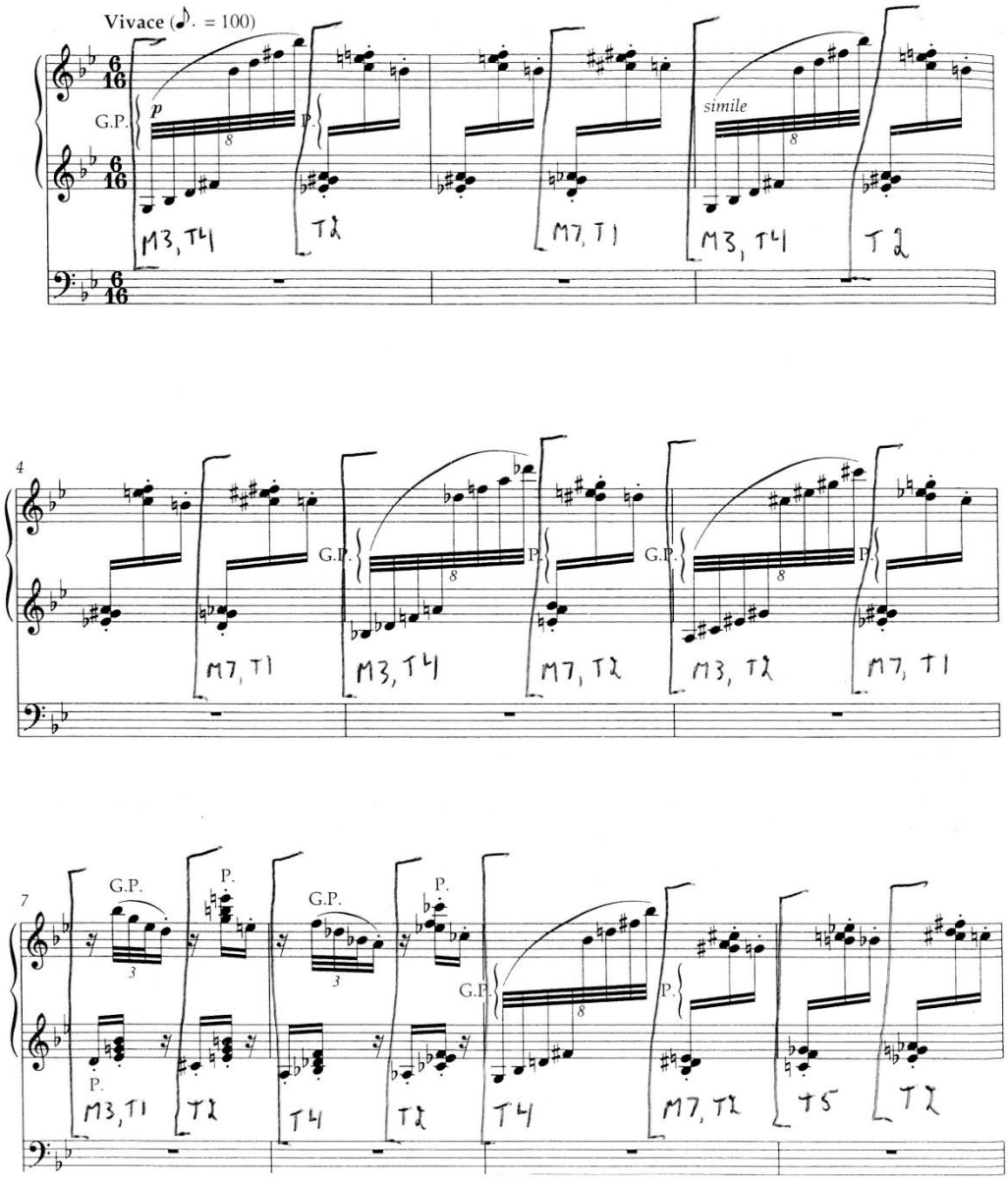
"Sitting on the parapet of the story where the towers arise from the massive corpus are all kinds of devilish things that were contrived by a grandiose imagination and captured in the grinning stone by a forceful and strict hand. Wondrous animals with long beaks, pointy claws, with misshapen ears and distorted mouths, devils with devout wings, midgets with long beards sit there and gape at the city with large, vicious, lurking eyes."[117]

This form of model composition discussed during the genesis of the *24 Pièces de Fantaisie* (1926-1927) was, for Vierne, in its infancy. As his music progressed more consistency in his dense modal writing is observed—at least thematically. If one takes a brief look at the "Scherzo" from his *6ème Symphonie*, Op. 59 composed in 1930, Vierne's modal awareness has evolved. Thus, the modal usage becomes more logical in his writing. This is evident on the opening page of the "Scherzo." There are no passing tones or chromatic alterations in the opening material. Modes 3 and 7 dominate the composition. Their common tone relationships are displayed in the examples of the main theme. However, for this opening material, the common tone of G is found in all transposition levels used by Vierne, thus allowing the free movement between each level on the opening page.

[117] Louis Vierne. *Pièces de Fantaisie en quatre suites,* Livre III Op. 53, ed. Helga Schauerte-Maubouet (Kassel: Bärenreiter-Verlag, 2008), XXII.

III. Scherzo

R. Flûtes 8, 4, Quinte, Octavin et Basson-Hautbois
P. *(espressif)* Bourdon 8, Flûte 4, Nasard, Tierce, Quarte de Nasard
G. Bourdon et Flûte 8 [accouplé au P.]
Péd. Flûtes 16, 8



Upon viewing the opening material, one should note that claiming the “Scherzo” is written “in the key of G minor” is erroneous. There is no harmonic function that allows for this assertion. The material is modal, and the knowledge of the modes of limited transposition is paramount for the understanding of this music.

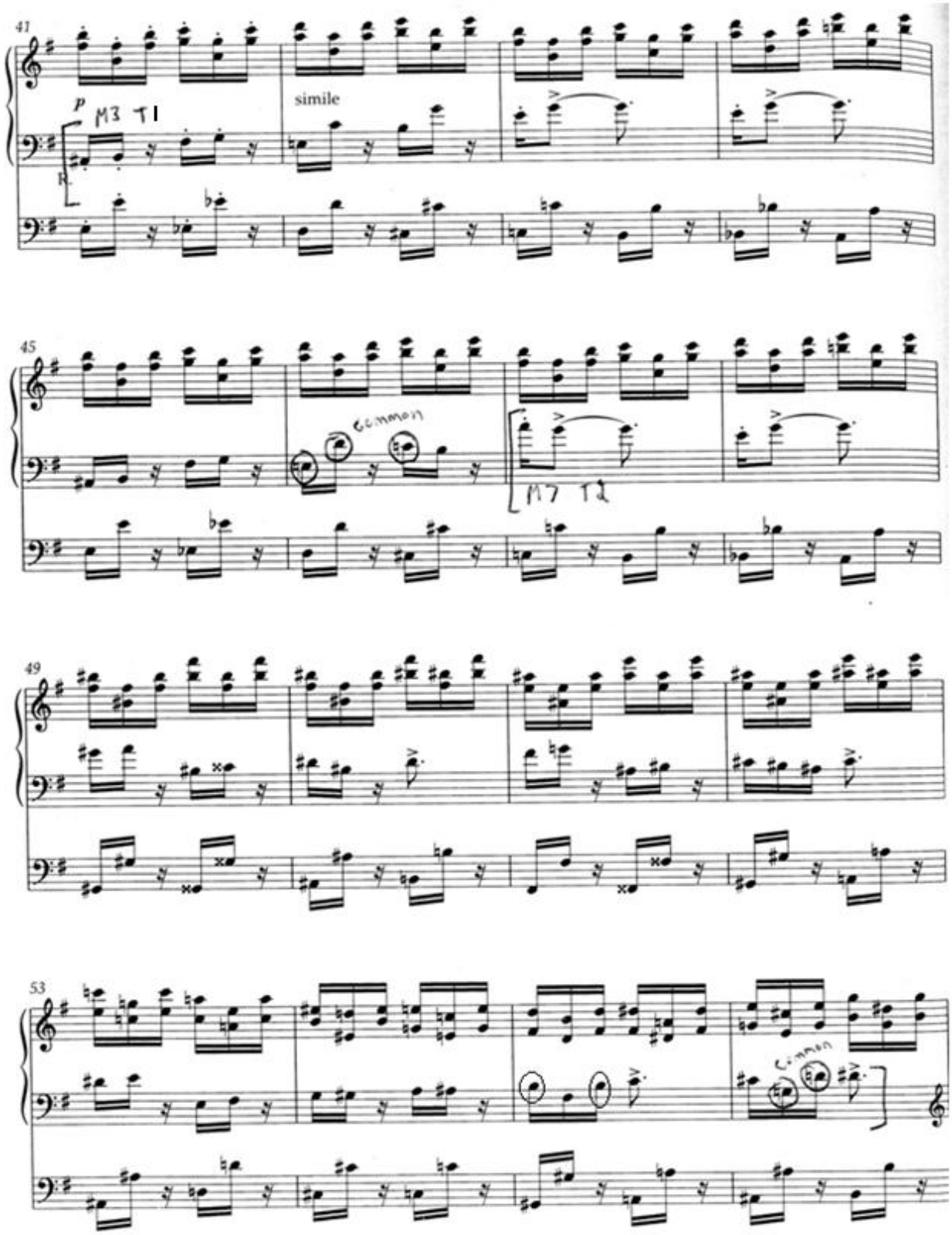
The main theme of this composition is comprised of two parts: The first is six measures in duration; the second is 10 measures. Here is the layout:

First statement

Pg. 30 Part 1: ms 41-46: Mode 3, T1.

Pg. 24 Part 2: ms 47-56: Mode 7, T2. (Passing tone B in ms 55).

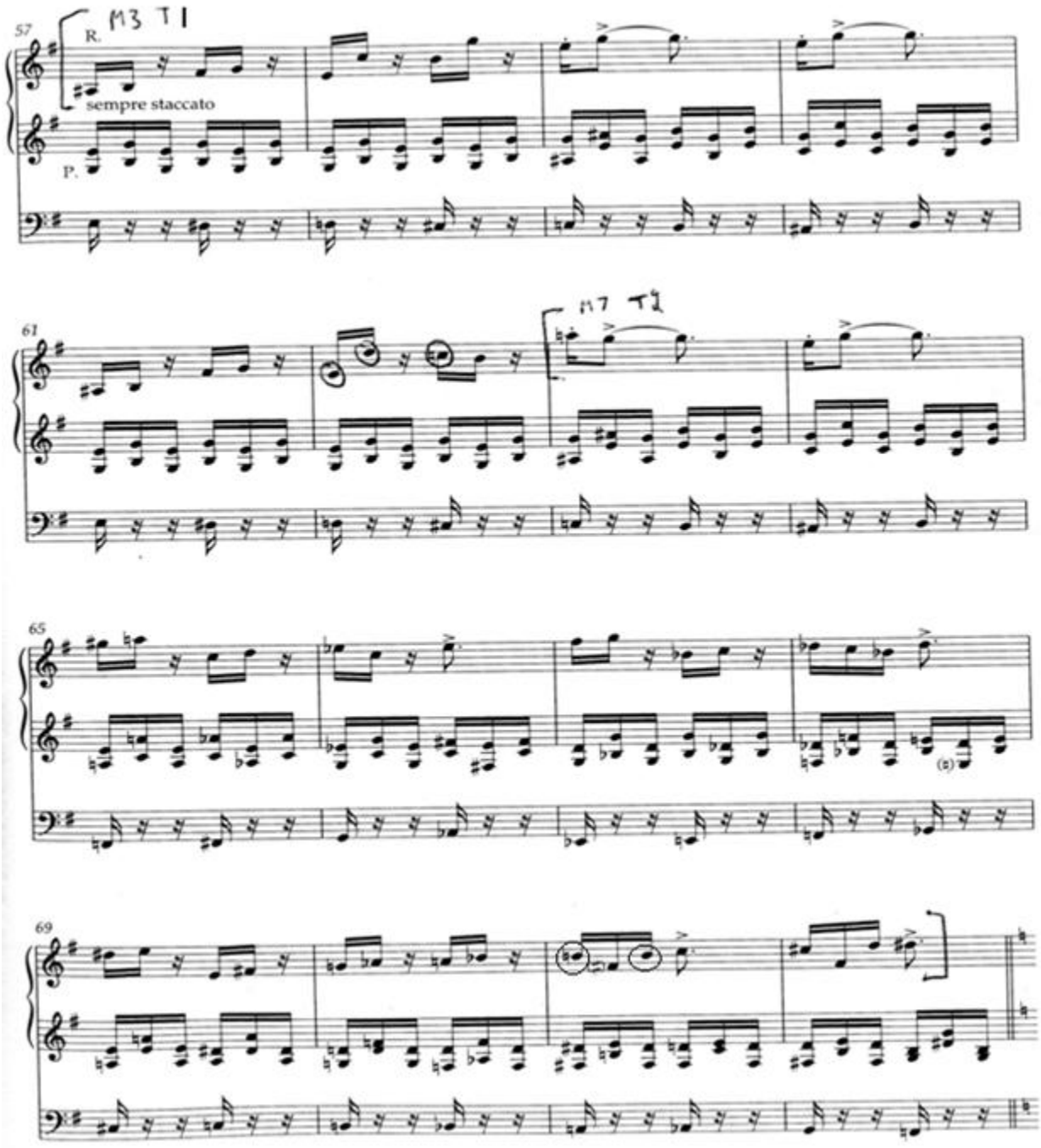
Common tones (ms 46): E, D, A.


47
simile
45
49
53

Second statement (Common tones G, D from previous measure)

Pg. 31 Part 1: ms 57-62: Ibid ms 41-46.

Pg. 32 Part 2: ms 63-72: Ibid ms 47-56. Common tones (Ibid).

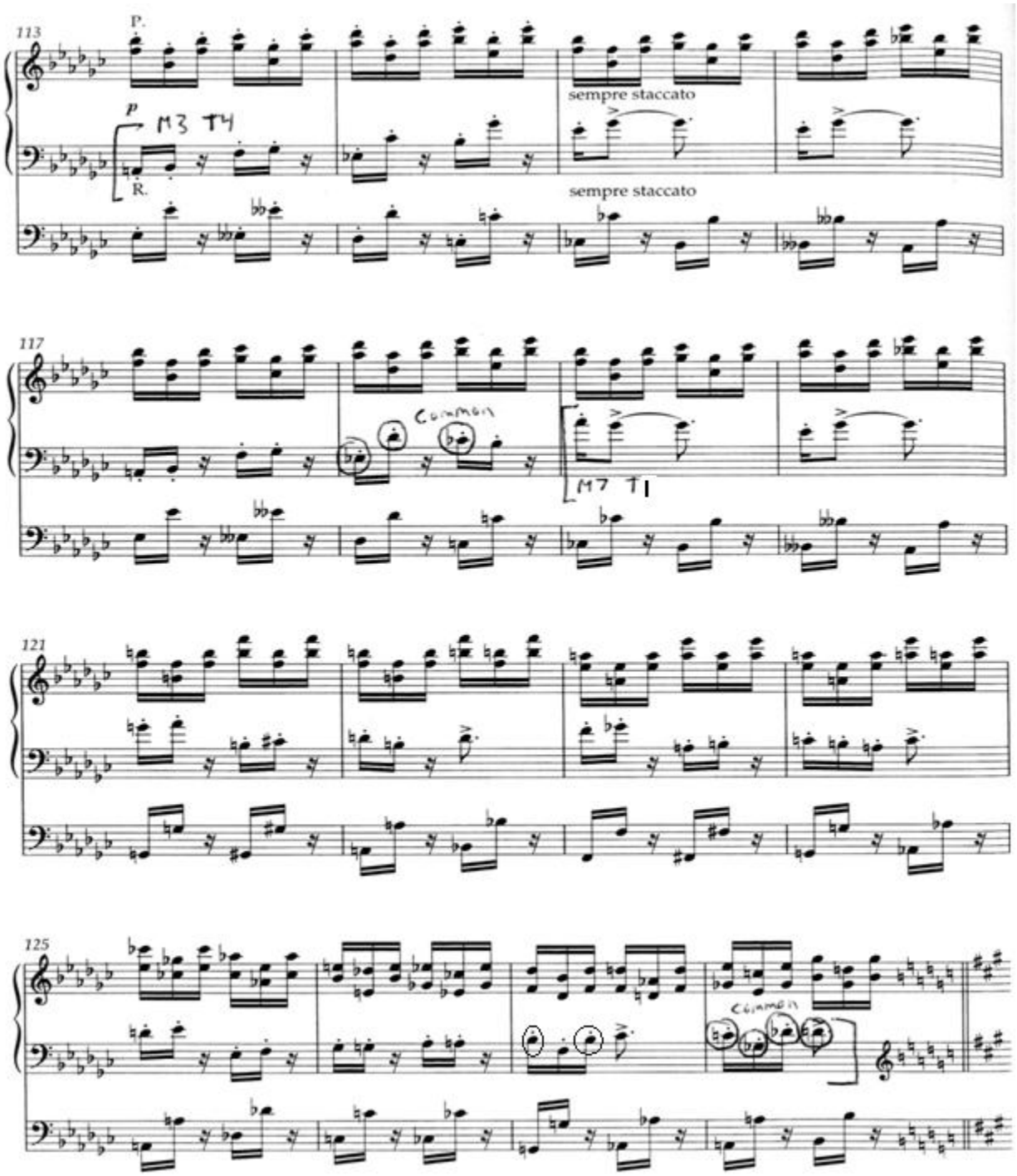


Third statement

Pg. 36 Part 1: ms 113-118: Mode 3, T4.

Pg. 36 Part 2: ms 119-128: Mode 7, T1. (Passing tone B-flat in ms 127).

Common tones (ms 118): E-flat, D-flat, C-flat.

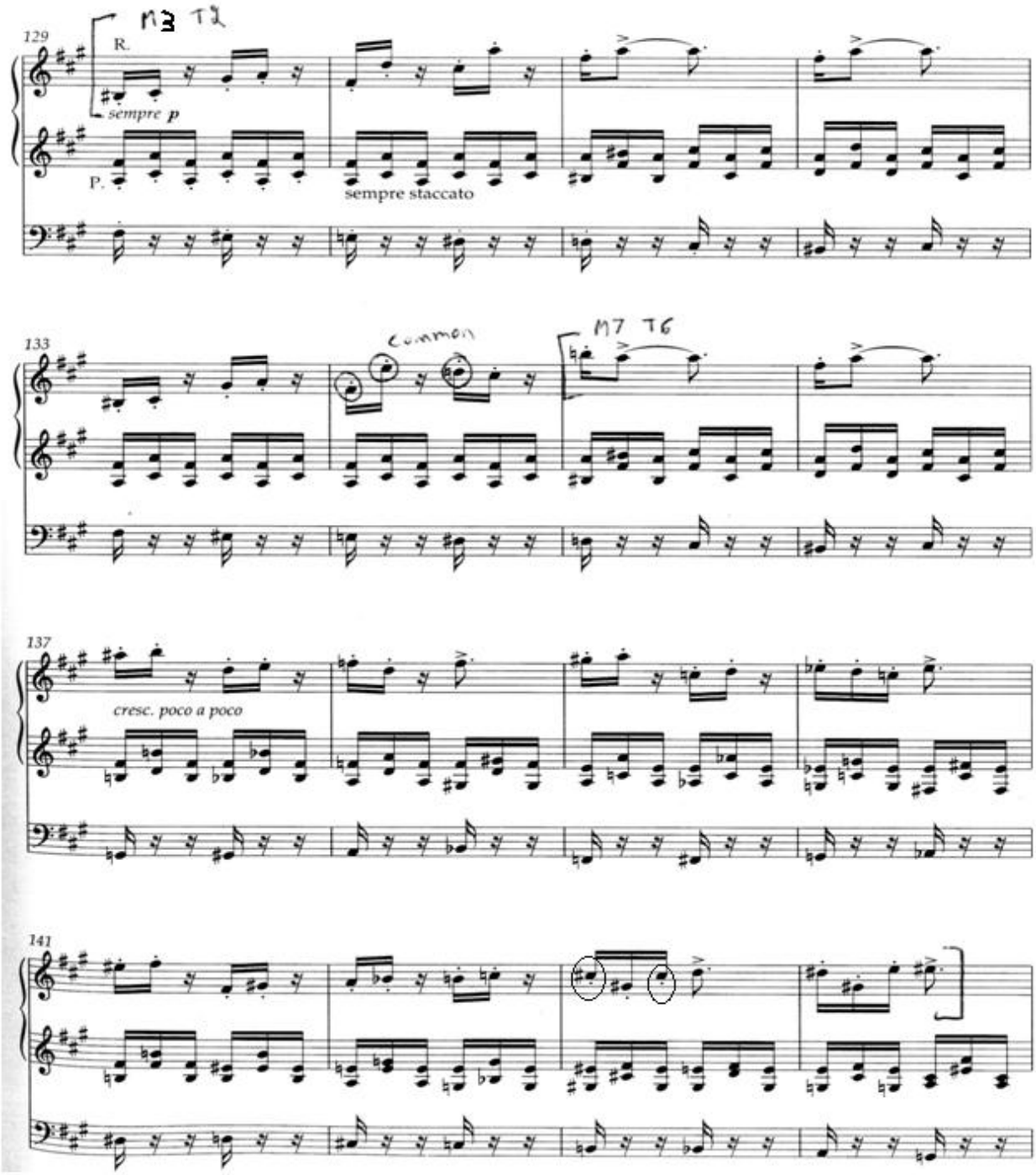


Fourth statement (Common tones: C, G-flat, D-flat, D from previous measure).

Pg. 37 Part 1: ms 129-134: Mode 3, T2.

Pg. 37 Part 2: ms 135-144: Mode 7, T6. (Passing tone C# in ms 143).

Common tones (ms 134): F#, E, D

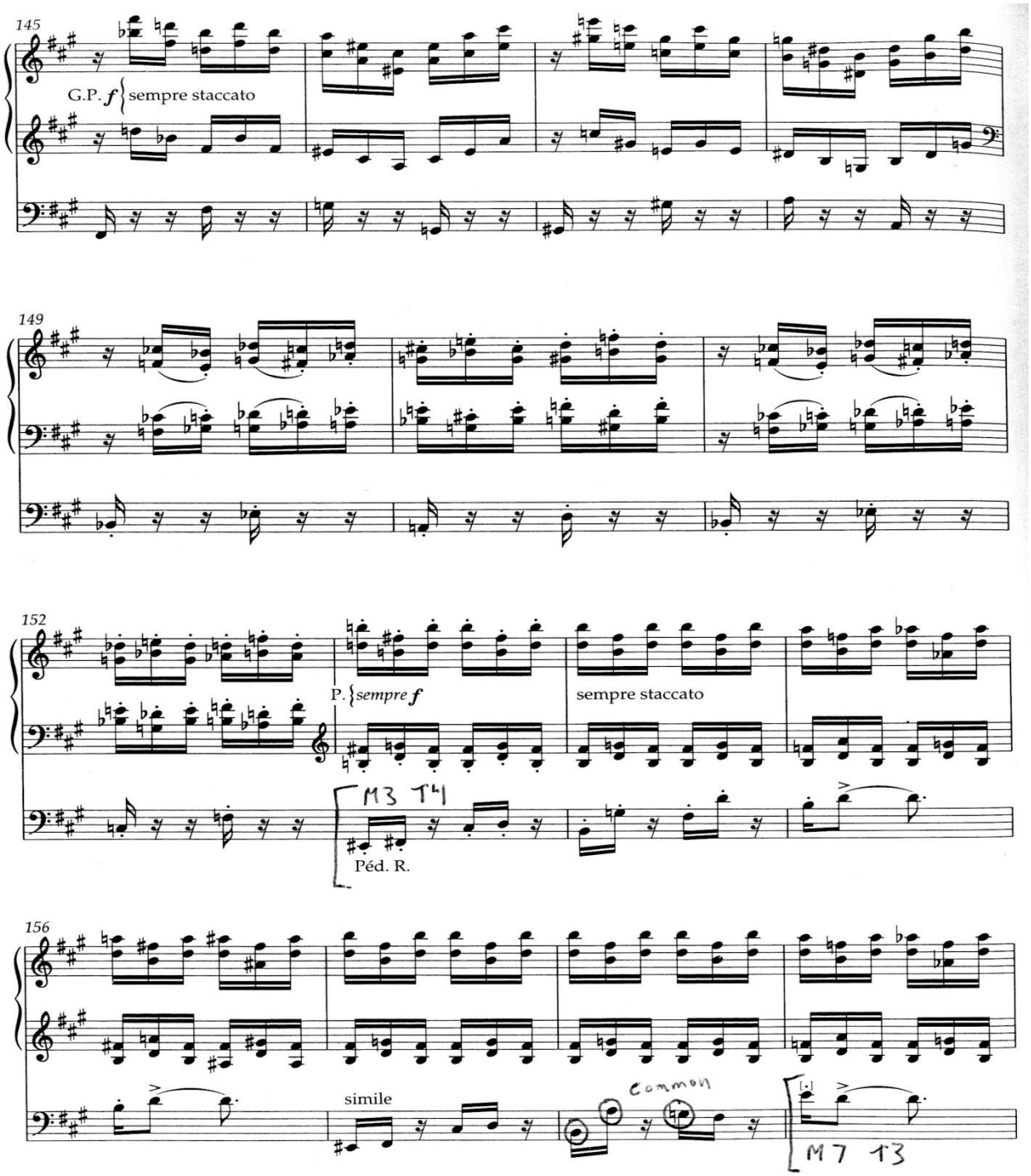


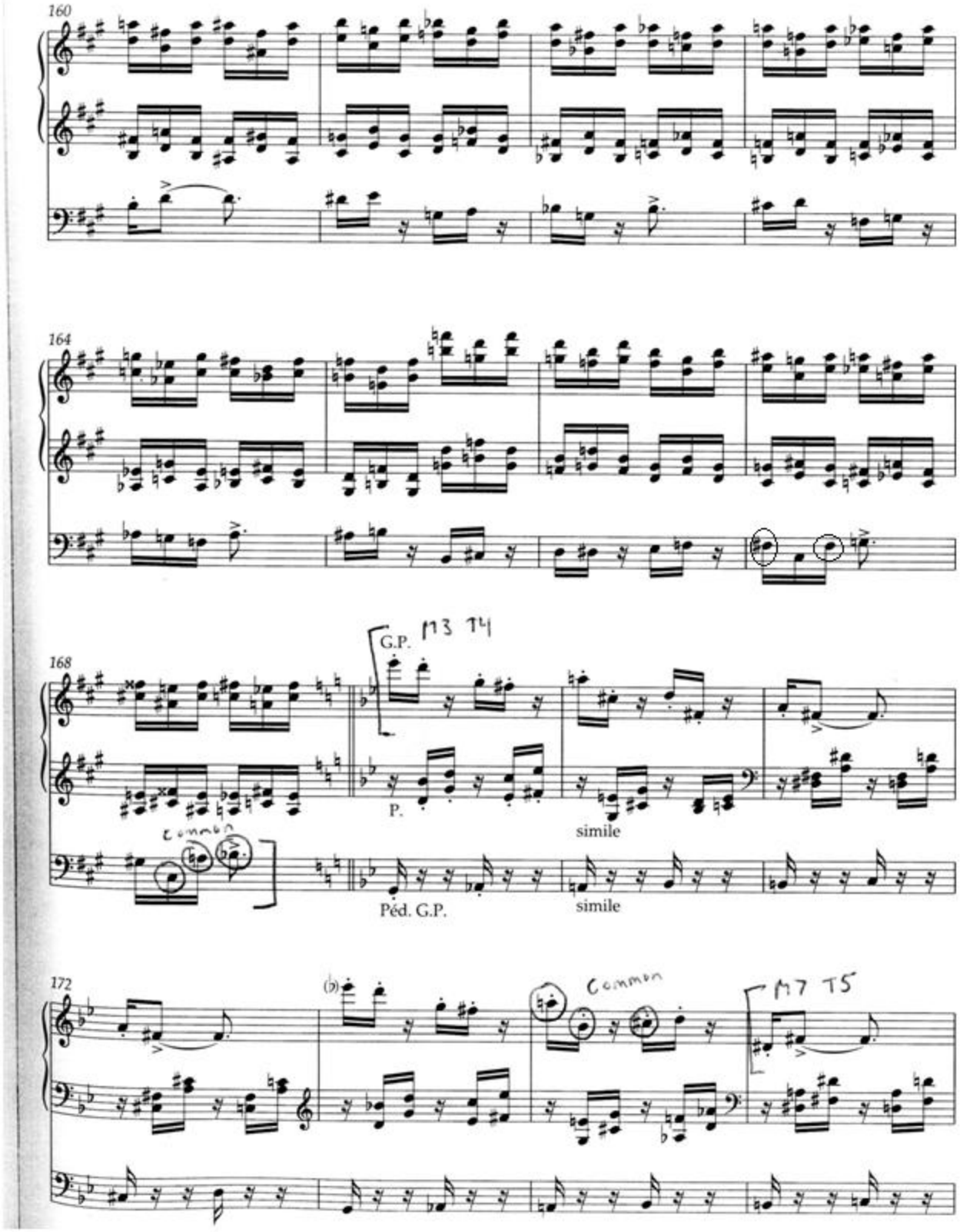
Fifth statement

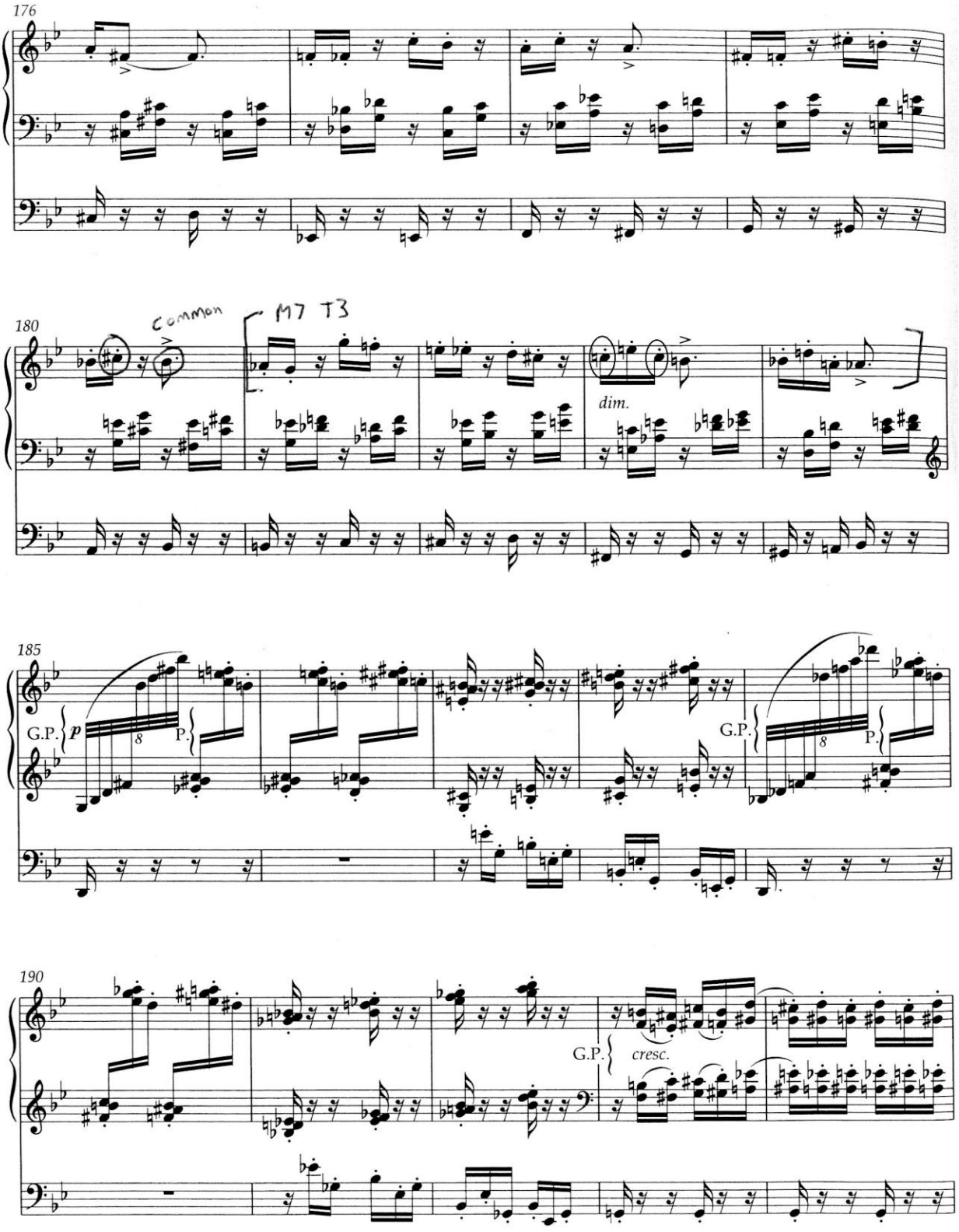
Pg. 38 Part 1: ms 153-158: Mode 3, T4.

Pg. 38 Part 2: ms 159-168: Mode 7, T3. (Passing tone F# in ms 167).

Common tones (ms 158): B, A, G




160
164
168
G.P.
M3 T4
P.
simile
Péd. G.P.
simile
172
Common
M7 T5


176
180
Common
M7 T3
dim.
185
G.P.
p
8
P.
G.P.
8
P.
190
G.P.
cresc.

Sixth statement (Common tones: C#, A, B-Flat from previous measure)

Theme is inverted with a different accompaniment pattern

Theme becomes segmented into three parts:

Pg. 39 Part 1: ms 169-174: Mode 3, T4 (6 measures).

Pg. 39 Part 2: ms 175-180: Mode 7, T5 (6 measures).

Common tones (ms 174): A, B, C#

Pg. 40 Part 3: ms 181-184: Mode 7, T3 (Passing tone C in ms 183), (4 measures).

Common tones (ms 180): B-flat, C#

Compared to the dense quilt patchwork of the main theme in "Feux Follets," the "Scherzo" from the *6ème Symphonie* is more modally consistent. The theme has virtually no chromatic alterations as seen in his previous compositions (at least those analyzed in this dissertation). Also, the *6ème Symphonie* is Vierne's last piece for solo organ. Rollin Smith states that "Vierne's harmonic vocabulary by this time had become so intensely chromatic that one of the themes in each of the first two movements of this symphony utilizes all twelve notes of the chromatic scale."[118] From this study, one may gather that Vierne became more proficient in this form of writing. As a result, his style of free form modal composition (and improvisation) evolved into a more concise and logical form.

Also, during the time between the *24 Pièces de Fantaisie* and the *6ème Symphonie* (1927-1930), Messiaen published his *Le Banquet céleste* (1928), and *Diptyque* (1930). Both of these pieces use the modes of limited transposition. According to Murray:

[118] Smith, *Louis Vierne,* 565.

> Though he was not yet twenty when he wrote "Le Banquet céleste," he had already turned from prescribed harmony to the modes of limited transposition that were to be a main feature of his early work, and it is these, or, more precisely, his uses of one of these, that create a distinctive harmonic movement dominant and tonic only by analogy.[119]

Based on the principle of modal evolution, the chronology of these works does not appear to be merely "coincidental." However, the genesis of these modes still remains a mystery.

It is impossible to tell if Vierne is responsible for the genesis of this modal material (later codified as the modes of limited transposition by Messiaen). There is no known documentary evidence that allows this assertion. Messiaen also denied creating all of them (see footnote 93). It is also unlikely that Vierne and Dupré collaborated on the use of these modes via improvisation practices.[120] However, the evolution in composition regarding the use of these modern harmonies is evident. From evidence germane to this research, this evolution stems from the Paris Conservatoire.

As Vierne's practices evolved throughout this timeframe (1926-1930), his musical ideas and modal usage become more structured and logical in his composition. Thus, it is not surprising to see a more logical modal usage in the "Scherzo" of his *6ème Symphonie* when compared to the earlier "Feux Follets." We can conclude, then, that as the years progressed, these modal elements (that were once used rather loosely) took on a new structure and identity; one that piqued the interest of Olivier Messiaen. Through this interest, Messiaen wrote two

[119] Murray, *French Masters*, 186.

[120] By 1924, Vierne and Dupré (once close friends) were bitter enemies. The crux of the dispute was over the title of "Organiste titulaire de Notre-Dame de Paris." This misuse by Dupré during his first American concert tour (he was Vierne's assistant, *not* the sole organist of the Cathedral) drove a wedge between these two men. The animosity lasted until Viene's death. Dupré even forbid any of his students to play Vierne's compositions during their organ lessons at the Conservatoire. Smith, *Louis Vierne*, 330-343.

compositions (between Vierne's aforementioned pieces), and later codified these modal elements into the modes of limited transposition. This codification was published in his *Nativité du Seigneur* in 1936, one year prior to Vierne's death.

Conclusion

While the brief exploration of Louis Vierne's *24 Pièces de Fantaisie* is finished, the work of fully understanding the compositional tools Vierne uses in this music is just beginning. My intention was not to discuss every composition in this set of 24, but to get the proverbial "ball" rolling. My purpose was to show a harmonic analysis of select pieces from Vierne's *24 Pièces de Fantaisie*. From this analysis one finds some form of modal awareness in Vierne's work that is interpretable through some of the later codified modes of limited transposition. Also, from the "Scherzo" of his *6ème Symphonie*, there is evidence of an evolution in regards to Vierne's modal language.

Understanding the history of how this music was created is important for the general knowledge of all organists and enthusiasts. The survey of the organ studios of Franck, Widor, and Guilmant opened a previously unsuspected potential avenue for this new compositional style that emerged from education and discipline. We encountered the brilliance of Aristide Cavaillé-Coll and his music-altering instruments that paved the way for this new music to emerge. Many of his instruments remain, in their original condition today. Playing them is a learning experience, one that cannot be replicated here in the United States. True understanding of this music is a learning process, one that can lead any artist to a more refined version of interpretation. Consequently, the more one internalizes these processes and understands the instruments and atmospheres these composers spent their entire lives working in, the better they will become as artists and interpreters of these respective compositions.

Likewise, the analysis of this music becomes its own process of interpretation. Thus, there may be more than one outcome for each piece in question. However, how do we truly know which one of these outcomes is actually what Vierne used when he sat down and put pen to paper? It will take the work of future organists and music theorists to reach an informed and ultimate conclusion. I hope that this work will inspire and stimulate the curiosity of current and future generations to take this task to the next level. Louis Vierne left us with a wealth of music to explore, not just upon the organ, or through our headphones, but also through our intellectual knowledge of the workings of music. As performers and scholars it is important to remember: we must go to great lengths to understand exactly what is happening musically and theoretically, not only to give our listeners a sense of musical understanding, but to help them (and ourselves) understand the mind and personality of the man behind the music.

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Vierne, Louis. *6ème Symphonie,* Op. 59, Edited by Helga Schauerte-Maubouet. Kassel: Bärenreiter-Verlag, 2010.

Appendix:

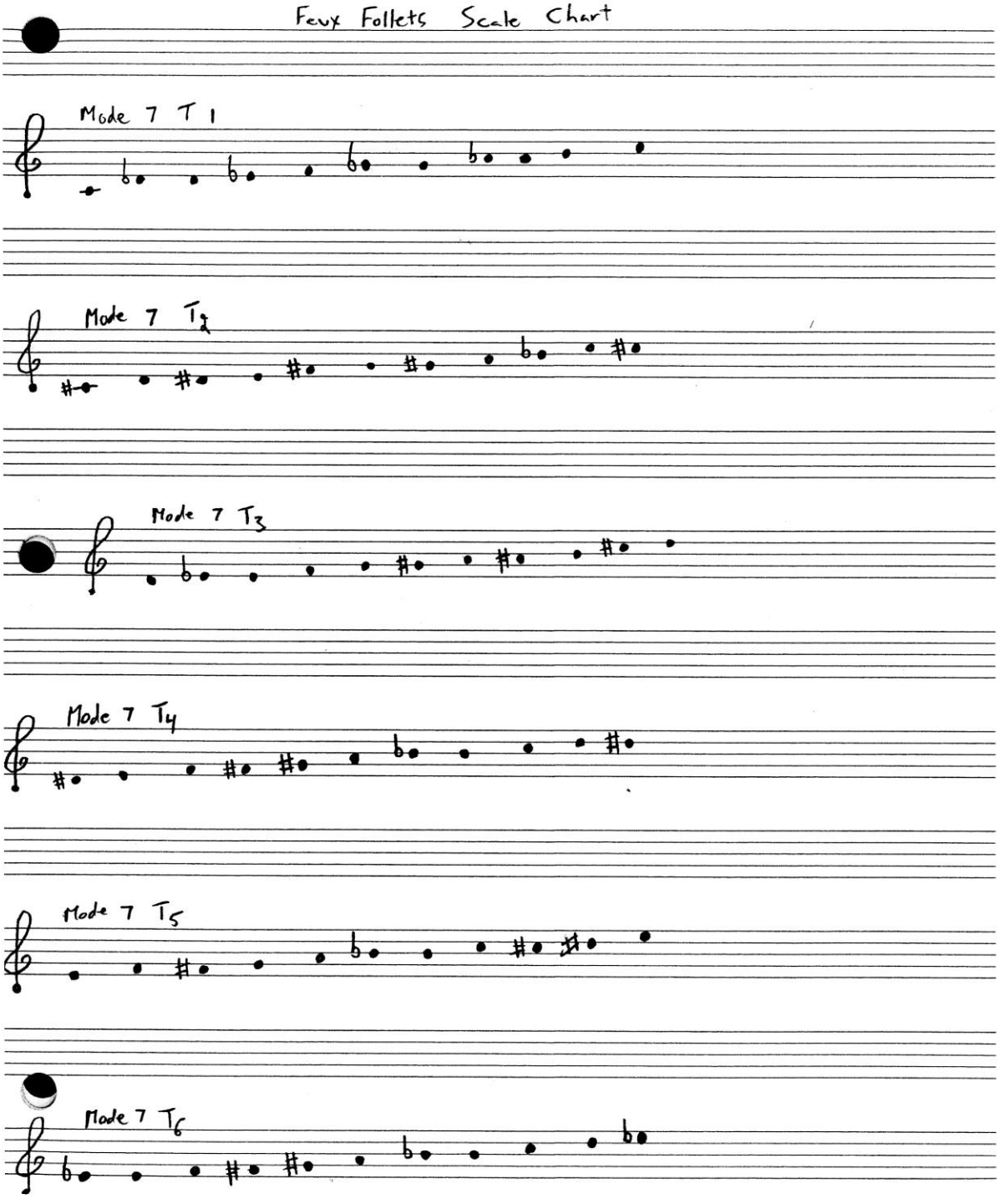
Scale Charts and Analyzed Scores

I: “Feux Follets”

II. “Fantômes”

III. “Cathédrales”

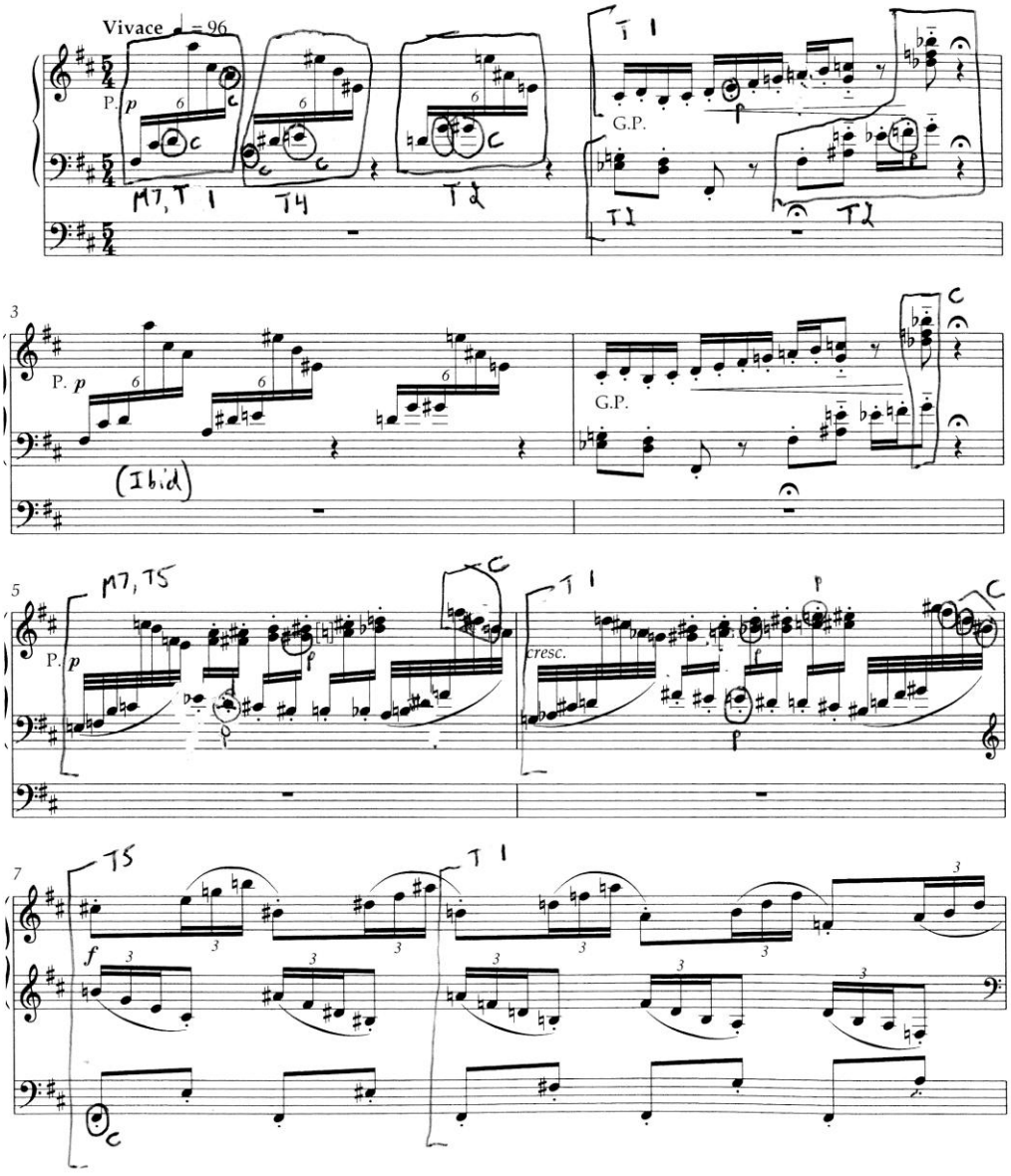
Feux Follets Scale Chart

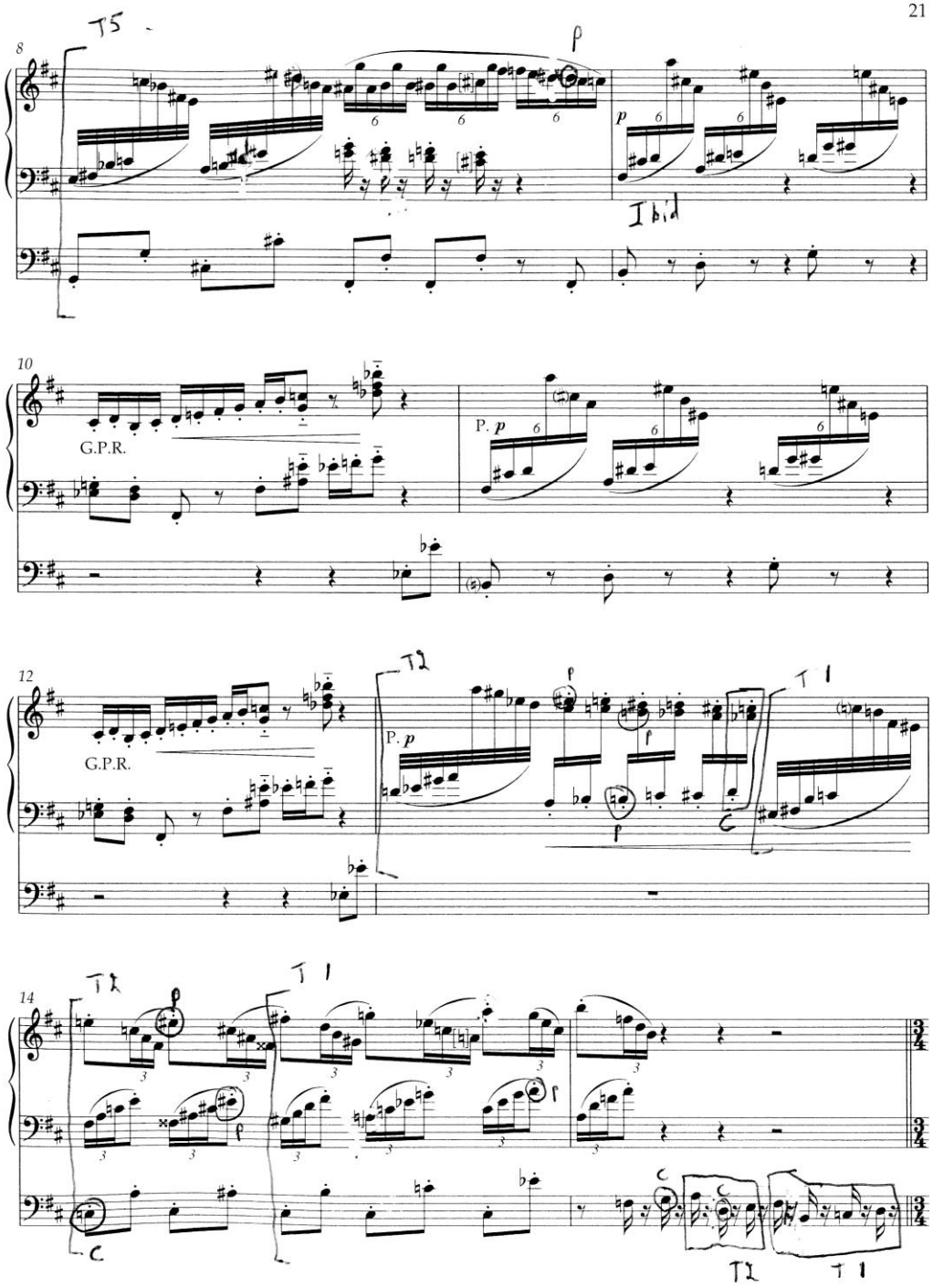


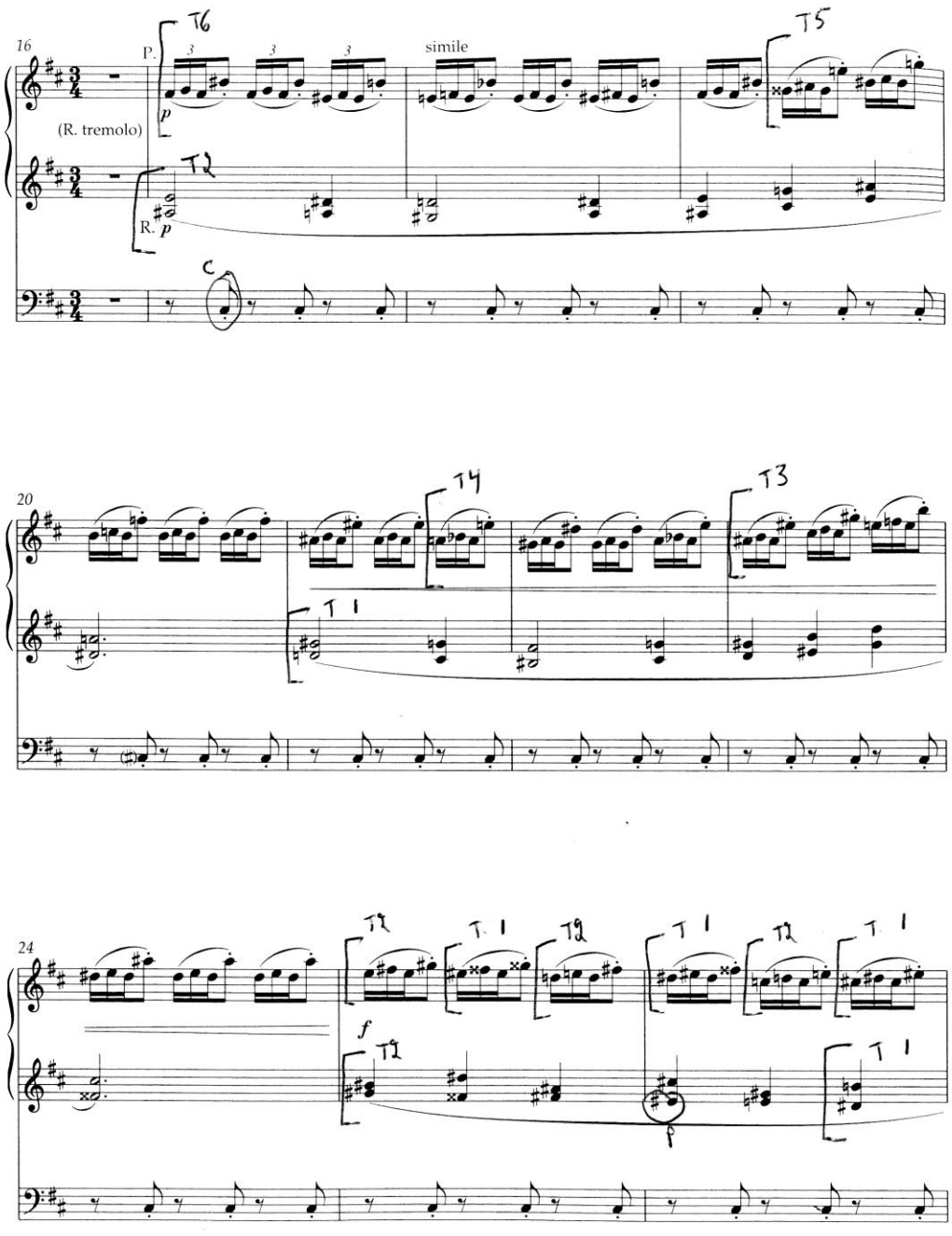
A mon ami Charles Courbouin
Organiste de Wanamaker Auditorium à Philadelphie (U.S.A.)

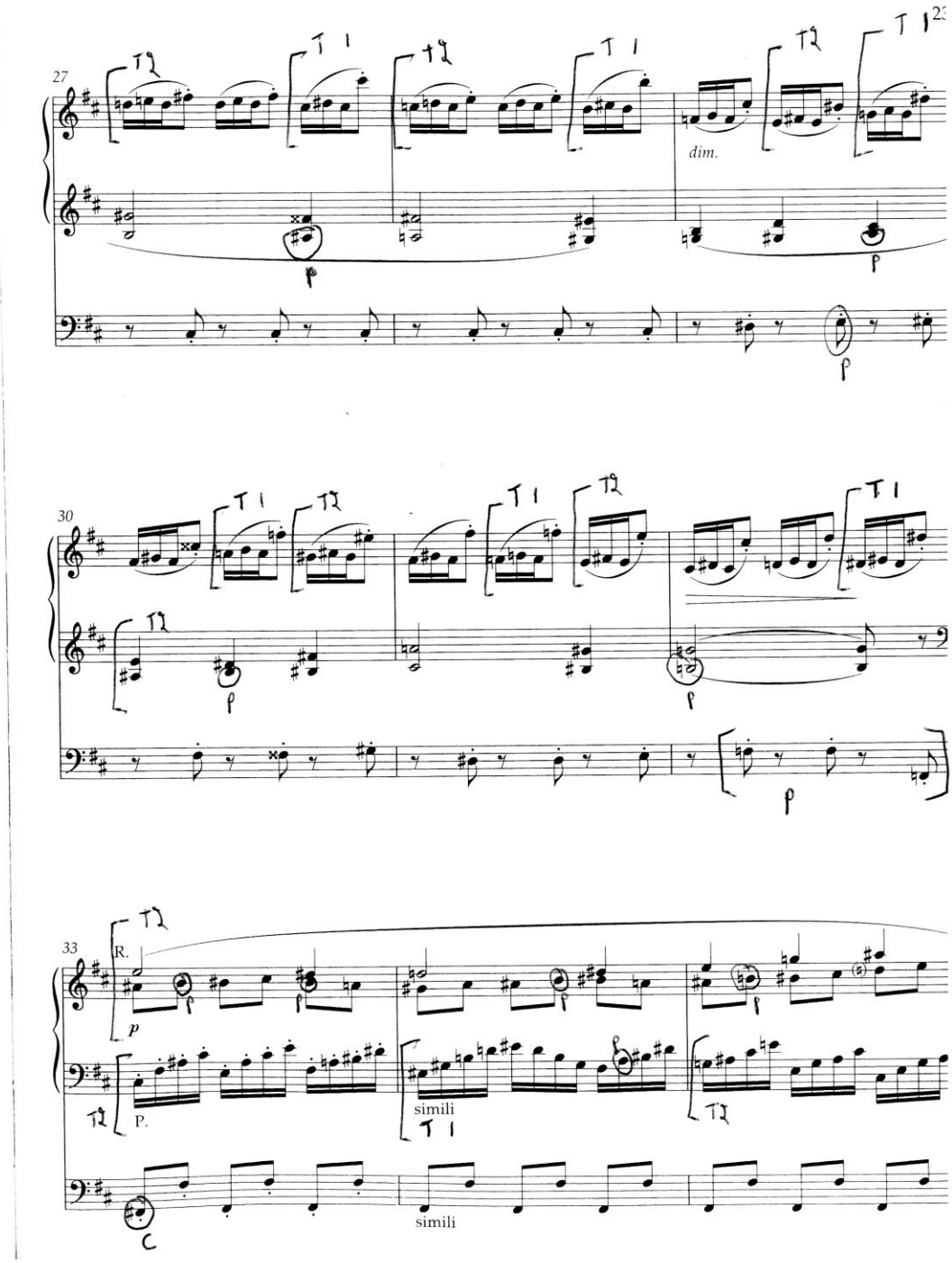
Feux follets

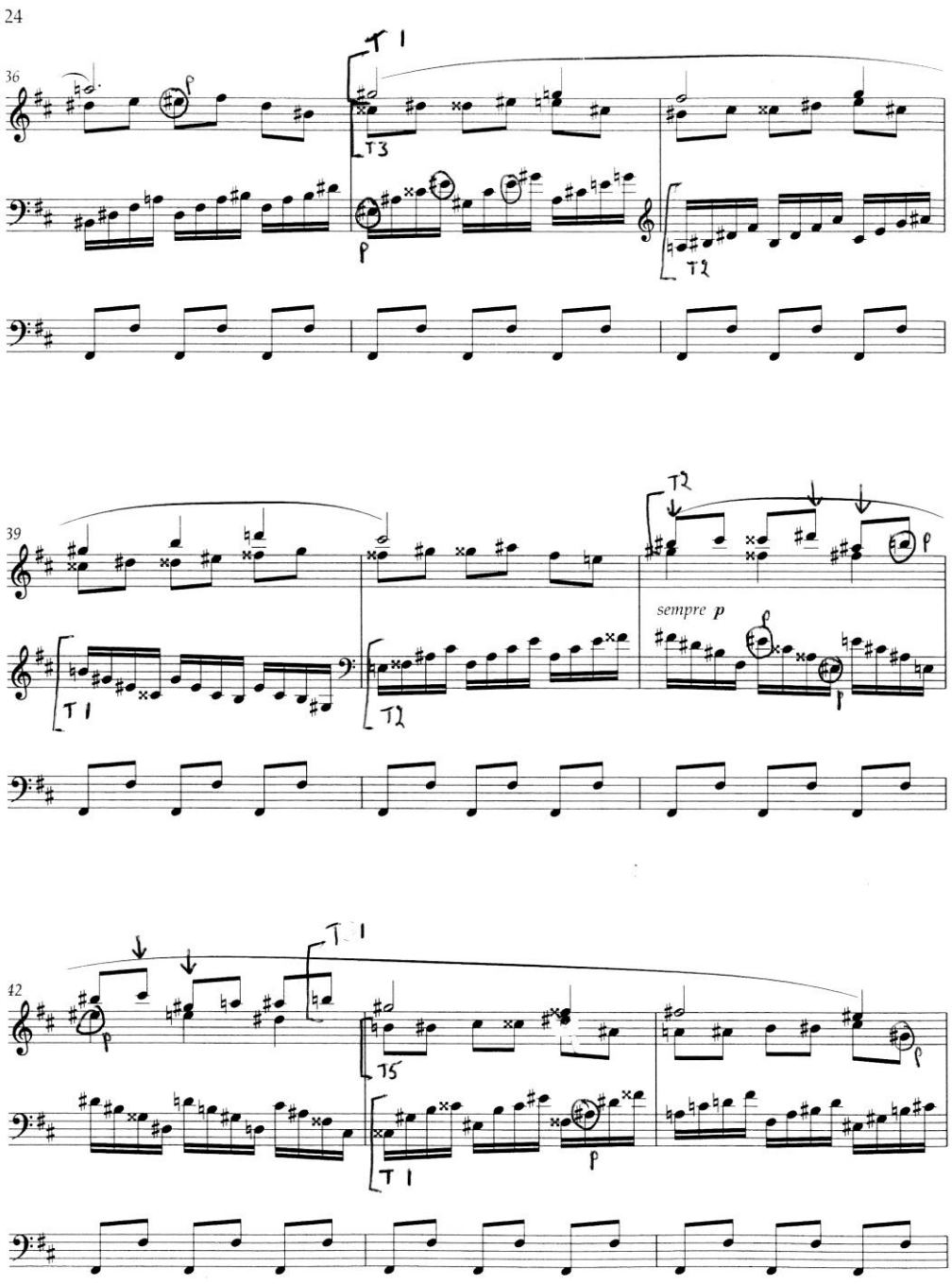
R. Cor de nuit 8, Flûte 4, Voix humaine (Livre II, 10)
P. *(espressif)* Bourdon 8, Flûte 4, Flageolet, Nasard
G. Flûte et Bourdon 8, Salicional 8, Octave 4
Péd. Flûte 16, 8; G. accouplé au P.

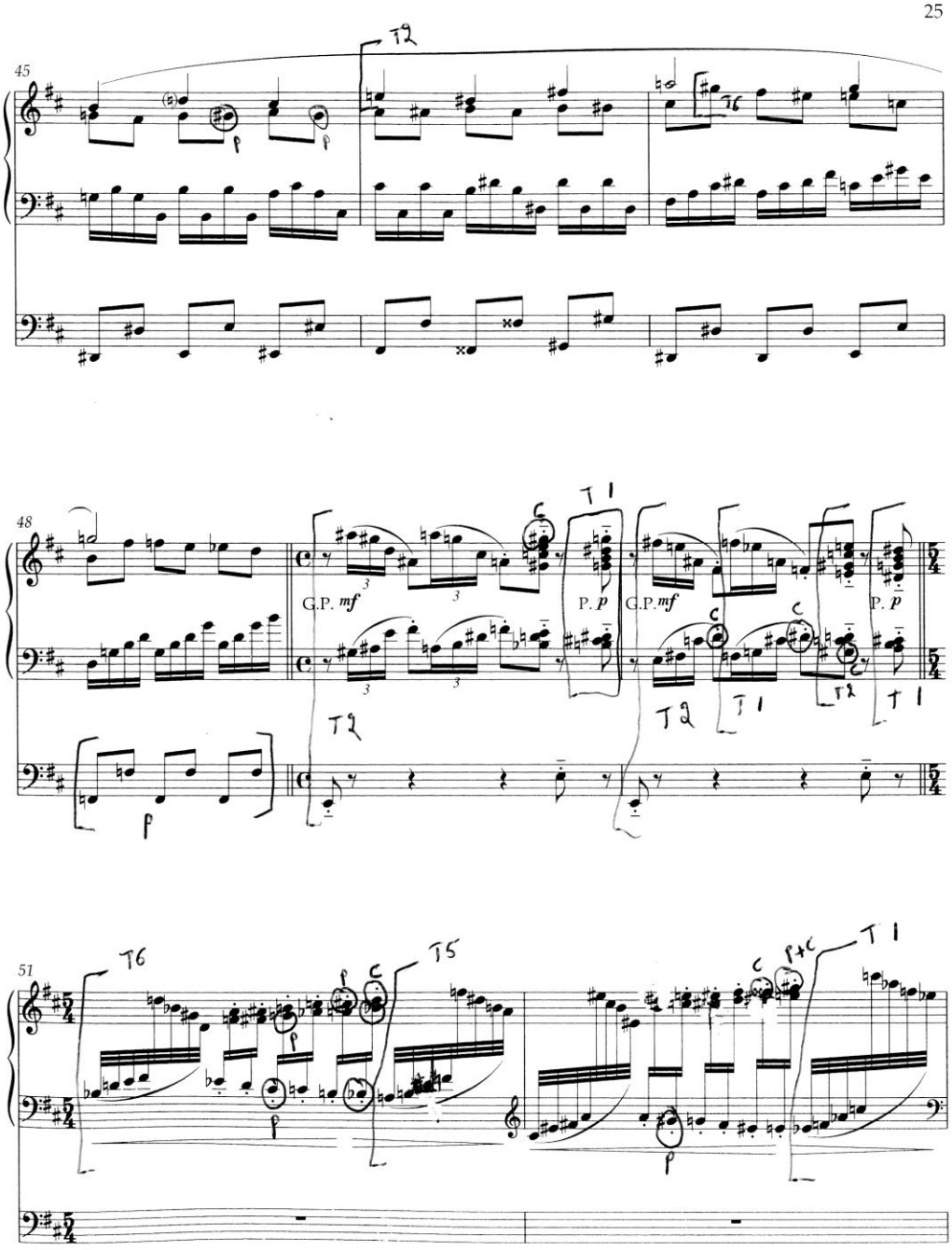


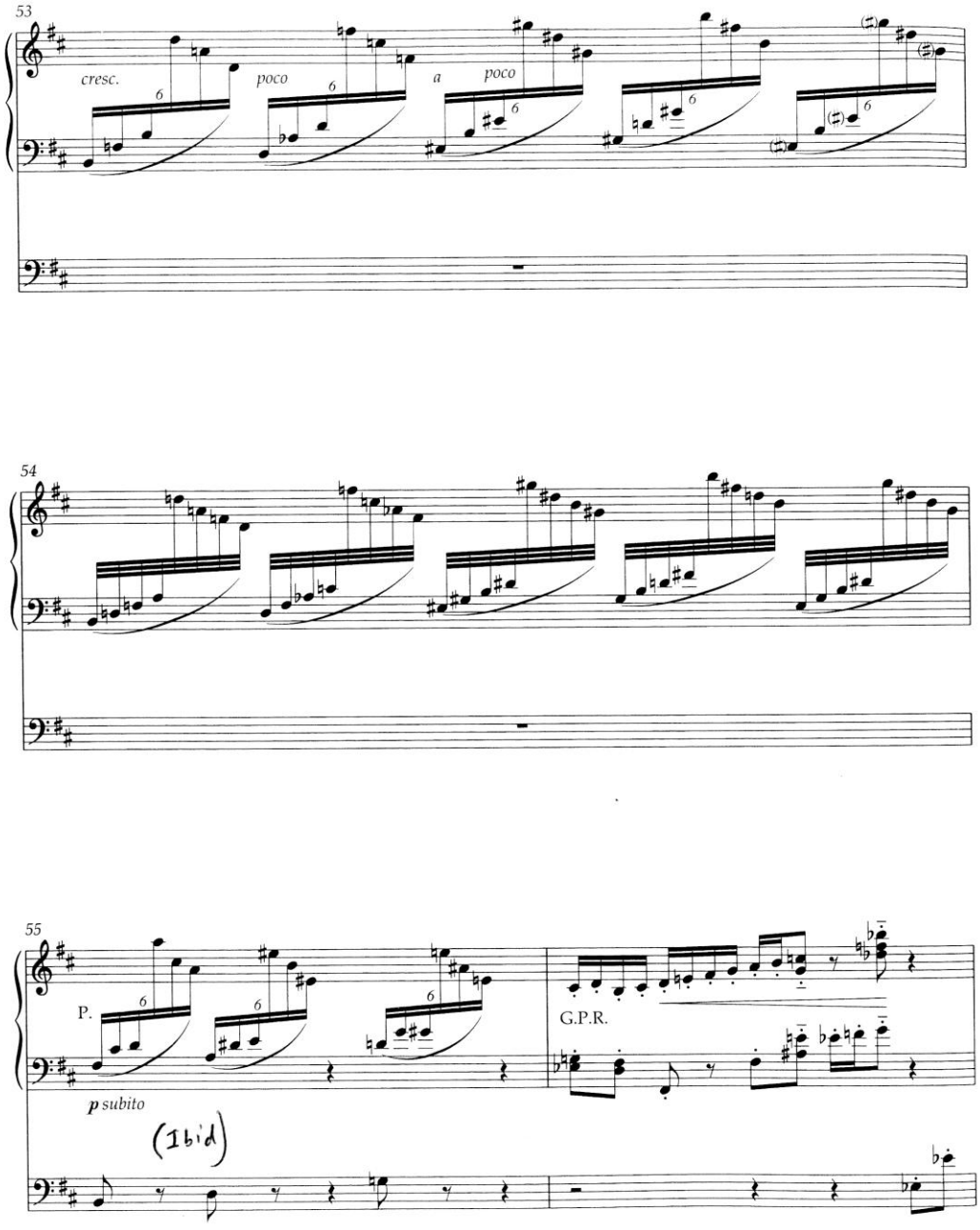

8
T5
p
Ibid
10
G.P.R.
P. p
12
G.P.R.
T2
P. p
T 1
14
T2
T 1
T2
T 1

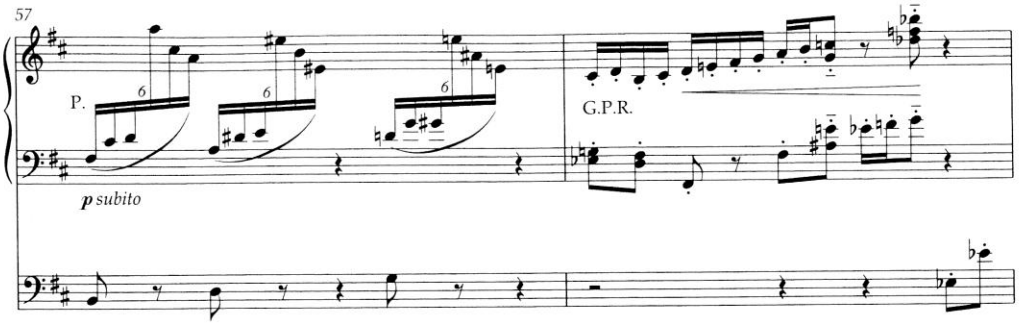

16
P.
T6
3
3
3
simile
T5
(R. tremolo)
p
T2
R.
p
C
20
T4
T3
T1
24
T2
T1
T2
T1
T2
T1
f
T2
T1
p

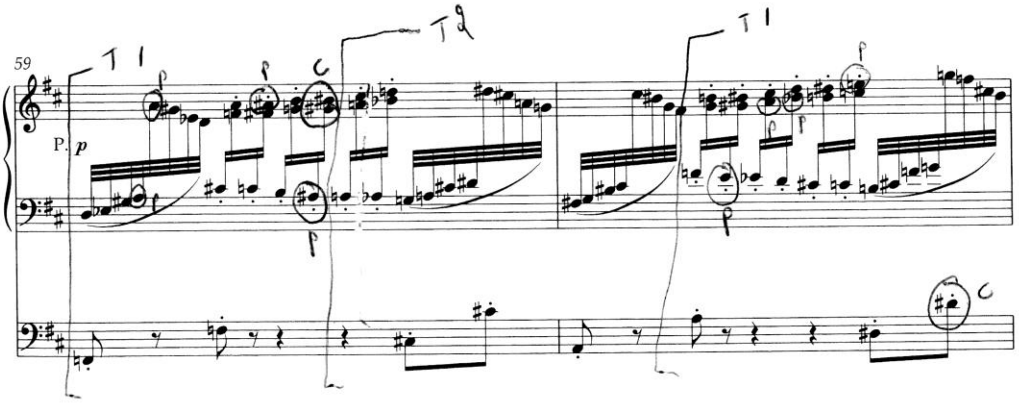

27
dim.
30
33
R.
P.
simili
simili

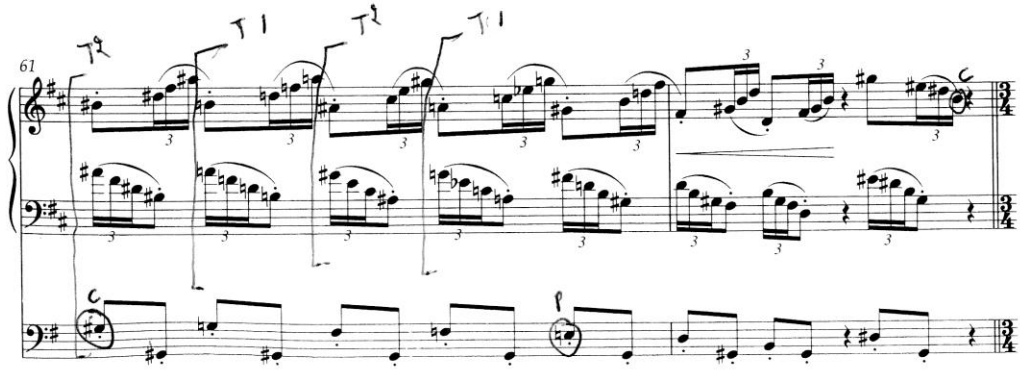

24
36
T 1
T3
p
T2
39
T2
T 1
T2
sempre p
p
42
T 1
T5
T 1
p
p

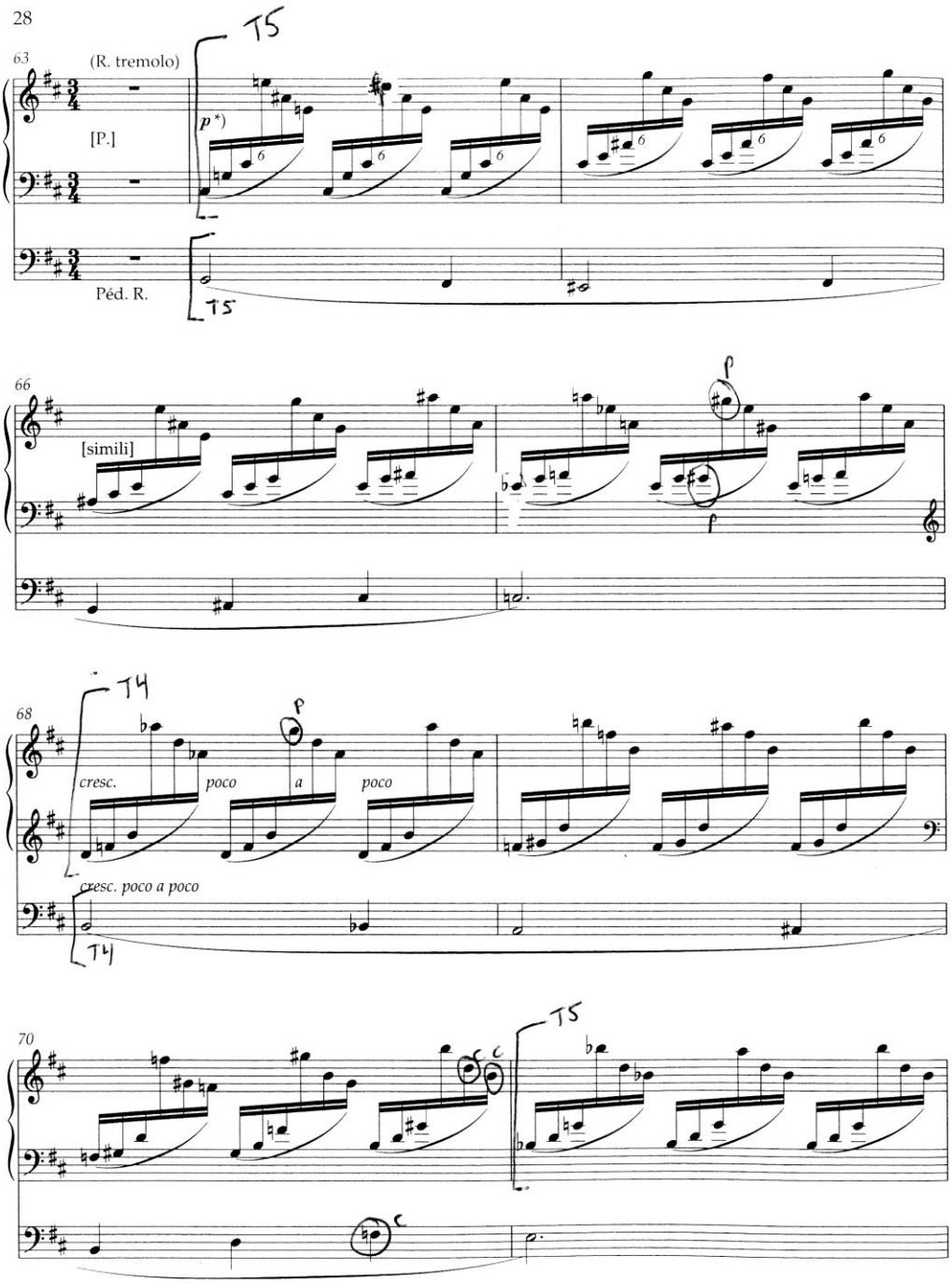

45
T2
48
G.P. mf
P. p
G.P. mf
P. p
T1
T2
51
T6
T5
T1

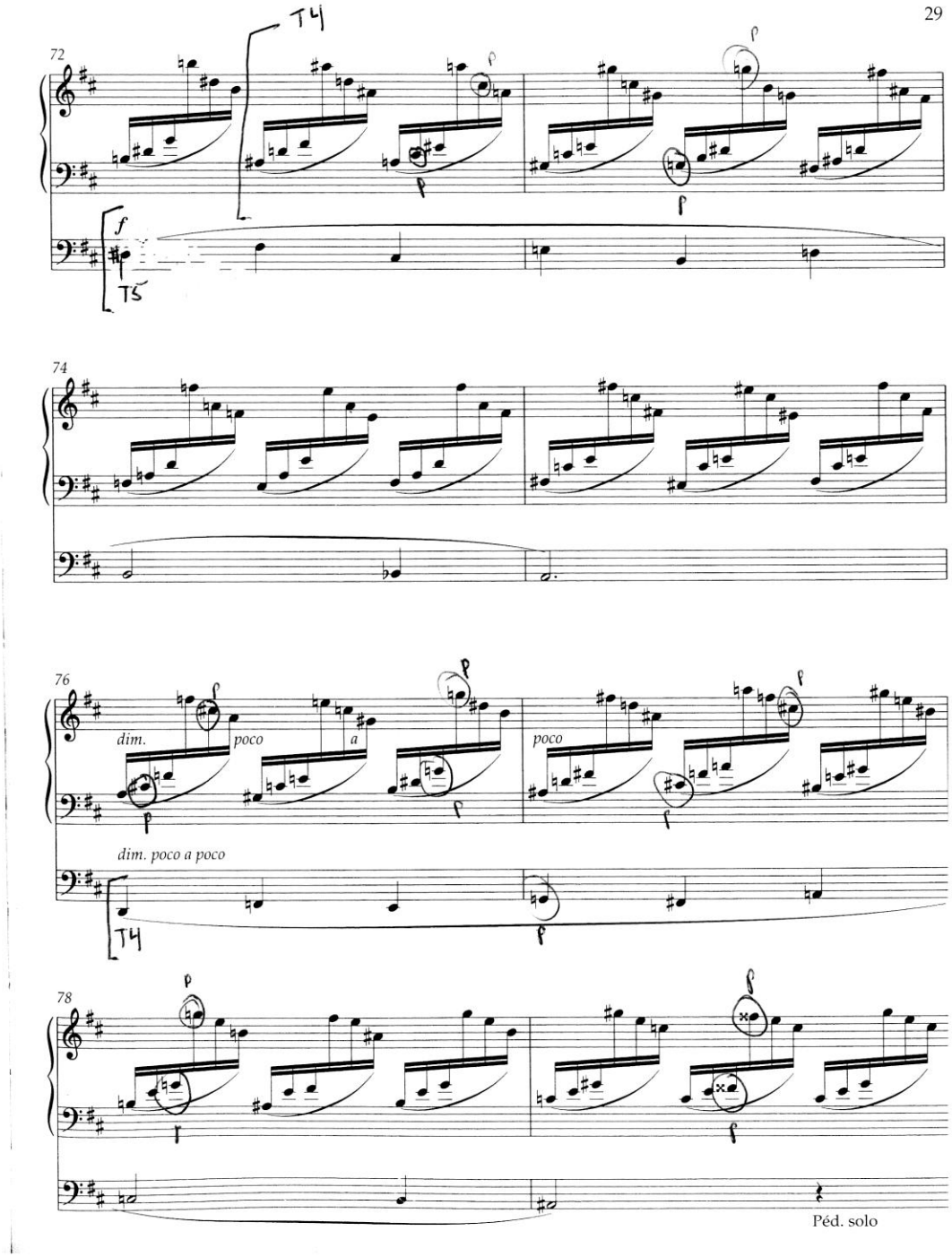

53
cresc.
poco
a
poco
54
55
P.
G.P.R.
p subito
(Ibid)

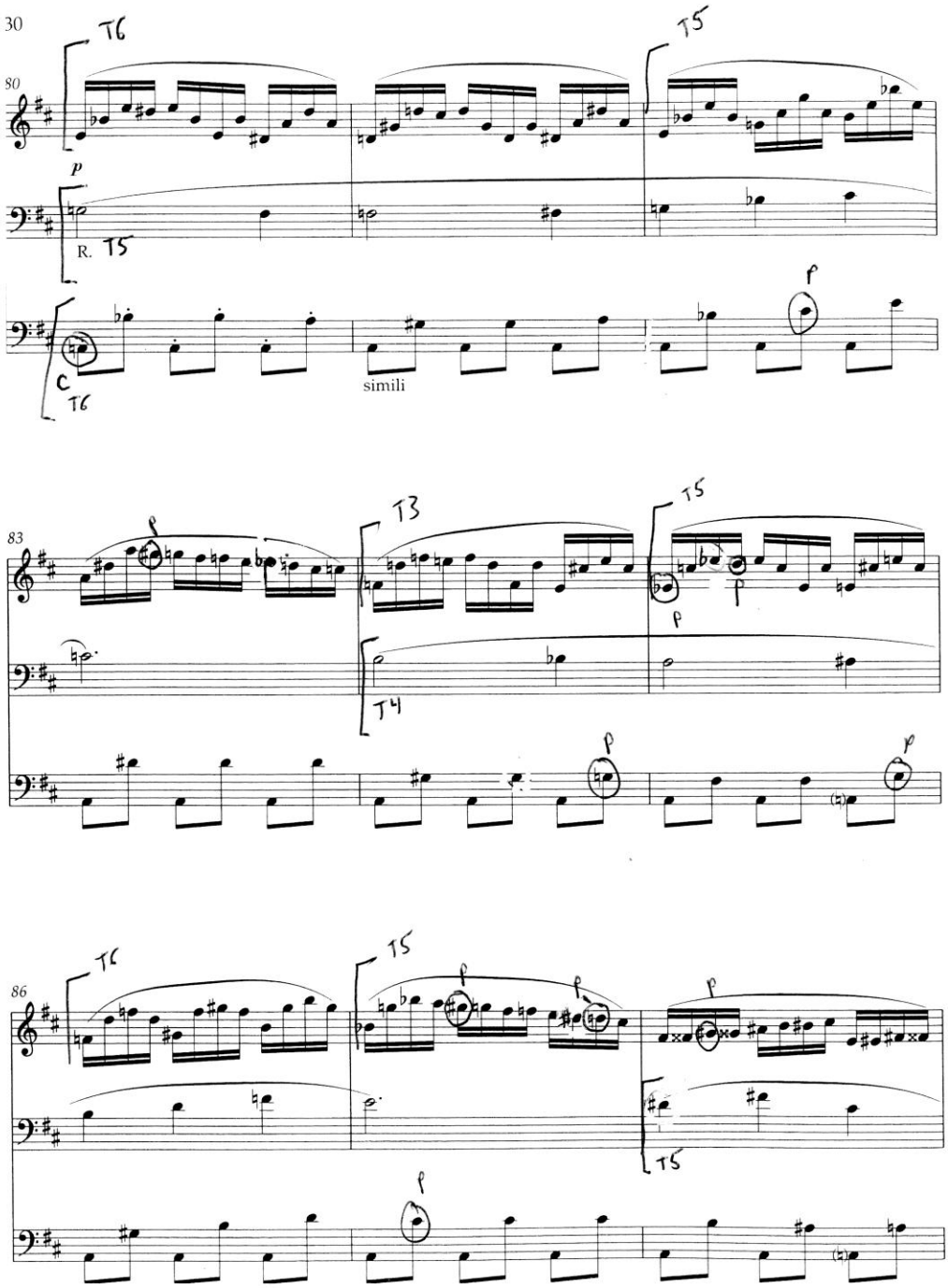

57
P.
G.P.R.
p subito

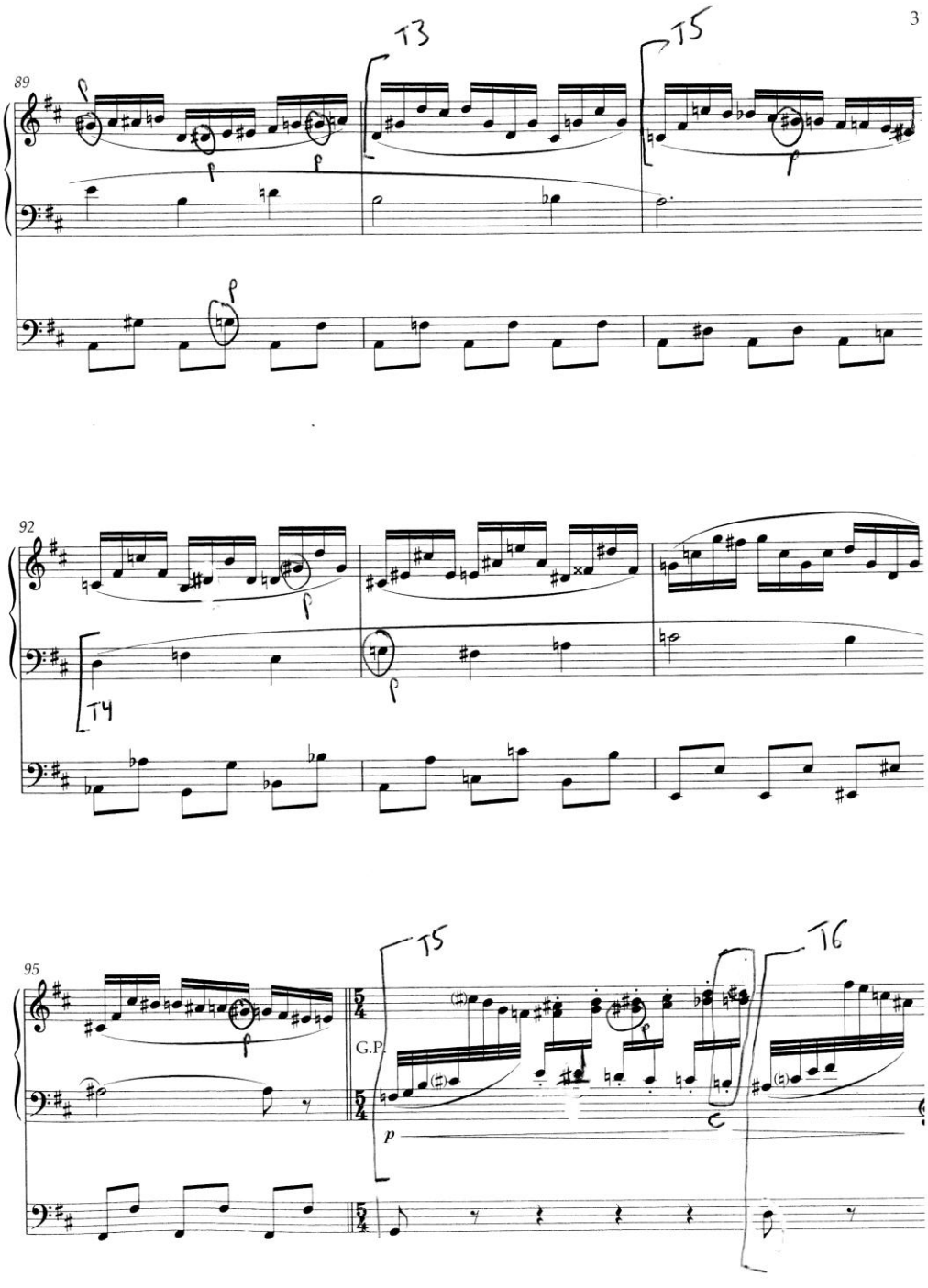

59
P.
p
T1
T2
T1

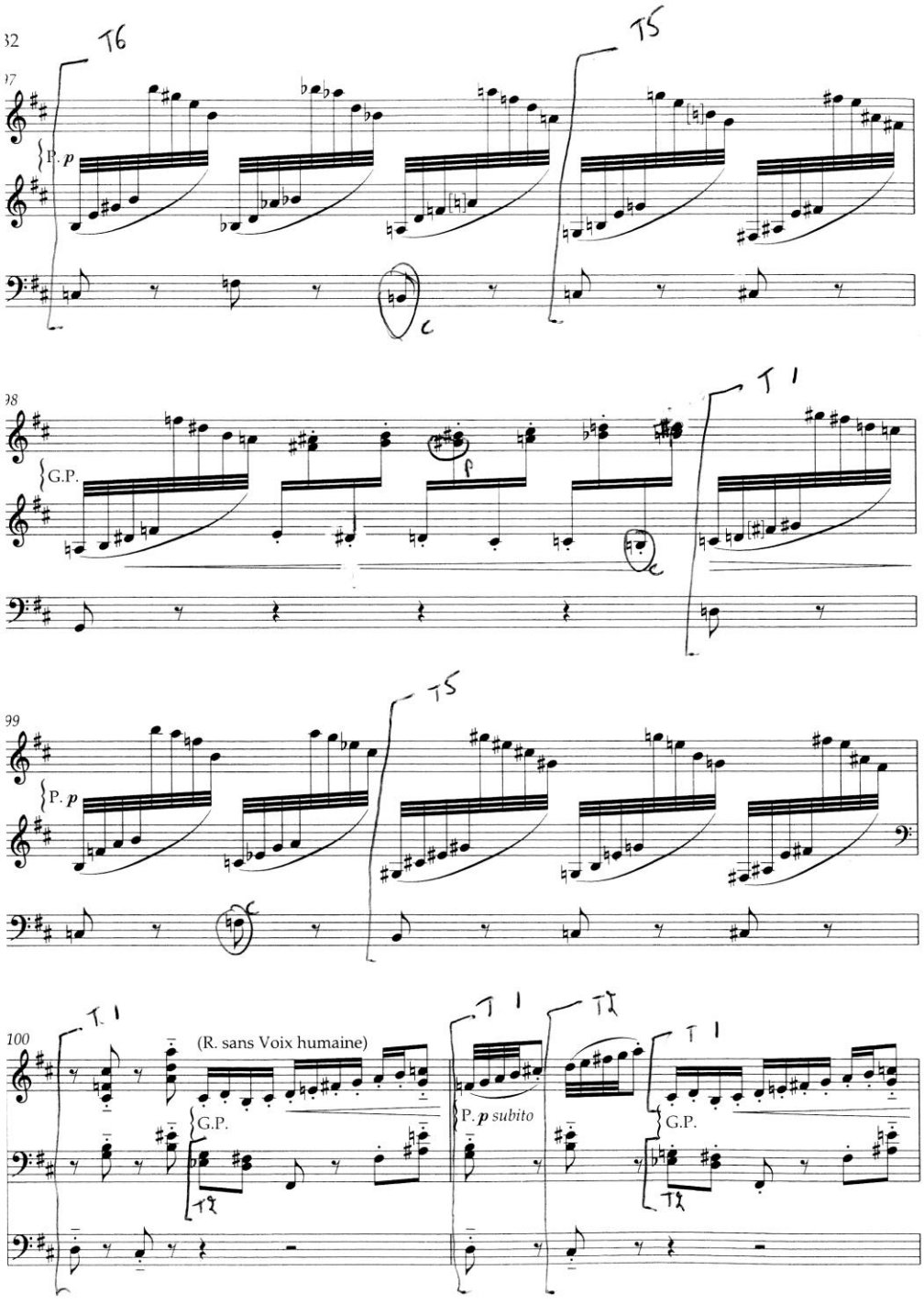

61
T2
T1
T2
T1

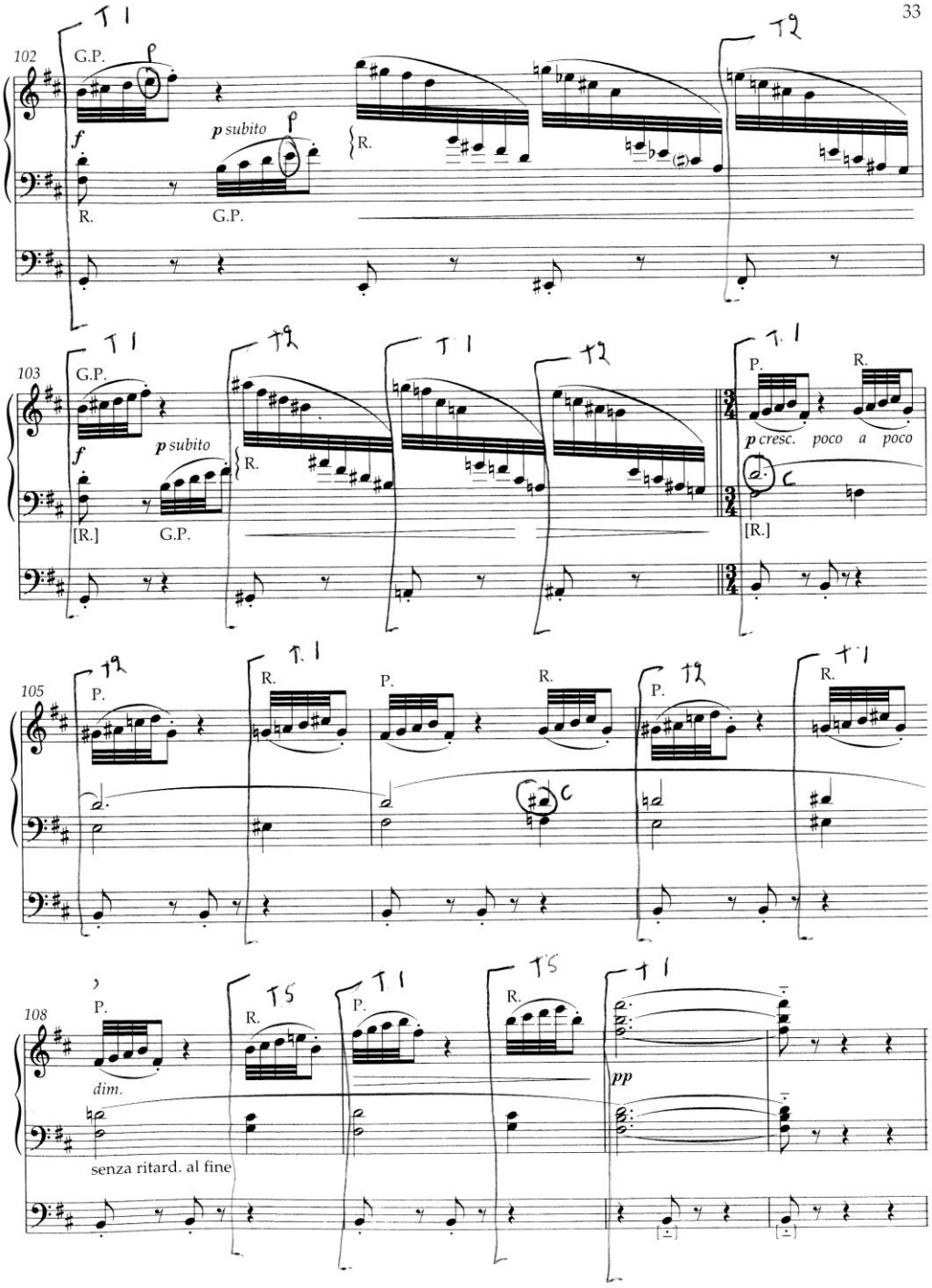

28
63
(R. tremolo)
T5
p *)
[P.]
Péd. R.
T5
66
[simili]
p
f
68
T4
cresc.
poco
a
poco
p
cresc. poco a poco
T4
70
T5
c
c

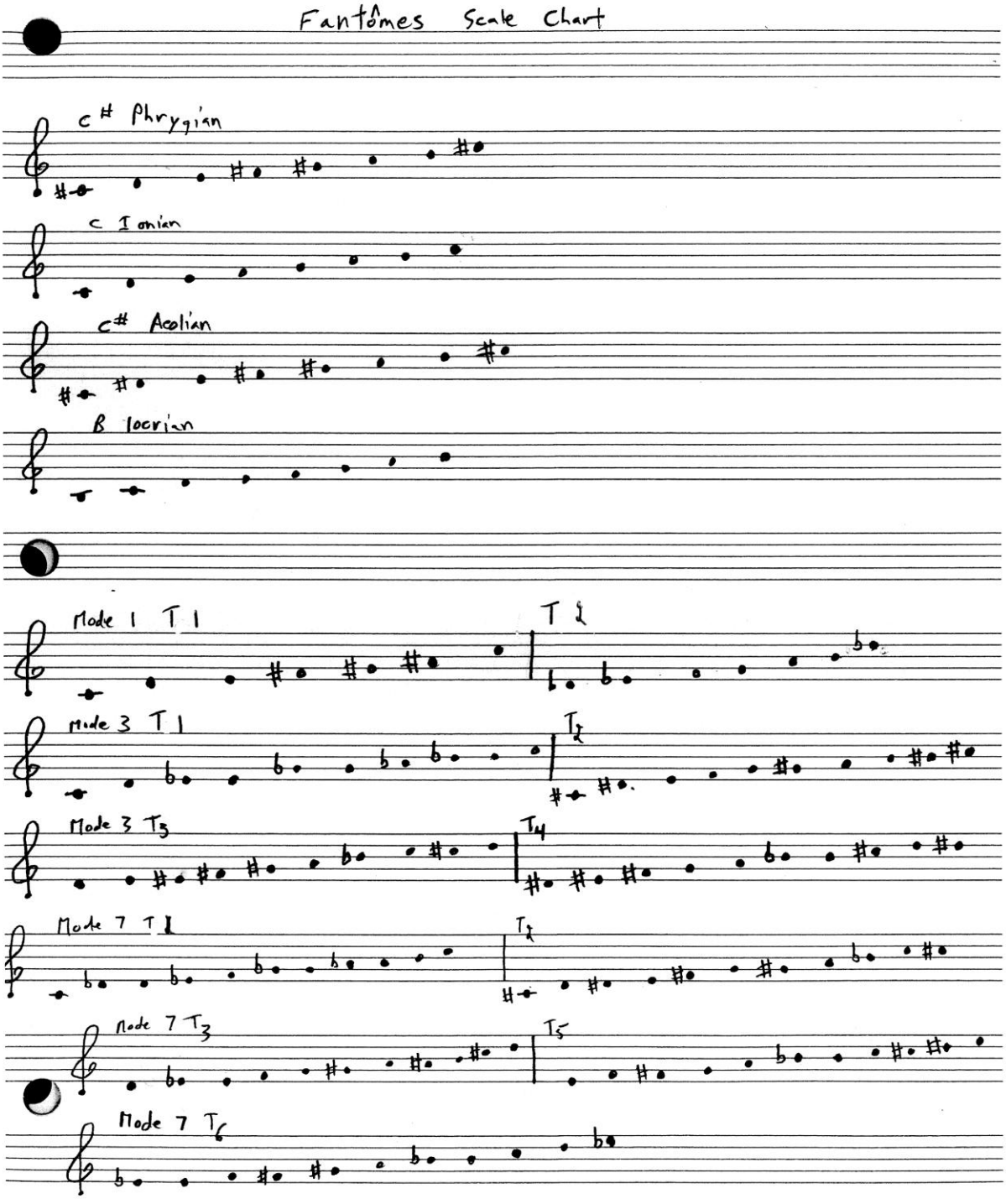

72
T4
f
T5
74
76
dim.
poco
a
poco
dim. poco a poco
T4
78
Péd. solo


30
80
T6
T5
p
R.
T5
C
T6
simili
f
83
T3
T5
p
T4
p
p
86
T6
T5
f
f
p
T5
p


89
T3
T5
92
T4
95
T5
T6
G.P.
p


T6
T5
P. p
G.P.
T 1
T5
P. p
T. 1
(R. sans Voix humaine)
G.P.
T 1
T2
P. p subito
T 1
T2
G.P.


102
G.P.
f
p subito
R.
G.P.
103
G.P.
f
p subito
[R.]
G.P.
p cresc. poco a poco
[R.]
105
P.
R.
108
P.
dim.
senza ritard. al fine
R.
pp


Fantômes Scale Chart
c# Phrygian
c Ionian
c# Aeolian
B locrian
Mode 1 T 1
T 2
Mode 3 T 1
T2
Mode 3 T3
T4
Mode 7 T 1
T2
Mode 7 T3
T5
Mode 7 T6

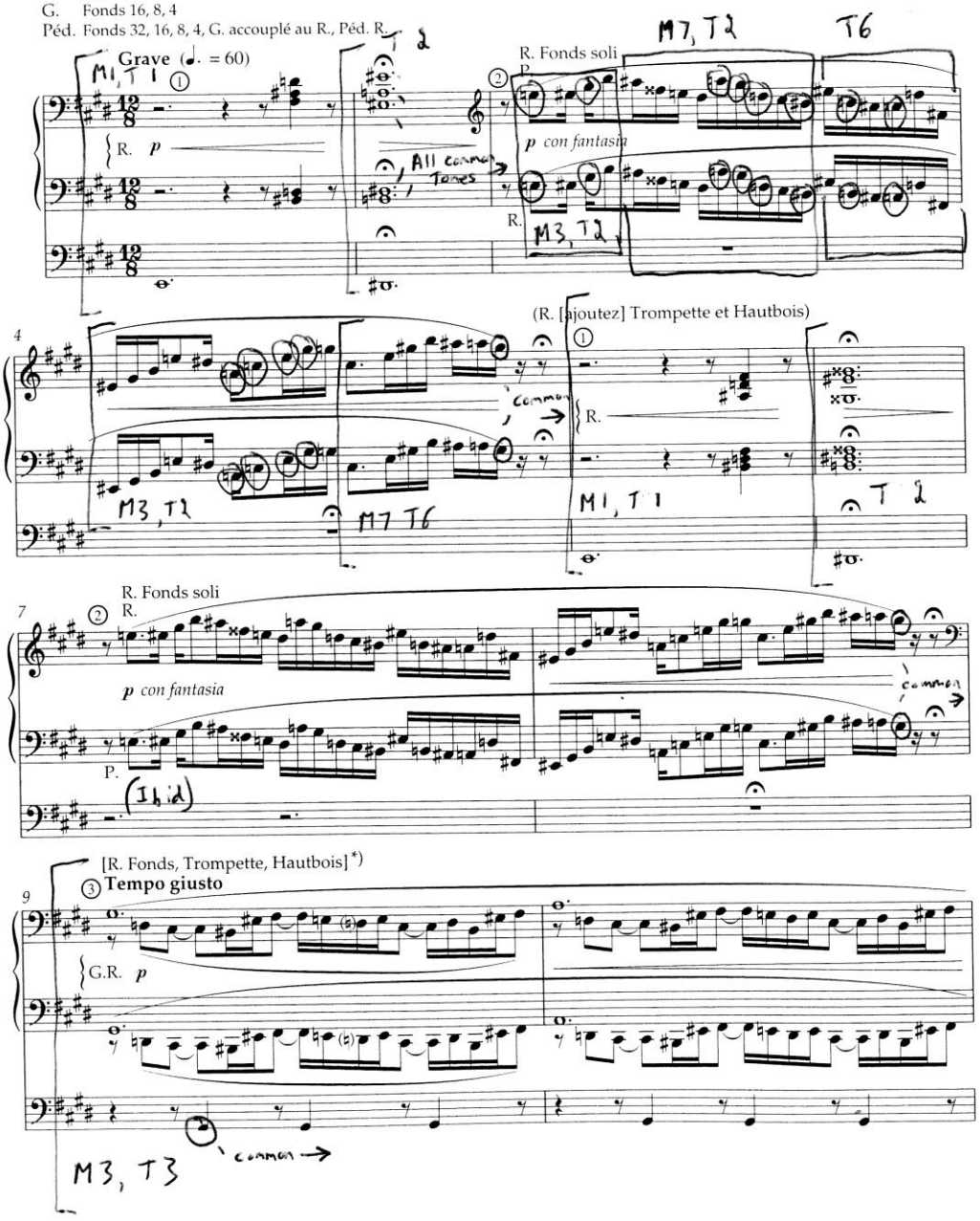
A mon élève Pierre Aucray

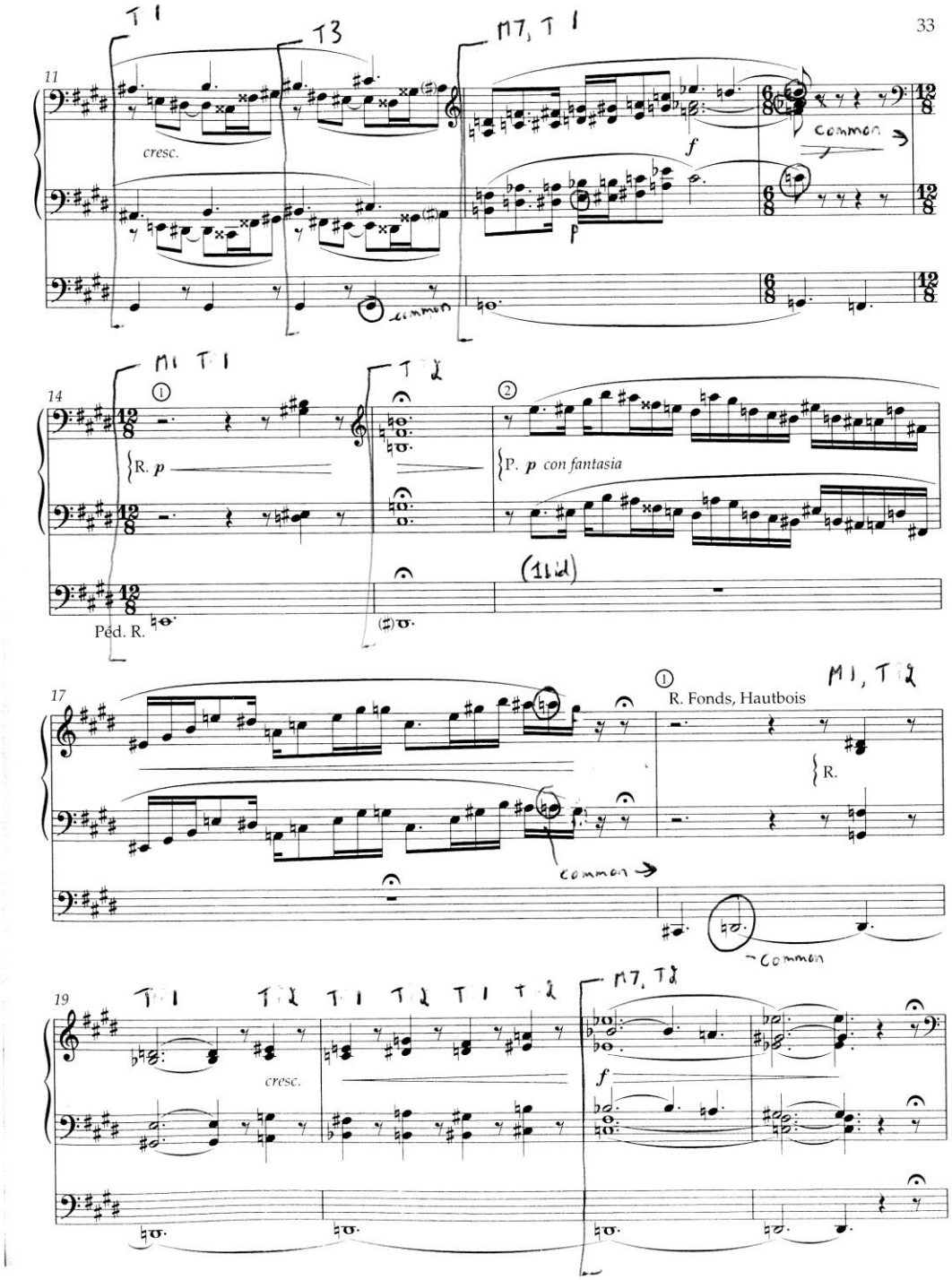
Fantômes

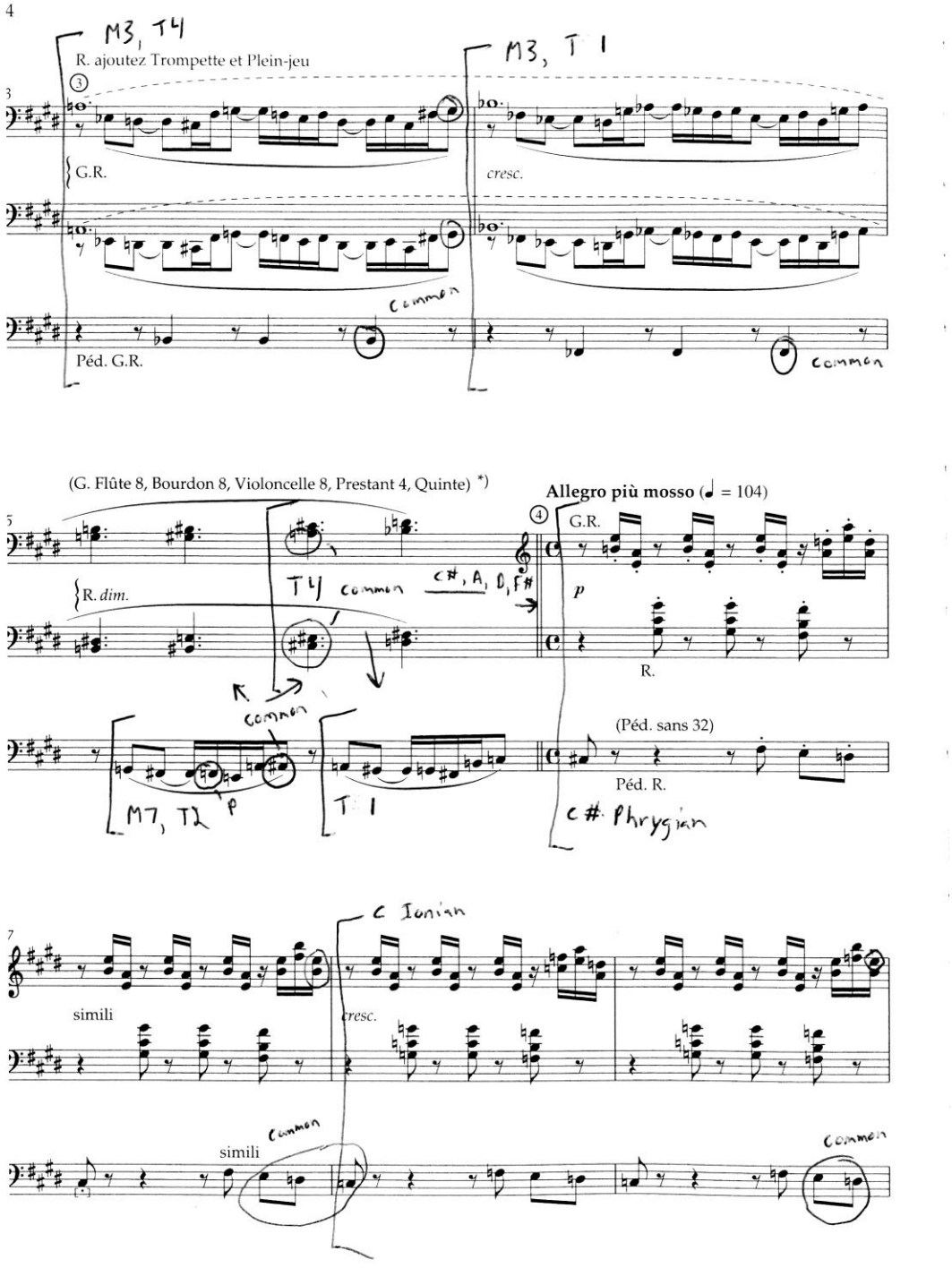
(pour le concert seulement)

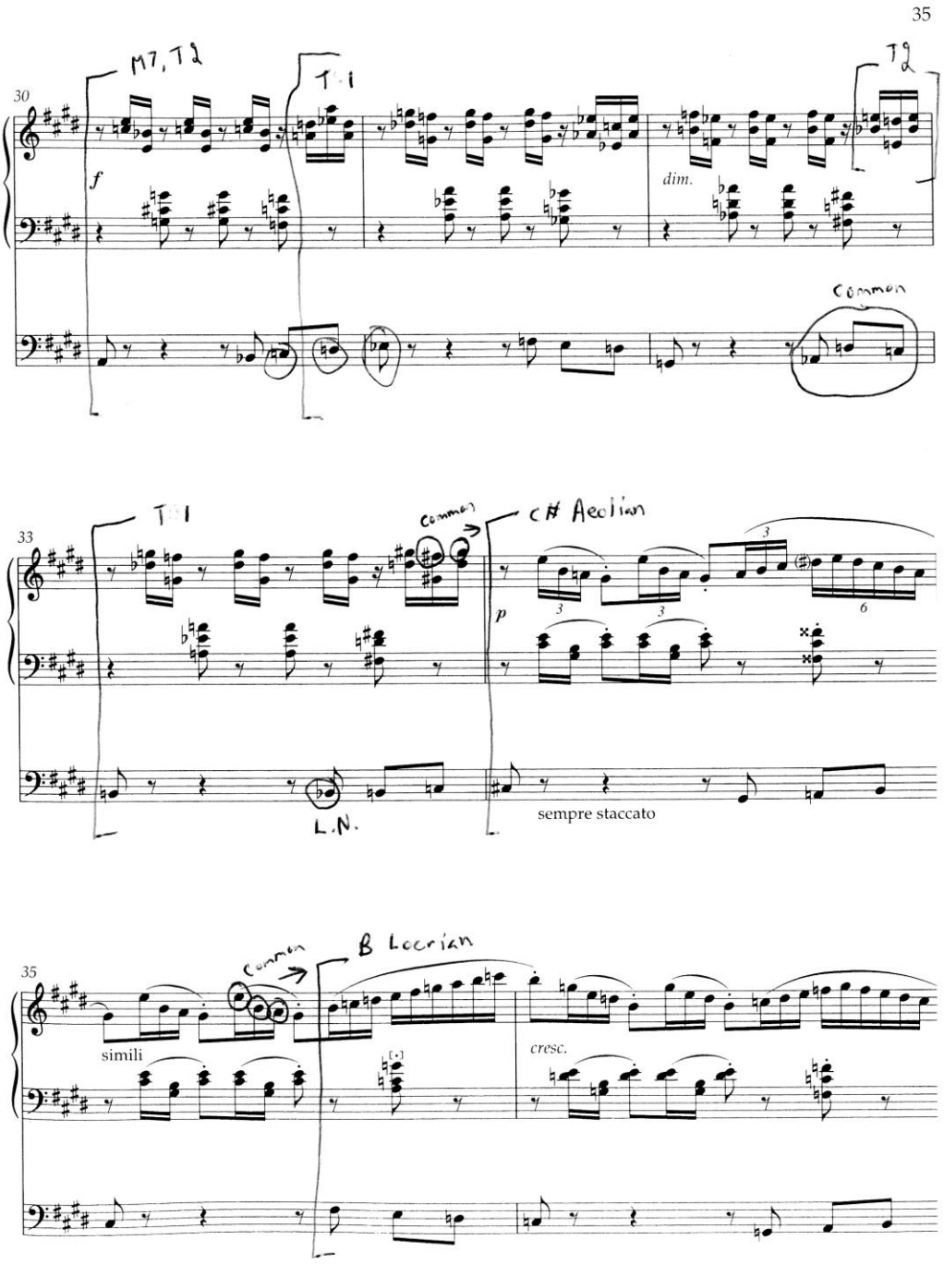
(Livre III, 16)

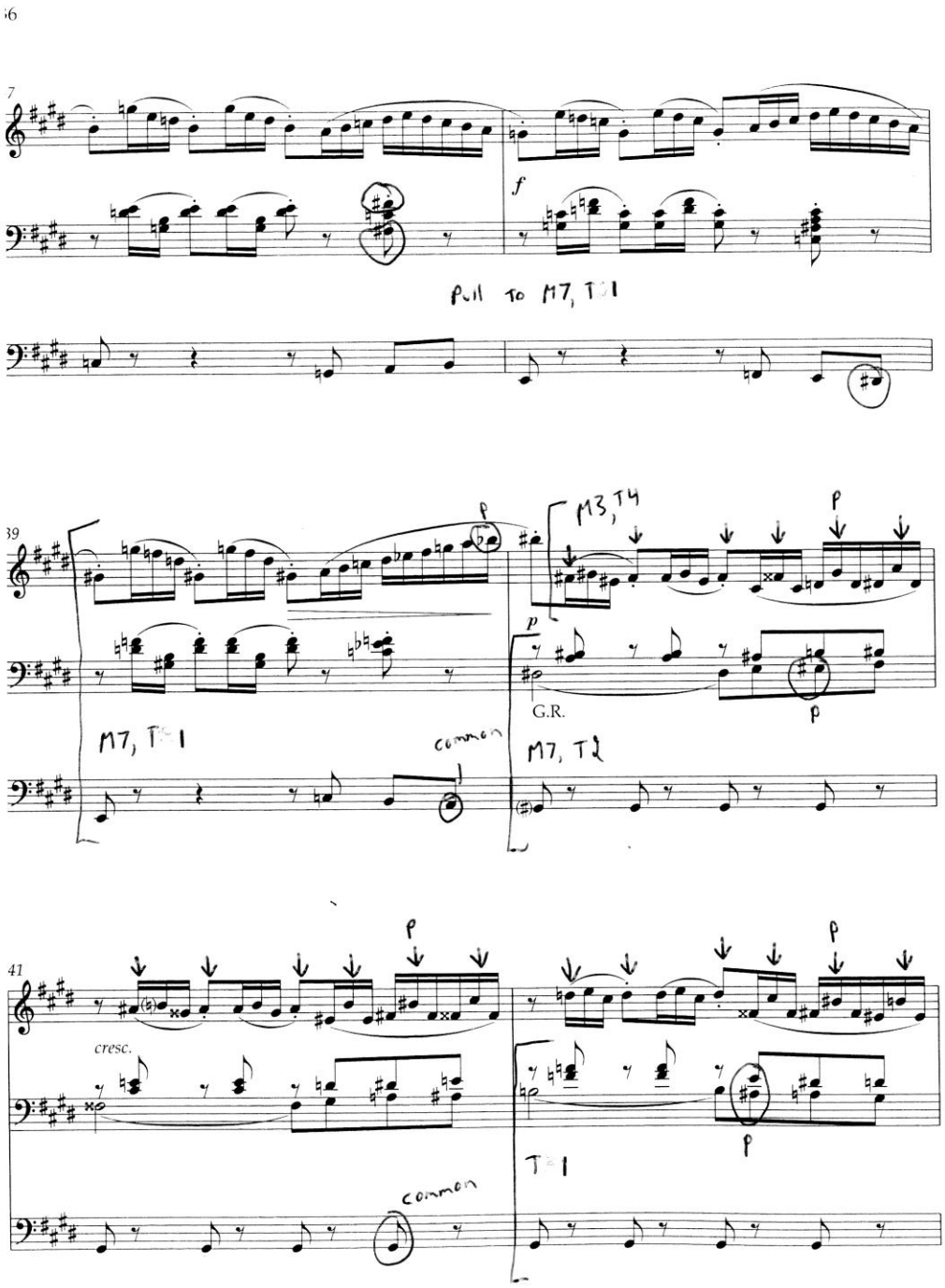
R. Fonds 8, 4, Trompette et Hautbois
P. *(expressif)* Bourdon 8, Salicional 8, Flûte 4, Nasard
G. Fonds 16, 8, 4
Péd. Fonds 32, 16, 8, 4, G. accouplé au R., Péd. R.

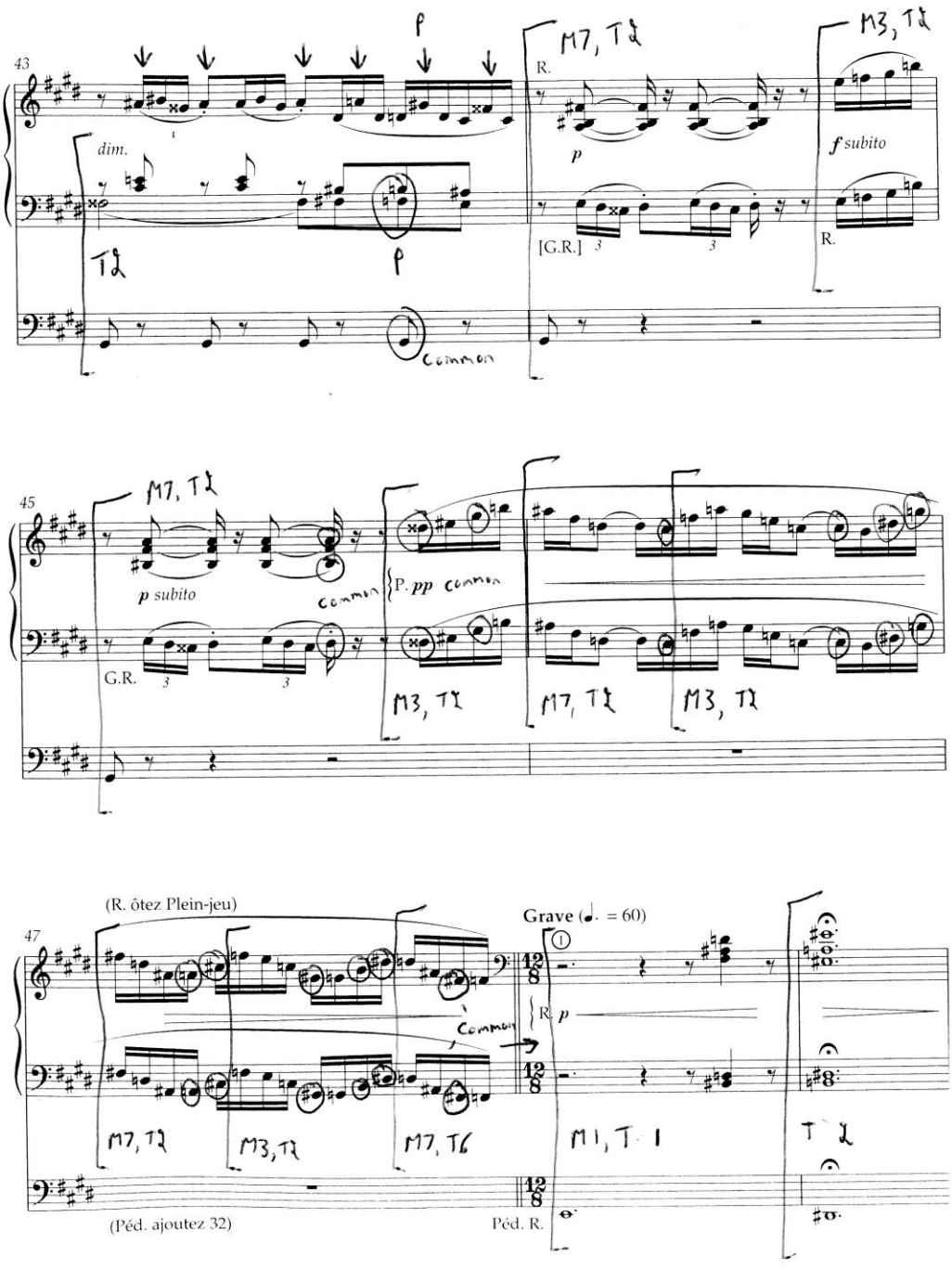


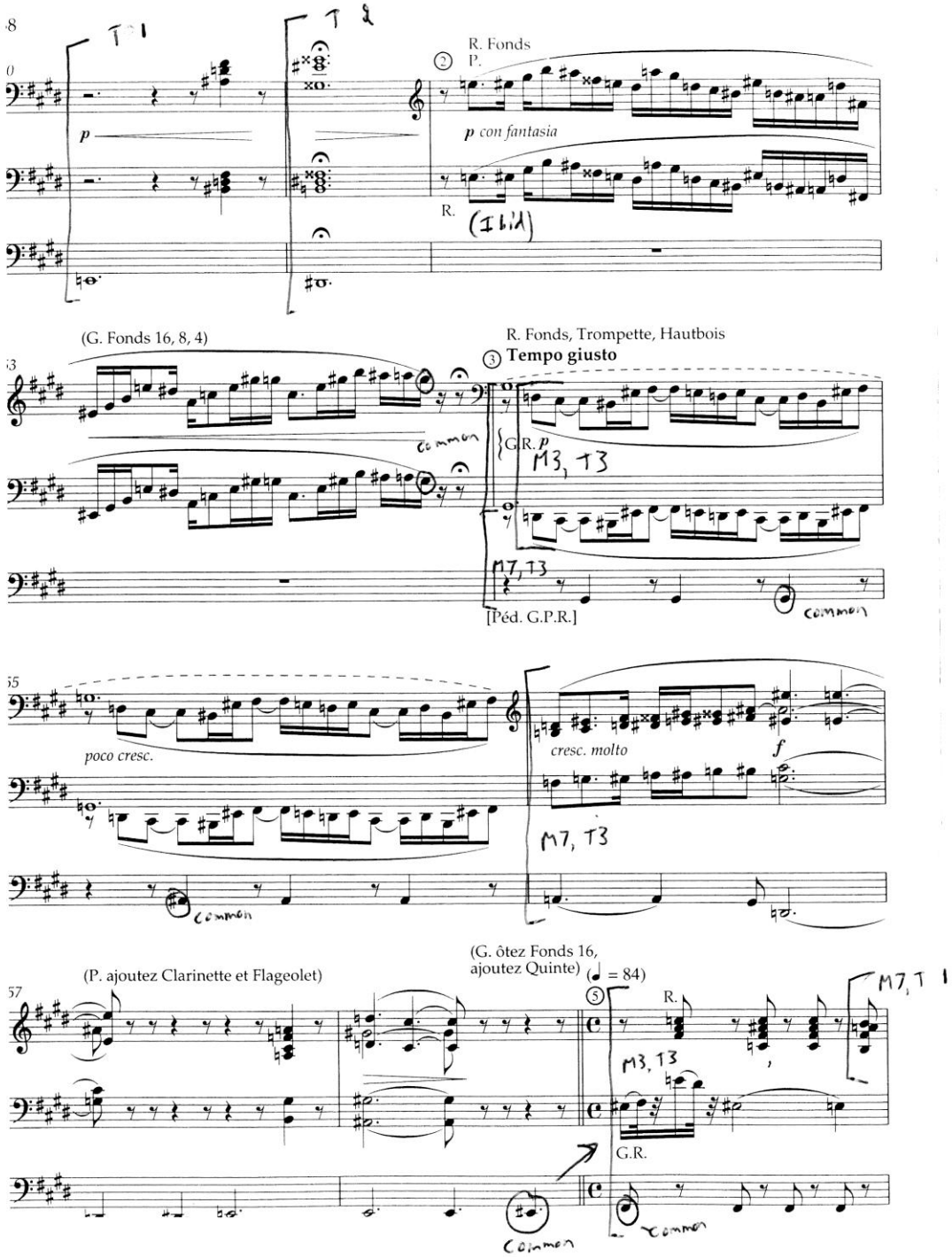

11
T 1
T 3
M 7, T 1
cresc.
f
p
common
14
M 1 T 1
T 2
R. p
P. p con fantasia
(1 à 2)
Péd. R.
17
M 1, T 2
R. Fonds, Hautbois
R.
common
common
19
T 1
T 2
T 1
T 2
T 1
T 2
M 7, T 2
cresc.
f

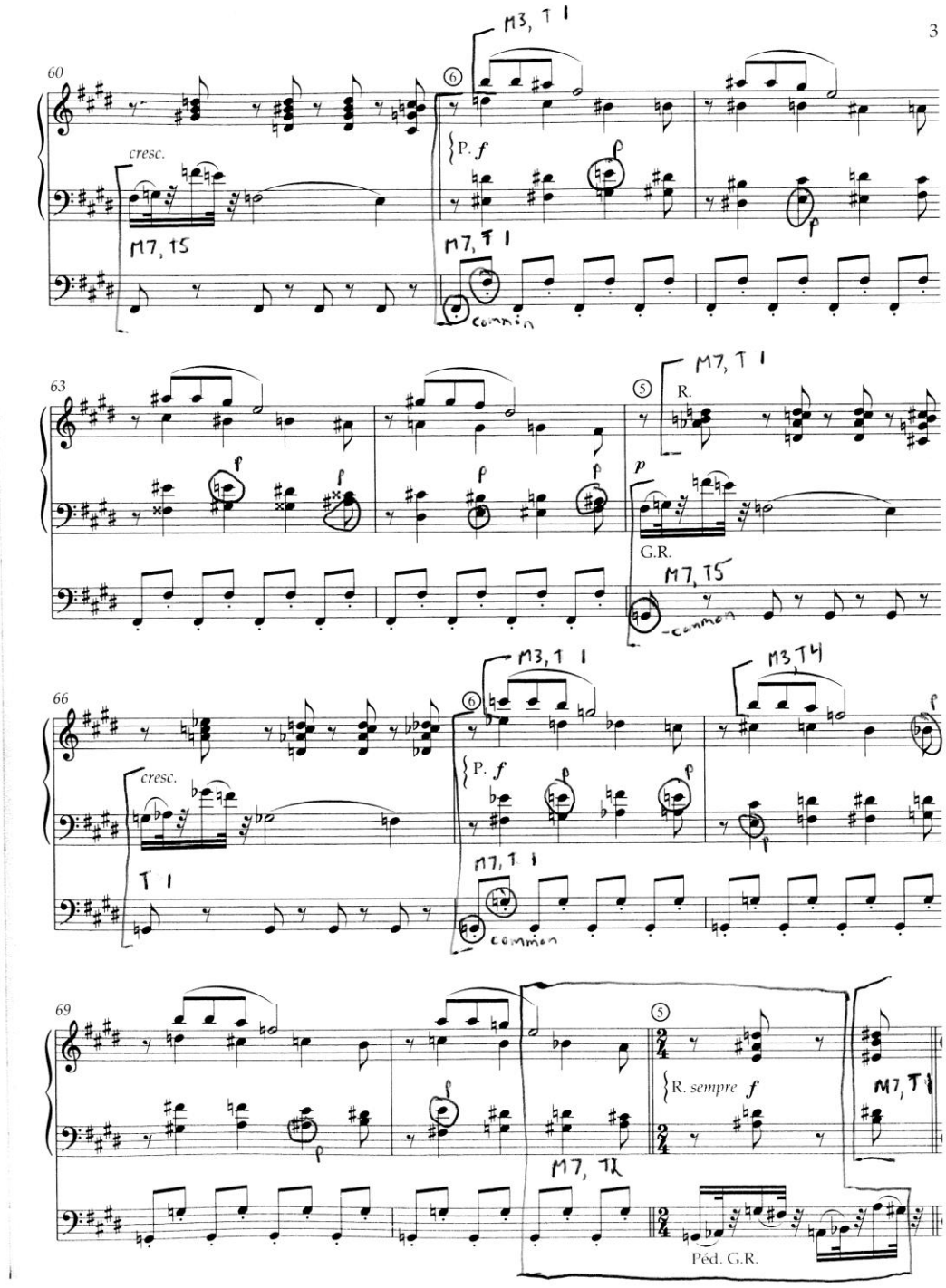

M3, T4
R. ajoutez Trompette et Plein-jeu
G.R.
Péd. G.R.
M3, T 1
cresc.
Commen
Commen
(G. Flûte 8, Bourdon 8, Violoncelle 8, Prestant 4, Quinte) *)
Allegro più mosso (♩ = 104)
G.R.
R. dim.
T4 commen
C#, A, D, F#
p
R.
Commen
(Péd. sans 32)
M7, T2
p
T 1
Péd. R.
c# Phrygian
c Ionian
simili
cresc.
simili
Commen
Commen

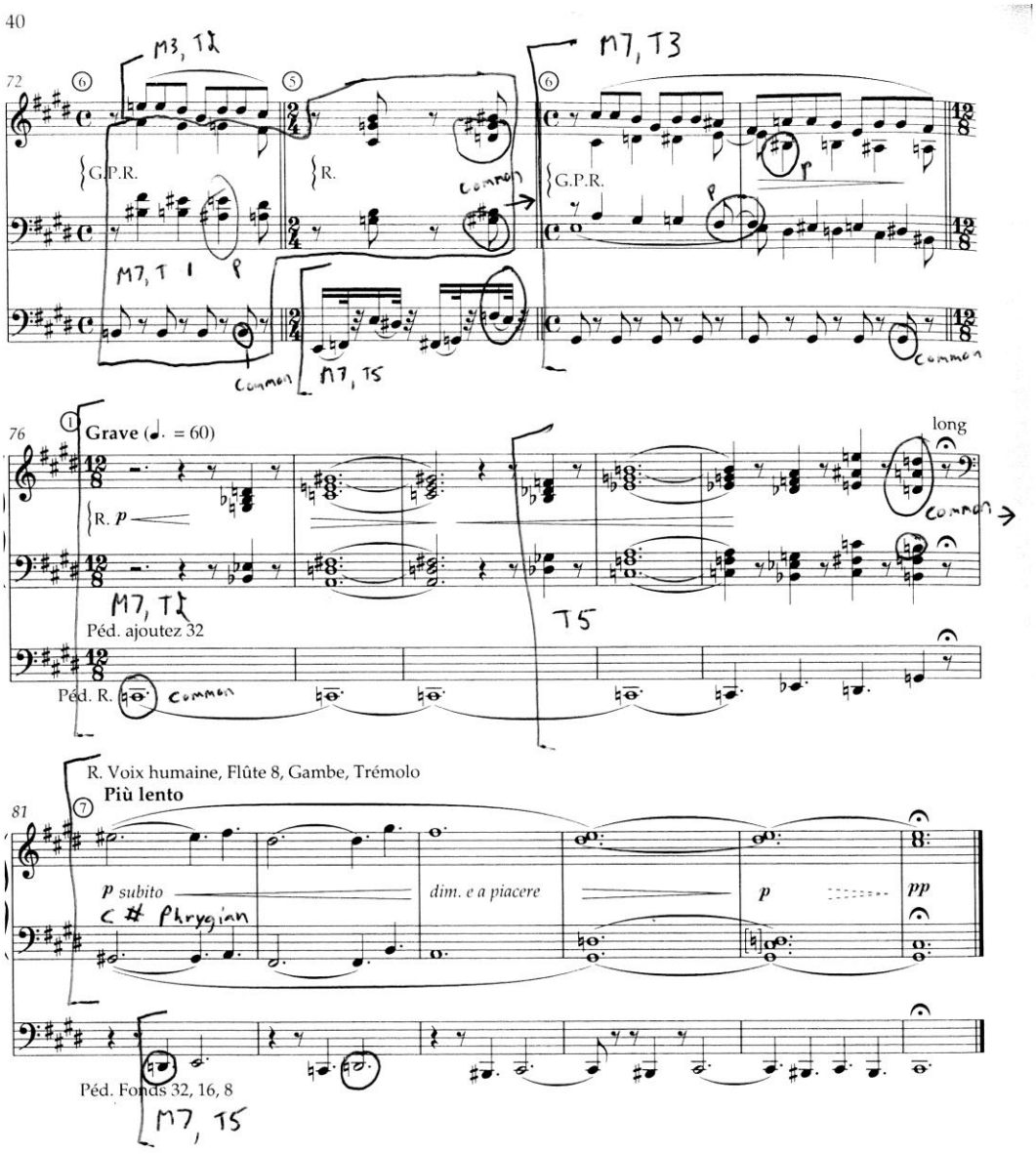

M7, T2
T1
T2
30
f
dim.
Commen
T1
Commen
C# Aeolian
33
p
L.N.
sempre staccato
35
Commen
B Locrian
simili
cresc.


f
Pull to M7, T1
p
M3, T4
p
p
G.R.
p
M7, T1
common
M7, T2
p
p
cresc.
p
T1
common

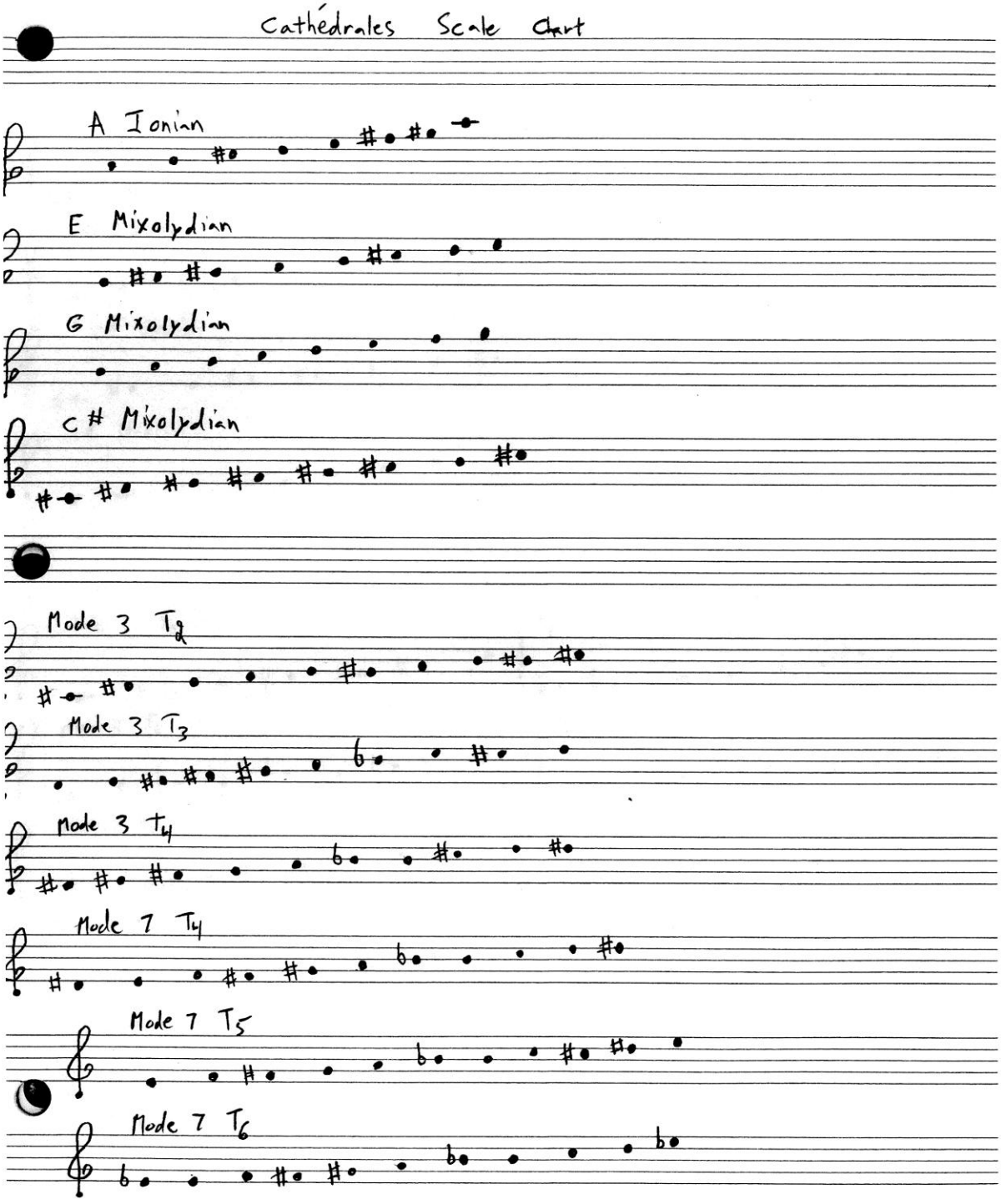

43
dim.
p
R.
[G.R.]
f subito
45
p subito
G.R.
P. pp
47
(R. ôtez Plein-jeu)
Grave (♩. = 60)
R. p
(Péd. ajoutez 32)
Péd. R.


R. Fonds
P.
p con fantasia
R.
(Ibid)
(G. Fonds 16, 8, 4)
R. Fonds, Trompette, Hautbois
Tempo giusto
G.R. p
M3, T3
M7, T3
[Péd. G.P.R.]
poco cresc.
cresc. molto
f
(P. ajoutez Clarinette et Flageolet)
(G. ôtez Fonds 16, ajoutez Quinte)
= 84)
R.
G.R.


60
cresc.
P. f
M3, T 1
M7, T5
M7, T 1
63
R.
G.R.
M7, T 1
M7, T5
66
cresc.
P. f
M3, T 1
M3 T4
T 1
M7, T 1
69
R. sempre f
M7, T
M7, T2
Péd. G.R.



L'EVOCATEUR: ① Qui donc prépare l'avenir? …
LE JEUNE ESTHETE: ② C'est moi … Je suis libre!
LE VIEUX PEDANT: ③ C'est moi … Je garde la tradition!
LE NEGRE: ④ L'avenir est au danseur.
LE SINGE: ⑤ L'avenir est à la fantaisie …
LE MENDIANT (joueur d'Orgue de Barbarie): ⑥ Il est à la misère ..... « Solo Mio ».
LE DESTIN: ⑦ Il n'est nulle part et partout.


Cathédrales Scale Chart
A Ionian
E Mixolydian
G Mixolydian
c# Mixolydian
Mode 3 T2
Mode 3 T3
Mode 3 T4
Mode 7 T4
Mode 7 T5
Mode 7 T6

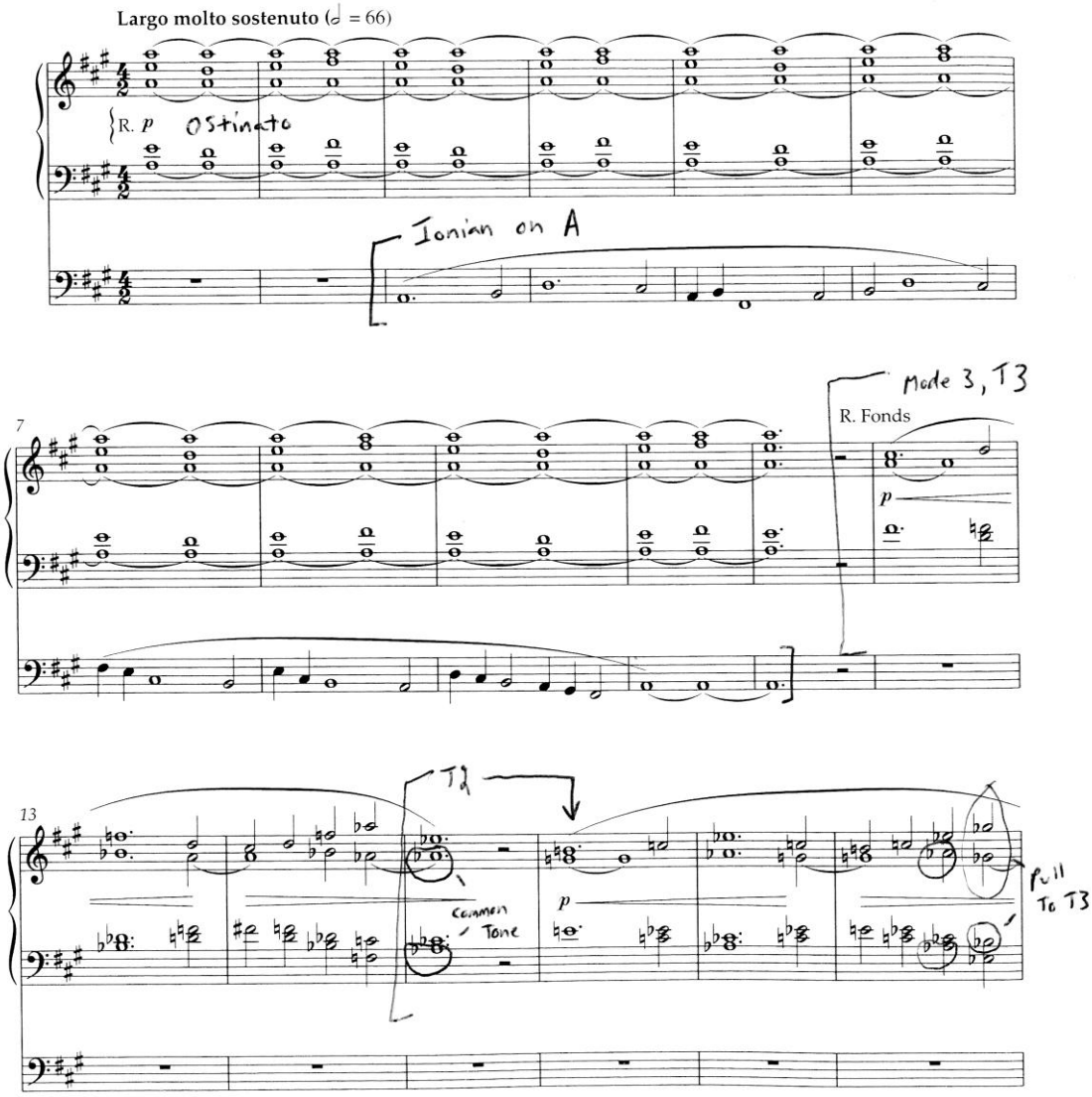
A mon élève Edward Shippen Barnes
Organiste à Philadelphie (U.S.A.)

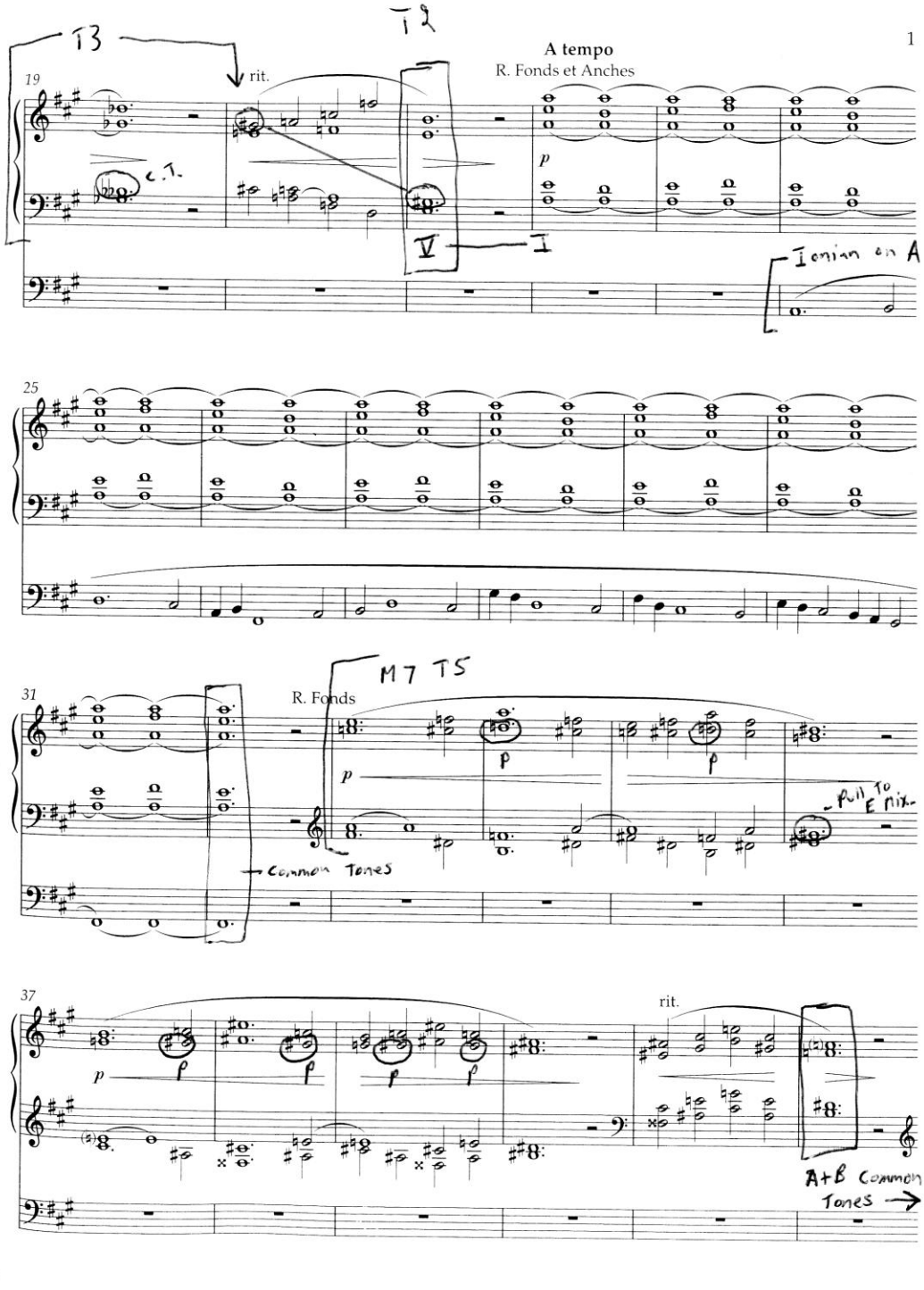
Cathédrales

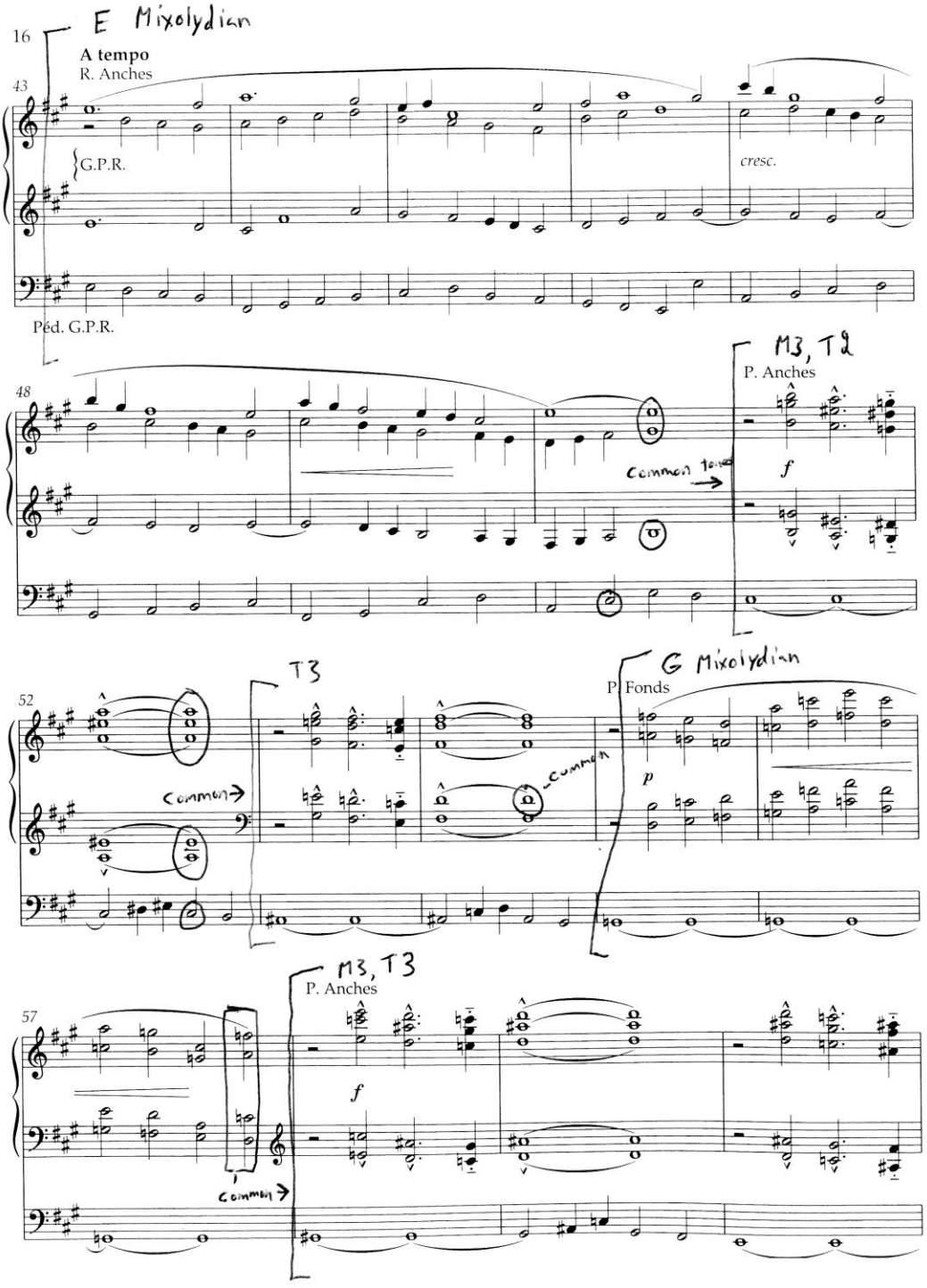
(Livre IV, 21)

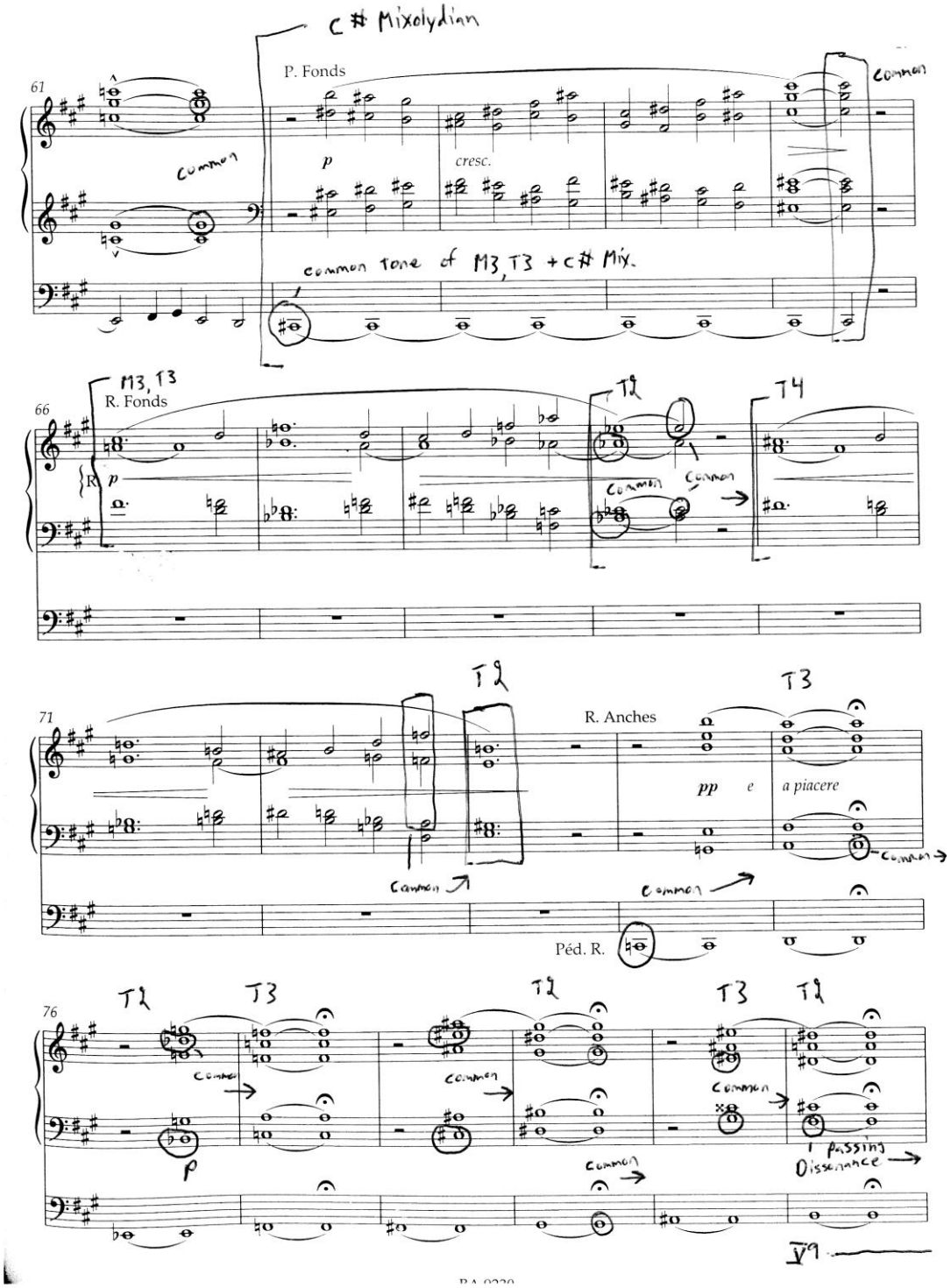
R. Fonds et Anches 16, 8, 4, 2
P. Fonds 16, 8, 4 (Anches préparées)
G. Fonds 16, 8, 4 (Anches préparées)
Péd. Fonds 32, 16, 8, 4 (Anches préparées)
Claviers accouplés, Péd. P.R.

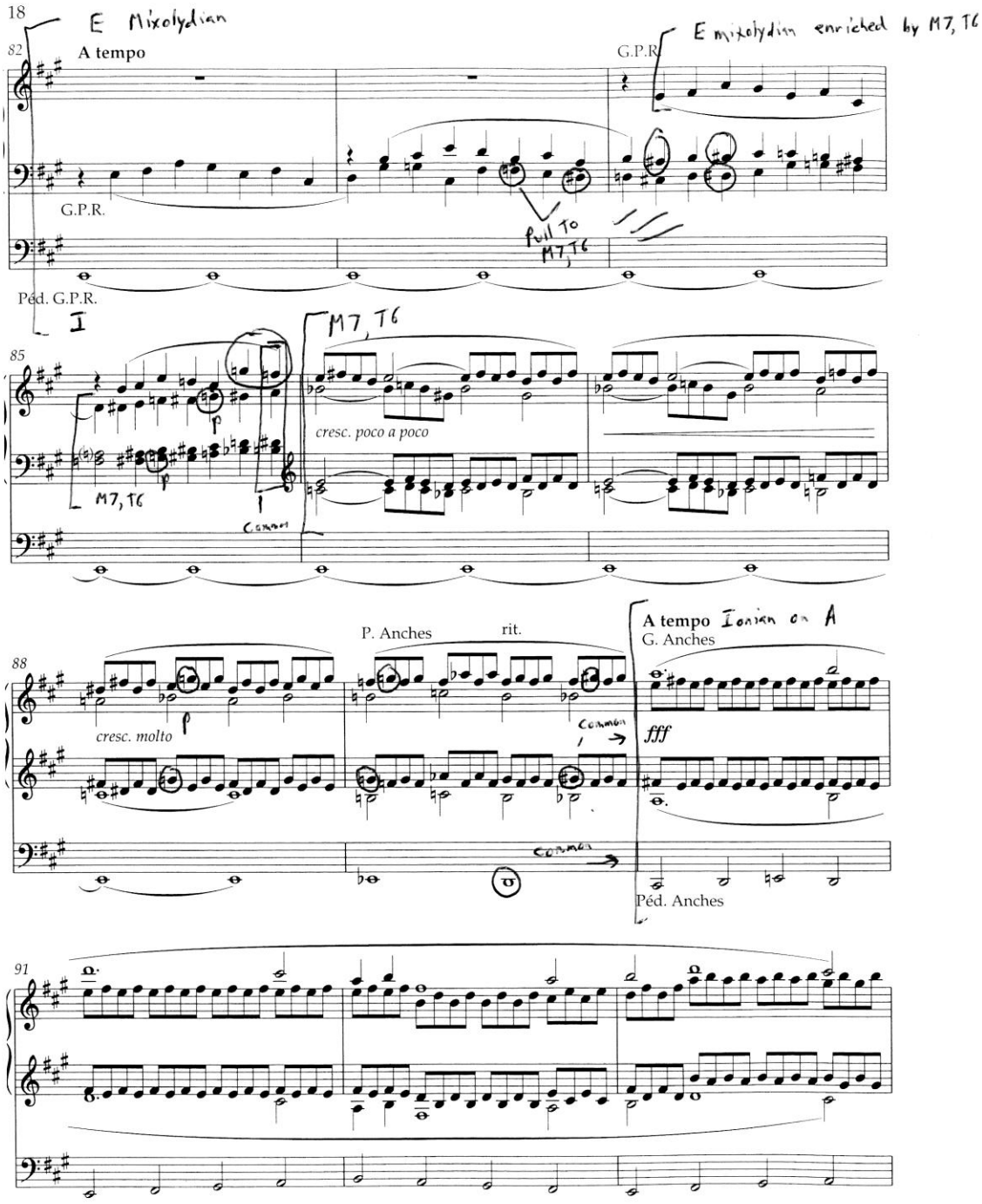
Largo molto sostenuto (𝅗𝅥 = 66)

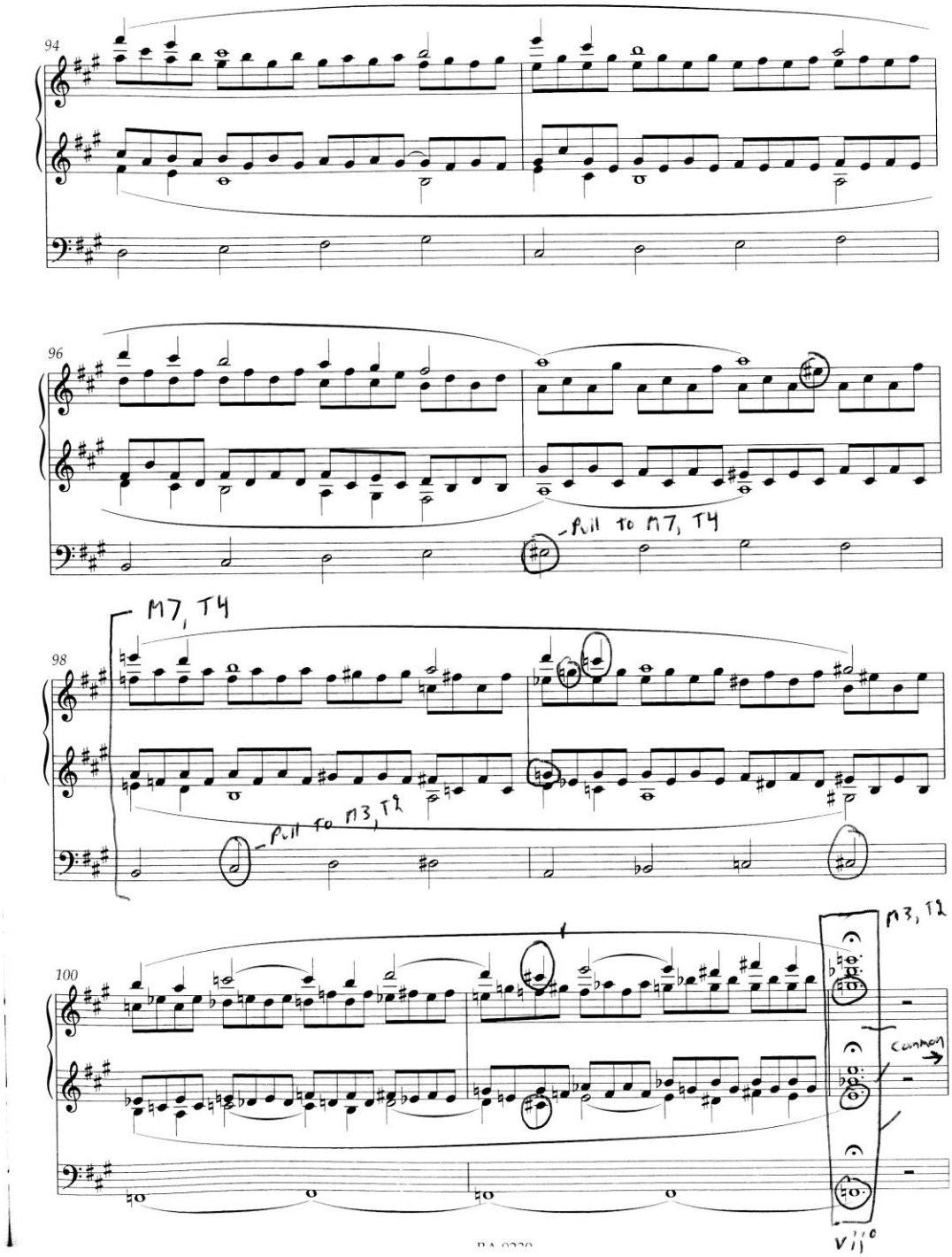


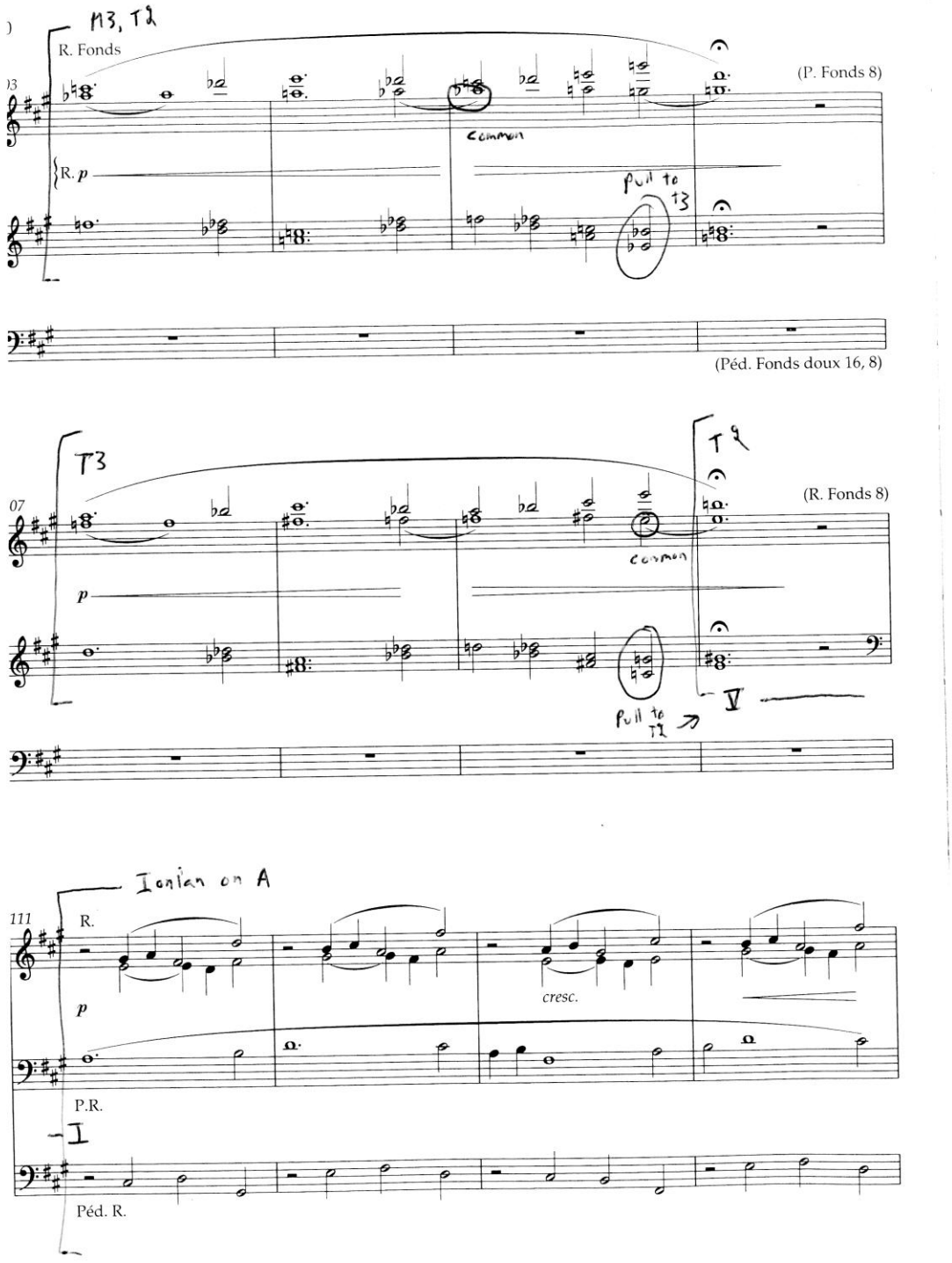

T3
T2
A tempo
R. Fonds et Anches
1
19
rit.
c.t.
V
I
Ionian on A
25
31
R. Fonds
M7 T5
Common Tones
Pull to E min.
37
rit.
A+B Common Tones

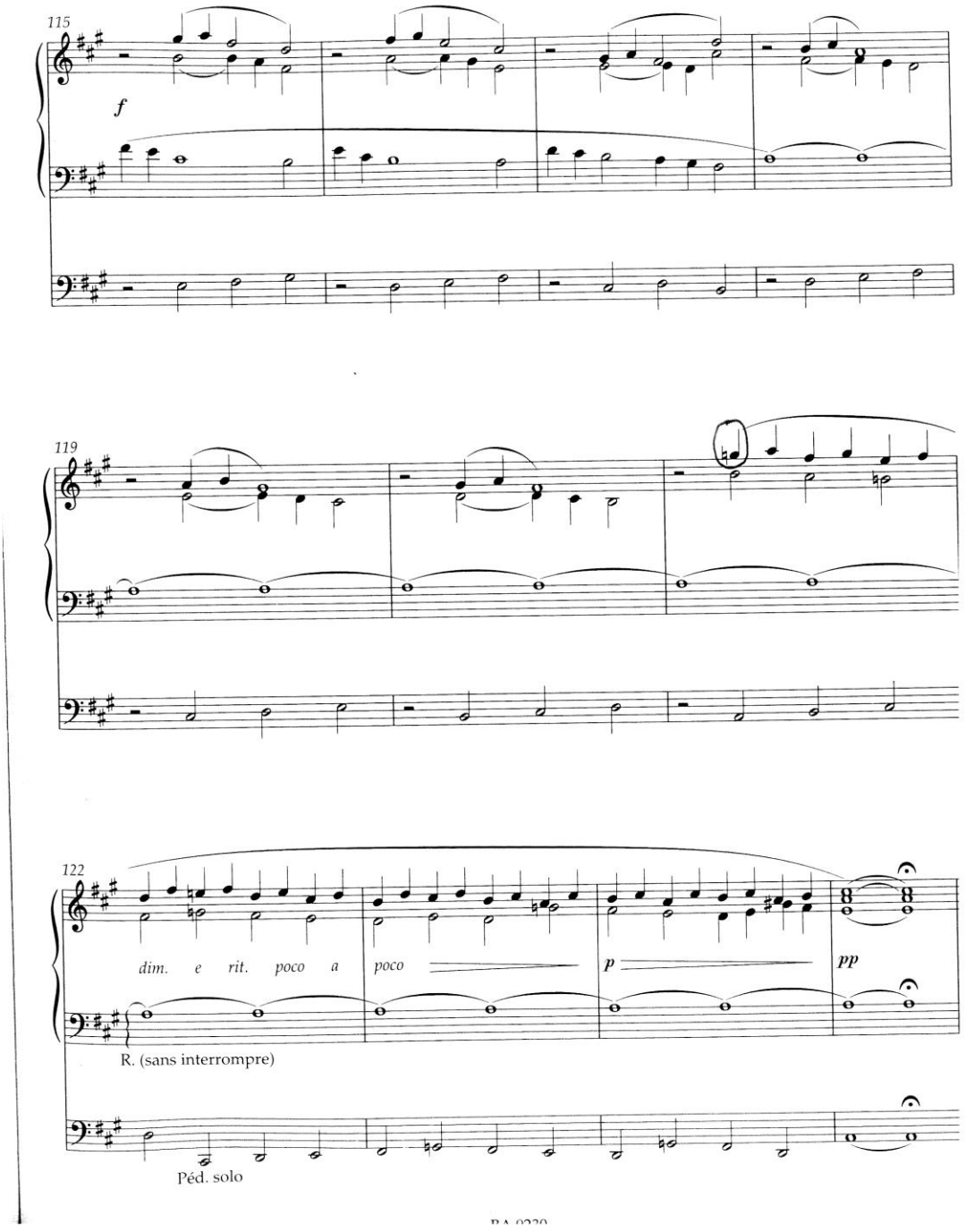

E Mixolydian
16
A tempo
R. Anches
43
G.P.R.
cresc.
Péd. G.P.R.
M3, T2
P. Anches
48
common tone
f
T3
G Mixolydian
P. Fonds
52
common
common
p
M3, T3
P. Anches
57
f
common


c# Mixolydian
P. Fonds
61
p
cresc.
common
common tone of M3, T3 + c# Mix.
M3, T3
R. Fonds
66
T2
T4
R. Anches
71
pp
e
a piacere
Péd. R.
76
T2
T3
passing
Dissonance


18
E Mixolydian
82
A tempo
G.P.R.
E mixolydin enriched by M7, T6
G.P.R.
Pull To
M7, T6
Péd. G.P.R.
I
85
M7, T6
M7, T6
cresc. poco a poco
p
Common
88
P. Anches
rit.
A tempo Ionian on A
G. Anches
cresc. molto
p
Common
fff
Common
Péd. Anches
91


94
96
Pull to M7, T4
M7, T4
98
Pull to M3, T2
100
M3, T2
common
vii°


M3, T2
R. Fonds
(P. Fonds 8)
common
R. p
Pull to T3
(Péd. Fonds doux 16, 8)
T3
T2
(R. Fonds 8)
common
p
Pull to T2
V
Ionian on A
R.
p
cresc.
P.R.
I
Péd. R.


115
f
119
122
dim. e rit. poco a poco
p
pp
R. (sans interrompre)
Péd. solo