

PIERRE COCHEREAU:  
A LEGACY OF IMPROVISATION AT NOTRE DAME DE PARIS  
By

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Matt Gender

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Chairperson: Michael Bauer

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James Higdon

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Colin Roust

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David Alan Street

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Martin Bergee

Date Defended: 05/15/19

The Dissertation Committee for Matt Gender certifies that this is the approved version of the following dissertation:

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## ABSTRACT

Pierre Cochereau (1924–84) was the organist of Notre Dame Cathedral in Paris and an improviser of organ music in both concert and liturgical settings. He transformed the already established practices of improvising in the church into a modern artform. He was influenced by the teachers with whom he studied, including Marcel Dupré, Maurice Duruflé, and André Fleury. The legacy of modern organ improvisation that he established at Notre Dame in Paris, his synthesis of influences from significant figures in the French organ world, and his development of a personal and highly distinctive style make Cochereau's recorded improvisations musically significant and worthy of transcription. The transcription of Cochereau's recorded improvisations is a task that is seldom undertaken by organists or scholars. Thus, the published improvisations that have been transcribed are musically significant in their own way because of their relative scarcity in print and in concert performances. This project seeks to add to this published collection, giving organists another glimpse into the vast career of this colorful organist and composer. The sound recordings compiled from the loft at Notre Dame include many CDs of Cochereau's liturgical improvisations. The four liturgical improvisations that I have compiled and transcribed were released on a CD entitled *L'organiste liturgique*.

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## Introduction

Organists and scholars who write about the art of improvisation undoubtedly think of the French organ school and a name familiar to most organists, Pierre Cochereau (1924–84), who was the only titular organist of Notre Dame Cathedral in Paris from 1955 until his death.<sup>1</sup> He had a significant impact in regard to the development of French organ improvisation during his time at Notre Dame. It is this for which he is most well-known. The French organ school is largely built on the skill of improvisation. Cochereau expanded upon this vast tradition and presented organ improvisation in its modern form during his tenure at Notre Dame. The importance of this legacy is preserved through his many recordings. It has been the duty of a few organists to anchor this legacy to the page by transcribing Cochereau's improvisations into notation, preserving and showcasing these pieces that would otherwise exist purely as sonic documents. It is with this goal in mind that I have sought to transcribe four of Cochereau's liturgical improvisations, providing the organ community a new glimpse into the creative life of this organist.

The most important secondary source of information on the life and works of Pierre Cochereau stems from a thesis written by Anthony Hammond. The thesis, originally titled "A Phenomenon Without Equal: An Assessment of Pierre Cochereau's Contribution to the History of the French Organ and to the Art of Organ Improvisation,"<sup>2</sup> has been reworked into a book entitled *Pierre Cochereau: Organist of Notre-Dame*, published in 2012 by the University of Rochester Press.<sup>3</sup> In it, Hammond details Cochereau's musical upbringing, his association with

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<sup>1</sup> From 1985 to the present Notre Dame de Paris has had multiple titular organists.

<sup>2</sup> Anthony Hammond. "A Phenomenon without Equal: An Assessment of Pierre Cochereau's Contribution to the History of the French Organ and to the Art of Organ Improvisation." Ph.D. Diss., (University of Bristol, 2010).

<sup>3</sup> Hammond, Anthony. *Pierre Cochereau: Organist of Notre-Dame*. Eastman Studies in Music, Vol. 91. (Rochester, NY: University of Rochester Press 2012).

the Parisian organ world, and his connection to the church and organ of Notre Dame Cathedral. Outside of this source, most of the details of Cochereau's life are preserved by the many people who have studied with him or transcribed his works. Also important to this project are the liner notes of the CD *L'organiste liturgique*,<sup>4</sup> which were written by Pierre Pincemaille, the late organist of Basilique Saint-Denis located in Saint-Denis, a suburb of Paris. Pincemaille details the history of the recorded improvisations at Notre Dame, Cochereau's tonal language, the selection criteria for the recordings, and the organ's place within the Masses celebrated at Notre Dame. To put Cochereau's work into historical context, I have referenced articles by Benjamin van Wye<sup>5</sup> and Nelson Quintal,<sup>6</sup> which give a broader sense of the art of improvisation as it developed in France over time.

## **I. A Brief History of Improvisation Within the French Church**

In France, the *alternatim* tradition became integral to the organ's place during worship and was prescribed in various documents,<sup>7</sup> the most important of which was the *Ceremoniale episcoporum* of 1600 issued by Pope Clement VIII, which enumerated the rules of *alternatim* organ playing during the Mass and office liturgies. The *Ceremoniale parisiense* of 1662 detailed the number of versets the organ could play during Mass and Vespers in Parisian churches, including the *Kyrie*, *Gloria*, *Sanctus*, *Agnus Dei*, *Communion*, and the *Deo Gratias* movements of the Mass.<sup>8</sup> The specific rules governing *alternatim* practice were left to the individual bishops,

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<sup>4</sup> Pierre Pincemaille, liner notes to *L'Organiste Liturgique*, Pierre Cochereau, SOCD 226, Disques du Solstice, 2005, 15-28.

<sup>5</sup> Benjamin van Wye. "Ritual Use of the Organ in France." *Journal of the American Musicological Society*, 33, no. 2 (1980): 287-325.

<sup>6</sup> Nelson Quintal. "Improvising in the French Romantic Style at the Organ," PhD Diss. (Göteborgs Universitet: Academy of Music and Drama, 2014).

<sup>7</sup> Alternation of organ playing with singing versets of chant or choral music.

<sup>8</sup> See Edward Higginbottom. "French Classical Organ Music and the Liturgy." *Proceedings of the Royal Music Association* 103, no. 1 (1977): 19-40.

leading to the publication of ceremonials by each diocese. Due to the number of times the organ was playing during the service and the large number of services that were scheduled, organists typically improvised these versets.<sup>9</sup> Indeed, organists were hired at churches largely based on their skills as improvisers.

This pervasive requirement of organists extends into the Romantic period, during which musical language became more colorful and organs became larger and more capable of rendering musical color. The organs of Aristide Cavaillé-Coll were ground-breaking in this regard. He is often cited as one of the influential forces in the history of French improvisation in the nineteenth century.<sup>10</sup> The other principal influence on the development of improvisation was César Franck, who turned improvisation into a mainstream art form, making it the central focal point of his teaching at the Paris Conservatoire (although it was taught by his predecessors as well).<sup>11</sup> This laid the foundations for the mid-twentieth-century traditions of improvisation by famous French organists, including Louis Vierne, Marcel Dupré, Charles Tournemire, and Jean Langlais.

Notre Dame Cathedral has had a long line of important organists throughout its nearly nine-hundred-year history. Charles Racquet (serving from 1618–1643), Louis-Claude Daquin (1755–1772), Armand-Louis Couperin (1755–1789), Claude Balbastre (1760–1793), Nicholas Séjan (1772–1793), Jean-Jacques Charpentier (1783–1793), Félix Danjou (1840–1847), and Louis Vierne (1900–1937) are just some of the many organists who have served Notre Dame since the early seventeenth century. All of them were renowned improvisers as well as published composers and/or pedagogues. This is the history that preceded and influenced Pierre Cochereau.

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<sup>9</sup> Wye, “Ritual Use of the Organ in France,” 307.

<sup>10</sup> Quintal, 11.

<sup>11</sup> Ibid.



## II. Biography

Pierre Cochereau was born in the Parisian suburb of Saint-Mandé on July 9, 1924, the son of George Cochereau, a shoemaker and Anne Reneé, an amateur musician.<sup>12</sup> The family was fairly well off due to George's shrewd business acumen, so Pierre did not have to worry much about money throughout his life. Although music was of little importance in the household, Pierre quickly showed a talent for music and was supported by his parents, who sent him to study piano with Marius-François Gaillard, and eventually with Marguerite Long in 1933. In the summer of 1937, while recuperating from an illness in Saint-Gervais-les-Bains, he encountered a harmonium for the first time. He asked the priest if he could see the large organ installed in the church. From the moment he first played that organ, Cochereau knew he wanted to be an organist. Upon his return to Paris, Cochereau's father arranged for him to take organ lessons with Marie-Louise Girod, a new student in the organ class at the Paris Conservatoire under whose direction he made great progress and demonstrated a gift for improvising.<sup>13</sup>

By the time Girod left Paris in 1941, the Cochereau family decided to begin attending the Eglise Saint-Roch in Paris. About the same time, Pierre began organ studies with Paul Delafosse, the *maître de chapelle* at St. Roch. André Pratz was the titular organist there until his sudden death in 1942, leading to Cochereau becoming the unofficial *organiste titulaire* by the end of the year (it was made official in autumn 1945). Cochereau changed teachers again to study with André Fleury, the titular organist at the Eglise Saint-Augustin in Paris. His father expressed a strong desire for Pierre to take up the family trade of shoemaking, but realized that Pierre was a gifted musician and finally allowed him to enter the Paris Conservatoire in autumn 1943.

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<sup>12</sup> Anthony Hammond. *Pierre Cochereau: Organist of Notre-Dame*. Eastman Studies in Music, v. 91 (Rochester, NY: University of Rochester Press, 2012), 4.

<sup>13</sup> Ibid.

Cochereau did not receive training as an organist in his first year there; instead, his education focused more on harmony and music history, though he still took private lessons with Fleury. Fleury introduced Cochereau to Marcel Dupré in 1944; subsequently Cochereau enrolled in preparatory lessons at Dupré's home in Meudon in order to prepare to enter his organ class at the Conservatoire. Fleury left Paris in 1944 because of health problems and, for a short time, Cochereau studied with Maurice Duruflé, who was immediately impressed with Cochereau's improvisational abilities. Finally, in 1945, he entered the organ class of Marcel Dupré at the Conservatoire. By all accounts, throughout his time at the Paris Conservatoire Cochereau was very close to many of his colleagues, both students and teachers. These included Pierre Boulez, Norbert Dufourcq, and Duruflé. Also, while studying at the Conservatoire, Cochereau married Nicole Lacroix, a piano student.<sup>14</sup>

Soon Cochereau developed a fascination with recording and recording equipment. In 1950 he received a sound engineer's diploma from the French National Radio. Because there were no radio positions available in Paris, his interest in a recording career meant that he would have to move to the provinces and relinquish his post as organist at St. Roch. Dupré envisioned another path for Cochereau and made it possible for him to be appointed as the Director of the regional conservatory at Le Mans instead, allowing him to return to Paris every weekend to play for services at St. Roch. Cochereau had great success at Le Mans, significantly upgrading the technology of the school (including recording equipment), teaching classes, and hiring some new faculty, which led to the general improvement of the school's musical standards. Beginning in 1953, Cochereau forged a friendship with Léonce de Saint-Martin, then the organist at Notre-Dame de Paris. Saint-Martin was unpopular with many Parisian organists because of the rather

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<sup>14</sup> Hammond, 6-9.

scandalous story of his appointment to the position at Notre Dame following the tenure of Louis Vierne and because of his activities at the church.<sup>15</sup> In June of 1954 Saint-Martin died, leaving the organ position at Notre Dame vacant. Cochereau competed for the position against some other well-respected organists, including Jeanne Demessieux, Gaston Litaize, and Rolande Falcinelli. At the urging of Saint-Martin's widow and François Carbou, a close associate of Saint-Martin's, Cochereau was awarded the position and began his new duties on Sunday, January 9, 1955. Cochereau immediately set to work making recordings on the organ,<sup>16</sup> which was in a very poor condition when he arrived at the church.<sup>17</sup> He embarked on a concert/recording tour of the United States in 1956, where he was exposed to the advanced electropneumatic organ consoles present throughout the country. It was this influence that led him to completely renovate the organ and replace its mechanical action with electropneumatic action beginning in 1961, a job undertaken by Philippe Hartmann, and later Robert Boisseau.<sup>18</sup>

Soon Cochereau's career gained momentum. He began touring, making and selling recordings, and giving regular concerts at Notre Dame. He was offered the position of Director of the regional conservatory in Nice in 1961. At this time in his career Cochereau was the principal contact person for film-makers who needed organs in their projects. In 1968, in conjunction with François Carbou, he also began a new business venture, founding his own recording company. The work of this company was facilitated by the installation of microphones

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<sup>15</sup> Saint-Martin succeeded Louis Vierne without a competition for the post and against Vierne's wishes. He also worked with the Germans in hosting events in the cathedral during World War II.

<sup>16</sup> Cochereau recorded works by Vierne, Liszt, Dupré, and Bach on discs released by the label *L'Oiseau-Lyre* beginning in 1955. He also recorded Vierne's *Symphonie II* and Dupré's *Symphonie-Passion*. The Dupré recording eventually won the *Grand Prix du Disque*, an important distinction for CD releases, issued by the *Académie du Disque Français*.

<sup>17</sup> The winding system leaked and the pipework and casework were dirty and dilapidated.

<sup>18</sup> Hammond, 10-18.

in the loft at Notre Dame for the purpose of recording services held in the cathedral. This recording label became *Disques FY*, from which *Disques Solstice* emerged.<sup>19</sup>

Cochereau's increasingly hectic schedule of touring, concertizing, and teaching caused him to neglect his health and family,<sup>20</sup> and in 1977 Cochereau made a promise to his family to reduce the number of professional activities he was undertaking. In late 1979 he accepted the post as Director of the newly renamed *Conservatoire national supérieure de musique et danse* in Lyon, the other *Conservatoire supérieure* in France alongside the Paris Conservatoire. Unfortunately, this conservatory was plagued with problems, including overcrowding, insufficient facilities, and insufficient administrative support. By the early 1980s Cochereau was physically exhausted due to his hectic schedule, the work he had done at Lyon, and the stress and additional work caused by the condition of the Notre Dame organ. At this time in his life he attempted to repair his relationships with his family and other friends from whom he had become estranged, and limit the number of projects he was undertaking. The organ at Notre Dame was in an ever-increasing state of disrepair due to lack of maintenance. The electronics were disconnected in August, 1983 because they were considered a fire hazard. He suffered a brain aneurism on the evening March 4, 1984, and died at the age of 59.<sup>21</sup>

### **III. The Context of the Improvisations at Notre Dame**

At the time of Cochereau's appointment at Notre Dame the ancient Latin liturgy, often referred to as the Saint Pius V liturgy, was still practiced at the church. The organ would be played during the earlier high Mass on Sundays, during which there was chanting and choral

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<sup>19</sup> Hammond, 19–26.

<sup>20</sup> Cochereau met and married Nichole Lacroix while they were both students at the Paris Conservatoire. They had two children both of whom entered the musical field: Jean-Marc and Marie-Pierre.

<sup>21</sup> Hammond, 26–8.

singing. Following this, the organ played almost continually through the later low Mass, which was mostly spoken by the priest. The organ had a small role in Vespers later in the evening. The low Mass, celebrated at 11 o'clock on Sundays, effectively became a concert, during which organists could play large amounts of repertory and demonstrate the organ's capabilities. After the Second Vatican Council (1962–65), the new Canon of the cathedral, Emile Berrar, expanded the number of liturgical events happening on any given Sunday at Notre Dame, thereby increasing the playing responsibilities of the titular organist. The large gallery organ now played at four specific points during the high masses celebrated at 10:00 a.m. and 11:30 a.m.: the introit (French: *entrée*), offertory (*offertoire*), communion (*communion*), and postlude (*sortie*).<sup>22</sup> These four liturgical elements became the principal vehicles for Cochereau's improvisations.

This DMA document draws on materials derived from Cochereau's improvisations at these four key times during the Mass. Recordings of Cochereau playing these improvisations have been drawn together in a collection entitled *L'organiste liturgique*, which includes material from about nine-hundred services at Notre Dame. François Carbou (both Léonce de Saint-Martin's and Cochereau's assistant) began assembling this collection in 1968 when the microphones and recording equipment were installed in the Notre Dame organ loft. In turn, Pierre Pincemaille, the organist at St. Denis in the suburbs of Paris, carefully selected four complete services for the recording he issued, each of which is patched together from various days and times at which Cochereau was improvising.<sup>23</sup> Based on their intrigue and ability to work together as a suite suitable for concert or any other live performance application on the organ, I selected one set of improvisations identified by Pincemaille for transcription.

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<sup>22</sup> Pierre Pincemaille, liner notes to *L'Organiste Liturgique*, Pierre Cochereau, SOCD 226, Disques du Solstice, 2005, 15–28.

<sup>23</sup> Pincemaille, SOCD 226, 18.

#### IV. General Musical Observations and Transcription Methodology

Pierre Cochereau developed an easily identifiable, distinctive improvisational language. Play any recorded improvisation by Cochereau to a trained organist and they will usually be able to recognize his style. This is due mainly to his distinct harmonic idiom and the structural components of his improvisations. Cochereau improvises in a very wide chromatic spectrum that can be traced back to Dupré's and Duruflé's influence. At times, Cochereau even transcends tonality, but his initial focus was always the color of the harmony. As his teacher André Fleury noted: "[Cochereau was in] search [of] the pretty harmony, rather than the strict exercise of contrapuntal discipline."<sup>24</sup> Cochereau favored the octatonic scale, and also practiced modulating by thirds, for instance from C major to E major or A-flat major.<sup>25</sup> He also favored added-sixth and seventh chords, especially when used as a long, sustained note followed by another chord of entirely different character (Figure 1).

The image displays a musical score for the song "The Rose Tree". It consists of two systems of music, numbered 39 and 40. Each system includes a vocal line (treble clef) and a piano accompaniment (bass clef). The key signature is one sharp (F#), and the time signature is 4/4. In the first system (measure 39), the piano accompaniment features a red box highlighting a sequence of four chords: F#m, Dm, F#m, and Dm. In the second system (measure 40), the piano accompaniment features a red box highlighting a sequence of four chords: F#m, Dm, F#m, and Dm. The vocal line in measure 40 includes a triplet of eighth notes. The piano accompaniment in measure 40 includes a triplet of eighth notes in the right hand and a triplet of eighth notes in the left hand.

Figure 1: *Sortie*, mm. 39–40 showing third-relations and added sixth and seventh chords.

<sup>24</sup> Pincemaille, SOCD 226, 15.

<sup>25</sup> A motion that can be also described as being hexatonically influenced.

Many of Cochereau's instinctive motions, especially in the *Sortie*, follow these principles, particularly in regard to his harmonic and melodic choices. Cochereau synthesized the harmonic and structural languages of many different composers and teachers, especially Dupré, Duruflé, and Olivier Messiaen.<sup>26</sup>

The process of transcribing these improvisations began by loading each of the selected movements from the CD into an open-source audio software suite called "Audacity," which enabled the easy access and manipulation of each sound file. Because of the constant back-tracking required for transcription, a program that displayed the waveform with a constantly moveable play-head/caret was a necessity, and I was able to select a specific moment in the sound file (precise to the hundredth of a second) to replay as often as needed. The project is typeset in "Dorico," a notation suite issued by Steinberg which is capable of easily handling the rhythmic subtleties of the improvisations (especially the *Sortie*), as well as the easy editing of notes, accidentals, score markings, and layouts. I utilized a keyboard connected to another software suite called "Reason" for pitch reference. Its sampling program has the ability to adjust tuning so as to better match the fluctuating tuning of the Notre Dame organ on the recording.

In order to transcribe this piece I not only drew upon my own knowledge and technique as an organist and improviser, but that of other organists who have transcribed Cochereau, including David Briggs,<sup>27</sup> Jeremy Filsell,<sup>28</sup> and François Lombard.<sup>29</sup> A knowledge of the specific organ of Notre Dame Cathedral is also required, and even more so the state of the organ during Cochereau's employment there (see the Appendix). When Cochereau became organist in 1955

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<sup>26</sup> Pincemaille, SOCD 226, 17.

<sup>27</sup> See Cochereau, Pierre. *Improvisations sur Alouette, gentille Alouette, transc. David Briggs*. UMP organ repertoire series no. 21. London: United Music Publishers, 1992.

<sup>28</sup> See Cochereau, Pierre. *Scherzo symphonique: pour orgue / Filsell, Jeremy*. Paris: Editions Chantaine, 1998.

<sup>29</sup> See Cochereau, Pierre. *Sortie sur "Hæc dies": pour orgue / Lombard, François; (Organist)*. Tournai: Éditions Chantaine, 1997.

he inherited a Cavaillé-Coll organ that was relatively untouched since its construction in 1868 (save for a few alterations in 1901 and 1932).<sup>30</sup> Cochereau envisioned a massive expansion and preservation project for the organ and, possibly influenced by his American organ tours (and the pervasive notions of organ restoration in vogue during the 1960s), he electrified the console and added fifteen additional stops, including mutations and horizontal reeds, as well as altering the composition of the mixtures.<sup>31</sup> With the electrification of the console a number of options became possible, including saving the stop combinations to a recallable memory, the use of sub and super octave coupling, and a unique device called a *coupure pédale*, a “pedal-divide” which enabled the organist to play with both feet upon the pedal-board with two completely different sounds, splitting at a pre-determined point (usually around the middle-C key, which is C<sub>3</sub> on a piano keyboard). The alterations that Cochereau carried out have not been received well by modern organ scholars, who since the 1970s have focused more on the authentic Cavaillé-Coll organ, one which had not been touched or altered (as was the fate of many of Cavaillé-Coll’s other organs). In addition to these electrical modifications, it is important to know that the organ had a fifty-six note manual compass, which helped in the transcription of difficult passages for which the octaves were hard to discern (for example in the *Sortie*, see Figure 11).

Many of the major notation decisions, including time and key signatures, were made based on efficiency of performance while still keeping Cochereau’s rhythmic and harmonic emphases intact. At certain points it was impossible to discern pitches within the texture (each movement has instances of this, discussed below). At those points, I selected notes and rhythms that would be close to contrapuntally correct and possible for a single performer to achieve. Some generalizations and editing had to be made with regard to rhythms to make them line up

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<sup>30</sup> Pincemaille, SOCD 226, 18.

<sup>31</sup> Ibid.



within the given framework while still giving the proper, desired effect (this is again evidenced in the *Sortie*).

## V. Transcribing Each Movement: Analytical Observations and Transcription

### Problems

The *Entrée* is the piece during which the clergy and other members of the liturgical procession enter the church. With Cochereau at the organ these often took the form of loud boisterous movements that utilized the organ's powerful *en chamade* stops,<sup>32</sup> and this selection is no exception. Its most prominent feature is the roaring and blaring pedal melody, which repeats in various ways throughout the short movement (Figure 2).



Figure 2: *Entrée*, mm. 6–15 showing the pedal melody.

<sup>32</sup> Loud horizontal reed pipes that were placed on the front of the organ case.

This draws a parallel with the earlier French classic *Plein jeu*, especially of De Grigny, in which a loud solo melody (usually a chant) could be played in the pedal with manual accompaniment upon the keyboard plenums (exactly what transpires here). I have been unable to identify any pre-existent tune that could form the basis of this melody, so I worked under the assumption that it, too, was improvised. Accompanied by the organ's full plenum,<sup>33</sup> this jaunty piece in triple meter serves to open the suite with an energetic fanfare. Here, Cochereau uses pivot motion (Figure 3), featuring abrupt changes of harmony built around a single note.<sup>34</sup> Cochereau also favored the augmented fourth scale degree, a Lydian inflection, in some of the melodic and harmonic passages (Figure 4). Rhythmically, Cochereau expertly manipulates the many possibilities inherent in triple meter, playing with suspensions, dotted rhythms, and delayed rhythmic cadences.



Figure 3: *Entrée*, mm. 28–30 showing pivot motion from A minor to A-flat major using C as a common tone.

<sup>33</sup> One of the basic organ sound combinations, utilizing pipes at multiple octaves.

<sup>34</sup> This can be reduced to a “slide” triadic transformation described by David Lewin. See: Straus, Joseph Nathan. *Introduction to Post-Tonal Theory*. 3rd ed.. Upper Saddle River, N.J.: Pearson/Prentice Hall, 2005.



Figure 4: *Entrée*, mm. 57–9 showing the raised fourth scale degree.

The pedal melody was also the most obvious problem in this movement's transcription. While itself easy to transcribe, the melody covered up the sound of the manual playing, meaning that a significant amount of the lower manual work had to either be written entirely new or based on a few fleeting bass notes. Several contextual clues enabled these decisions to be made in an informed manner. When the pedal was not playing, the manual notes were easier to hear, thus allowing me to check whether or not the previous passages made sense as to their range and texture. The peculiar breaks of the mixture stops on the Notre Dame organ also made certain notes project from the texture (especially soprano D); I used these notes as signposts to help with range and texture issues as well. When it was impossible to discern either aurally or contextually the notes used for a particular passage, I took what I knew about Cocherneau's musical and tonal language and wrote a passage based on what would be feasible and musical to play on an organ, while attempting to be contrapuntally correct and informed by Cocherneau's musical and tonal language (Figure 5). In any case, every attempt has been made to preserve the notes exactly as they were played.



Figure 5: *Entrée*, mm. 6–10. This is one spot (mm. 9–10) where the left hand (middle staff) was difficult to hear.

The *Offertoire* (the preparation of Holy Sacrament) is a softer movement focusing mainly on the organ's string and flute stops. Cochereau aims for a dreamy atmosphere with chords and patterns that are built upon the octatonic and whole-tone scales. He also favored the added-sixth chord and highly-chromatic motion. The harmonic flute stop in the right hand serves as a counter-melody to the main melody, which is played on a *jeu-de-tierce* combination.<sup>35</sup> Cochereau inserts the interval of a fourth in the counter melody, and some ornamentation in the main melody. This is all accompanied by a mysterious pulsating bass provided by the lowest pipes in the pedal division. The main melody seems to wander, giving rise to the suspicion that it again was freely improvised and not based on a pre-existing *cantus firmus*.

<sup>35</sup> A combination of organ stops that utilize non-octave pitches, usually thirds and fifths at higher pitch levels.



Figure 6: *Offertoire*, mm. 1-10, showing the texture, different sounds, and the beginning of the melody in the pedal.

This movement presented several unique challenges, the most significant of which was the fact that Cochereau almost certainly used the Notre Dame organ's unique *coupure pédale*, the "pedal-divide" which enables the organist to play two different musical lines with two different sounds on the pedals. This unique device is not present on most organs, and thus a solution was required that would enable this passage to still be playable by a single person. To

accomplish this, I omitted many of the passages of low bass notes, and gave the main *jeu-de-tierce* melody to the pedal. While the loss of the low bass is not detrimental to the affect of the piece, I included the bass notes wherever possible (when the melody was not being played). Another problem was determining the extent of the thumbing-down technique that Cochereau used, which necessitated the use of a four-stave score.<sup>36</sup> The bass notes were also in such a low register that determining their pitch was somewhat of a challenge, even when the *récit* was coupled into the pedal. Some decisions were based on my closest approximation and the feasibility of playing these passages given the relative position of the player's feet.

The *Communion* improvisation could take many forms during the service and was one of the most musically varied improvisations present in *L'organiste liturgique*. The criteria used to select this particular example involved its unique structure and focus on counterpoint, which contrasted artistically with the other movements and acted as a linking passage from the softer nature of the *Offertoire* to the louder *Sortie*. Cochereau applies various fugal techniques throughout this piece, with each voice entering in sequence, starting with the bass. The subject is highly chromatic and, as each voice enters, the texture becomes more chromatic. There is some octatonic influence in the melodic material, notably the quicker motivic passages (Figure 7), which appears to be Cochereau's standard choice. Alternating between fugal entries (Figure 8) and episodes (Figure 9) throughout, Cochereau manages a four to five-voice fugue in an efficient manner, no doubt a difficult technique to master while improvising.

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<sup>36</sup> Common organ playing technique introduced during the French Classic period and popularized by the organist Alexandre Guilmant that involves playing multiple keyboards with the same hand.



Figure 7: *Communion*, mm 19-21 showing Cochereau's octatonic tendencies.

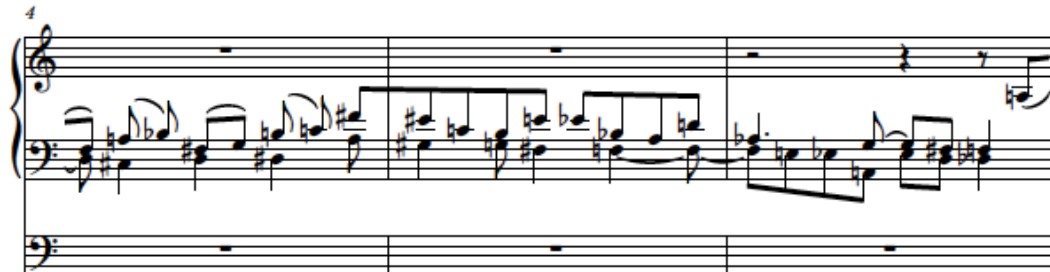


Figure 8: *Communion*, mm. 1-9, first fugal entry section.



Figure 9: *Communion*, mm. 13–16, a fugal episode, some pitch assumptions.

The most significant issue encountered during the transcription of the *Communion* was being able to hear the middle voices. At certain points (Figure 9) pitch assumptions had to be made in order to avoid parallel motion and fill the texture from what could not be heard. The pedal was difficult to hear due to the low register and choice of registration.

The *Sortie*, a closing piece for the exit of the liturgical procession at the end of the mass, is a lengthy, fast-paced toccata, with rapid passages, quick harmony changes, and loud registrations. This type of improvisation was common for Cochereau, and has remained commonplace throughout Parisian churches. Cochereau defaults to a quick moto-perpetuo toccata, characterized by repeated chords and notes in the left hand and pedal. The right hand takes up most of the fast passagework and solo melodies. Cochereau almost certainly used the crescendo pedal for this movement, which explains the gradual and quick dynamic changes that



were plentiful and would have been otherwise difficult to accomplish.<sup>37</sup> Again, as in previous movements, Cochereau favored the octatonic scale and highly chromatic and dissonant harmonies.

The *Sortie* was the biggest challenge of the suite, largely due to its length and tempo. The fast tempo that Cochereau employed required the use of digital aids in its transcription, especially the time-altering feature of “Audacity.” This function, called “change tempo,” lengthened the selected audio and slowed the tempo without affecting the pitch. The caveat was that, in order to calculate the slower audio, the computer had to introduce audible artifacts into the sound by slicing the available audio and copying it many times over. This produced an audible distortion which obscured some of the pitches and rhythms. I reduced the speed by fifty-percent, which allowed for a more accurate transcription.

Because of the distortion caused by the tempo-reduction, many passages have had their rhythms and pitches approximated, starting as early as mm. 5.

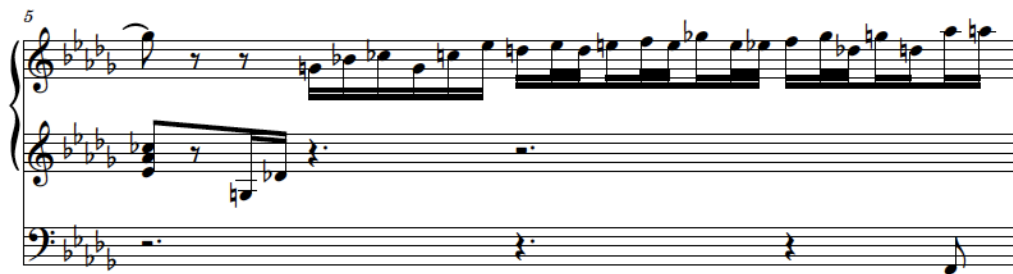


Figure 10: *Sortie*, mm. 5 with some pitch and rhythm approximations.

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<sup>37</sup> This technique was quite common for Cochereau, and can be seen in videos of his playing and improvising.

Cochereau was quite consistent in his observance of meter, but on occasion he added extra beats or extra half-beats, which are notated with extra measures. Another surprising challenge involved determining the range of some of the passages (Figure 11).



Figure 11: *Sortie*, mm. 30 showing various range issues.

The breaks of the mixtures obscured the range in the louder passages, and context clues were used to determine the correct positioning of the notes, including finding sure passages and working backwards. Particularly useful were the one or two notes on the keyboard with decidedly bright and piercing mixture ranks, which allowed them to carry through the texture and loud registrations.

## VI. Conclusion

Organ literature began with composers who arranged pieces that were originally intended for another instrumental or vocal genre. Throughout history, composers and organists have arranged other pieces for performance at the organ, and thus transcription of orchestral repertoire and other pieces became standard practice, memorializing the music of old masters and augmenting the available repertoire for concert and liturgical performance. This pervading aesthetic is what forms the foundation upon which Cochereau's early transcribers built their transcriptions. All of this constitutes the genre-specific basis for this project. In the process of

working on this project, uncovering details of Cochereau's musical and personal life added to the importance and musical value of his improvisations and consequently their transcriptions. The unique history of liturgical improvisation at Notre Dame Cathedral in Paris was forever changed by Cochereau, both by his music and the alterations done to the organ. His synthesis of the styles, drawn from the playing of his various teachers and, subsequently, incorporated into his own unique liturgical improvisation, transformed the practice as well as ushering it into the modern musical language of France and beyond. It is hoped that, following its publication, this project will result in a work of value to the organ community that will further motivate other organists to pursue similar projects in the future.

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## Appendix: Disposition of the Organ at Notre Dame During Cochereau's Tenure<sup>38</sup>

Origin of the Pipes Thierry, 1733/Clicquot, 1788 (A). Cavaillé-Coll, 1868 (B). Mutin, 1904 (C). Beuchet, 1932 (D). Hermann, 1963 (E). Boisseau, 1965 (F).			
Pédale:	I. Grand Orgue:	II. Positif:	III. Récit Expressif:
Principal 32 (B)	Principal 16 (A, B)	Montre 16 (A, B)	Quintaton 16 (A)
Contrebasse 16 (B)	Bourdon 16 (A)	Bourdon 16 (A, B)	Principal 8 (C)
Soubasse 16 (A)	Montre 8 (A)	Salicional 8 (B, C)	Gambe 8 (B, C)
Principal 8 (C)	Principal 8 (B, F)	Unda maris 8 (B)	Voix céleste 8 (B)
Flûte 8 (A)	Flûte harmonique 8 (B)	Flûte harmonique 8 (B)	Flûte harmonique 8 (B)
Bourdon 8 (D)	Bourdon 8 (B)	Bourdon 8 (A)	Bourdon 8 (F)
Octave 4 (B)	Prestant 4 (B)	Prestant 4 (A)	Octave 4 (C)
Flûte à cheminée 4 (F)	Octave 4 (A)	Flûte douce 4 (A)	Flûte Harmonique 4 (B)
Bourdon 2 (F)	Doublette 2 (A)	Doublette 2 (A)	Octavin 2 (B)
Piccolo 1 (F)	Fourniture IV (A, B, F)	Fourniture IV 16 (E)	Fourniture III (C, F)
Fourniture III (F)	Cymbale V (A, B, F)	Cymbale III (F)	Cymbale IV (F)
Cymbale IV (F)	Bombarde 16 (A)	Quinte 2 2/3 (A)	Bombarde 16 (B)
Quinte 10 2/3 (B)	Trompette 8 (A)	Tierce 1 3/5 (E)	Trompette 8 (A)
Tierce 6 2/5 (B)	Clairon 4 (A)	Clarinette 16 (B)	Basson-Hautbois 8 (B)
Quinte 5 1/3 (B)		Clarinette 8 (A, B)	Voix Humaine 8 (A, B)
Septième 4 1/7 (B)	IV. Solo:	Clarinette 4 (B)	Clairon 4 (A)
Tierce 3 1/5 (F)			
Quinte 2 2/3 (F)	Bourdon 32 (A, F)	V. Grand Chœur:	Not under expression:
Tierce 1 3/5 (F)	Principal 16 (B)		Cornet d'écho (A, F)
Larigot 1 1/3 (F)	Montre 8 (A)	Principal 8 (B)	Chamade 8 (F)
Bombarde 32 (A, B)	Flûte harmonique 8 (B)	Bourdon 8 (B)	Chamade 4 (F)
Bombarde 16 (A, B)	Prestant 4 (B)	Prestant 4 (B)	Chamade 2/16 (F)
Basson 16 (B)	Doublette 2 (B)	Doublette 2 (B)	Tremblant
Ranquette 16 (F)	Fourniture II, 32 (F)	Piccolo 1 (B)	
Trompette 8 (A)	Fourniture V, 16 (F)	Cymbale IV (F)	
Basson 8 (B)	Cymbale IV (F)	Quinte 2 2/3 (B)	
Clairon 4 (A)	Cornet IV-V (A, B)	Tierce 1 3/5 (B)	
Chalumeau 4 (F)	Quinte 5 1/3 (A)	Larigot 1 1/3 (B)	
	Tierce 3 1/5 (B)	Septième 1 1/7 (B)	
	Quinte 2 2/3 (B)	Tuba 16 (B)	
	Septième 2 2/7 (B)	Trompette 8 (A)	
	Cromorne 8 (F)	Clairon 4 (A)	

<sup>38</sup> Pincemaille, 22.