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Transcribing Philip Glass’s Glassworks: Historiography, Case Study, Methodology

Author
Hoch, Philip John

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Transcribing Philip Glass's *Glassworks*:

Historiography, Case Study, Methodology

A dissertation submitted in partial satisfaction of the

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by

Philip John Hoch

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ABSTRACT OF THE DISSERTATION

Transcribing Philip Glass's *Glassworks:*

Historiography, Case Study, Methodology

by

Philip John Hoch

Doctor of Musical Arts

University of California, Los Angeles, 2021

Professor William Andrew Kinderman, Co-Chair

Professor Jocelyn Hiu Ching Ho, Co-Chair

Transcriptions have long been a companion to solo organ literature. Because of the instrument's rich and diverse sound palette available to the organist's discretion, organ transcriptions can generally offer an expressive and captivating recreation of the work at hand. The history of transcriptions paints an intriguing picture: transcribers often reworked contemporary pieces of their time. For example, J. S. Bach transcribed works by Antonio Vivaldi, and Theodore Dubois arranged symphonic works by Felix Mendelssohn for the organ. This embellished trend of transcribing contemporary works seems to have broken around the turn of the twentieth century. Transcribers of today are generally continuing to transcribe works from preceding periods, especially nineteenth century symphonies. If transcribers have overlooked mainly twentieth century works, then minimal music is particularly underexplored.

This observation brings forth a compelling question: in what direction can organists continue to expand upon the tradition of transcribing works for the organ in the twenty-first century in a productive way? One possibility is recreating minimalist pieces on the organ, as this dissertation demonstrates. The idea of transcribing minimalist works for the organ came after hearing Latvian organist Iveta Apkalna perform Philip Glass's *Mad Rush* (1979) on the Glatter-Götz/Rosales organ at the Walt Disney Concert Hall in 2019. Her technical endurance, registrations, and expression in her rendition of Glass's piano piece generated an overwhelmingly positive response from the audience. This enlightening discovery unveiled a strong affinity between audiences and minimalist works be reimagined on the organ, influencing this dissertation study.

Chapter 1 will present three case studies of organ transcriptions of various works completed within the last 150 years to generate a wide array of transcription approaches. Philip Glass's renowned *Glassworks* (1981-2) will be examined in Chapter 2 to reveal its peripheral appeal to classical and popular music listeners through instrumentation, form, and style. Chapter 3 outlines my process of creating an organ version of *Glassworks*, addressing any concerning areas that surfaced in the process. Herbert Ellingford's treatise, *The Art of Transcribing for the Organ*, and each transcribers' methods addressed in Chapter 1 are consulted to aid my transcription process. Chapter 4 presents the *Glassworks* transcription and addresses performance considerations, instrument selection, and registration approaches.

The dissertation of Philip John Hoch is approved.

Christoph Bull

Cesar Daniel Favila

Ian Krouse

William Andrew Kinderman, Committee Co-Chair

Jocelyn Hiu Ching Ho, Committee Co-Chair

University of California, Los Angeles

2021

For Samuel, Olga, Salomon, and Alma Schmidt.

Gracias a Dios por su amor, apoyo y aliento en mis esfuerzos académicos.

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PREFACE

Organ transcriptions have long played a significant part in the instrument's repertoire. First appearing in the sixteenth century, they rose to prominence in the Baroque era and have endured to the present day.[1] Jack Bethards attributes this longevity to the enhanced expression often possible on the organ and to the artistic mastery of a single performer: "being under control of one artist, [the organ] can often render a more convincing performance than can an orchestra."[2] During the Baroque period, the organ assumed special prominence. It became one of the period's most important instruments, according to Rachel Stevenson, "[d]ue to its rich and full cathedral sound" and ability "to create polyphony while holding out a pedal point in the bass."[3] The possibility of producing such polyphonic sounds on a single instrument was attractive, even pathbreaking.

Throughout history beginning in the Baroque era, transcriptions had usually been based on contemporary works. Bach transcribed several of Vivaldi's *concerti*.[4] In the Romantic period, Theodore Dubois (1827-1924) transcribed and performed works by Felix Mendelssohn-Bartholdy on the great organs built by Aristide Cavaillé-Coll (1811-1899).[5] In the twenty-first century, however, organists continue to transcribe Baroque and Romantic concertos, symphonies, and choral works, which seems to break the predisposed tradition of transcribing pieces by contemporary composers. For instance, James David Christie (b. 1952) recently transcribed Vivaldi's *Concerto in D Minor* (RV 93) for the organ, just as Bach had done.

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[1] On transcriptions in the sixteenth century, see Herbert Ellingford, *The Art of Transcribing for the Organ,* vi.
[2] Jack Bethards, "A Brief For The Symphonic Organ," *BIOS Journal* 26 (2002): 4.
[3] Rachel Stevenson, "The Interwoven Evolution of the Early Keyboard and Baroque Culture," *The Research and Scholarship,* Presentation, Cedarville University, (2016): 2.
[4] Quentin Faulkner, "Information on Organ Registration From a Student of J.S. Bach," *The American Organist* Vol. 27 (1993): 58.
[5] One such transcription is Dubois's organ version of Mendelssohn's *Athalie, Op. 74* (1843-45). For more on Dubois's organ transcriptions, see Jed Distler, "The Organ Transcription in France," *Classics Today*, https://www.classicstoday.com/review/review-13347/.

"Christie's version [of Vivaldi's *Concerto*] was convincing as an organ piece, using Bach's transcription[s] as obvious models."[6] Samuel Metzger (b. 1972), Senior Organist at The New Presbyterian Church in Pompano Beach, Florida, recently published *Five Classical Transcriptions for Organ (2016)* – a collection of choral and instrumental transcriptions from the Baroque and Romantic periods.[7] Metzger's notable transcription is a rendition of Gabriel Fauré's (1845–1924) "In Paradise" from *Requiem (1887–1890).*[8]

If twentieth century music has been largely overlooked by transcribers, minimalist works are particularly underexplored. This dissertation explores minimalism's potential to be transcribed for the organ. Minimalist works performed on the organ offer beautiful and entrancing expressive possibilities when appropriately registered, potentially rendering a more compelling interpretation than the original medium. To support one's transcription endeavors, it is imperative to closely examine other transcribers' processes of adapting musical material on the organ.

My first chapter, "Three Case Studies in Organ Transcription," will examine works by Edwin Lemare, Calvin Hampton, and William Westbrook to reveal their approaches to transcribing chamber works, symphonies, and operas for the organ. The second chapter, "*Glassworks* as a Bridge Between Classical and Popular Spheres," will investigate how Philip Glass's *Glassworks* has generated a following from classical and popular music listeners. Chapter 3, "Transcribing *Glassworks* for the Organ," will present my methodology for transcribing *Glassworks,* drawing on the case studies in Chapter 1 and Herbert Ellingford's

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[6] Daniel Hathaway, "James David Christie, Organ & Robert Walters, English Horn, at Immaculate Conception Church (Sept. 27)," Cleveland Classical, October 1, 2015, https://clevelandclassical.com/james-david-christie-organ-robert-walters-english-horn-at-immaculate-conception-church-sept-27/.
[7] Samuel Metzger, *Five Classical Transcription for Organ* (St. Louis, MO: Morning Star Publications, 2016).
[8] Jan Beukes also transcribed Faure's *Requiem* for the organ and documented his transcription process. See Jan Beukes, "A Liturgical Justification for a Duet or Duo Organ Transcription of Fauré's *Requiem, Opus 48,*" *Navorsingartikels* (2015): 82-98.

treatise, *The Art of Transcribing for the Organ*. The fourth and final chapter, "The Transcription," will present the transcription of *Glassworks* in its entirety, along with a commentary on performing the work on organs of varying construction.

VITA, Philip Hoch

Education

University of Redlands, Redlands, CA: M.Mus. Keyboard Performance, Emphasis in Organ Performance. Degree earned: April, 2018, GPA: 4.0

University of Redlands, Redlands, CA: B.Mus. Keyboard Performance, Emphasis in Organ Performance. Degree earned: April, 2016, GPA: 3.97

Academic Leadership

2020-21 Founding Treasurer, Inaugural Herb Alpert School of Music Graduate Student Council, University of California, Los Angeles

Honors and Scholarships

2018-20 Music Meritus Scholarship recipient, University of California, Los Angeles

2016-18 Graduate Student Assistantship recipient, University of Redlands, Redlands, CA

2017 Meritorious Poster Presentation recipient, American Speech-Language Association (ASHA), Los Angeles, CA

2013-16 Rowena Bishop Scholarship recipient, University of Redlands, Redlands, CA

2016 Inducted into Pi Kappa Lambda honor society, University of Redlands, Redlands, CA

2016 Senior Performance Award, University of Redlands, Redlands, CA

Competitions

2016 President's Honor Recital winner, University of Redlands, Redlands, CA

2017 President's Honor Recital winner, University of Redlands, Redlands, CA

2015 Concerto Competition finalist, University of Redlands, Redlands, CA

Conference Presentations

2017 “Music, Voice & Collaboration: Creating Interprofessional Learning Opportunities at a Liberal Arts University” with contributing authors: Dr. Julia Shuler, Gillian Maguire, Ilse Kruze, and Ariel Estébez, American Speech-Language Association (ASHA), Awards: Meritorious Poster Presentation. Los Angeles Convention Center, Los Angeles, CA

Professional Experiences

2019-2021 Organ Scholar, First Congregational Church of Los Angeles, Los Angeles, CA

2021 Interim Organist, Shepherd’s Grove (Hour of Power), Irvine, CA

2016-18 Graduate Teaching Assistant, Organ Department, University of Redlands, Redlands, CA

2015-21 Piano Instructor, Picco Music Academy, Redlands, CA

Professional Organization Memberships

American Guild of Organists (AGO)

CHAPTER 1: THREE CASE STUDIES IN ORGAN TRANSCRIPTION

This chapter offers case studies of three organ transcriptions completed within the last 150 years. They demonstrate the organ's versatility and its ability to recreate contrasting genres of classical music: a piece for solo violin and piano, an orchestral symphony, and an operatic work for orchestra and opera chorus respectively. Each transcription will be closely compared with its orchestral counterpart to reveal the transcriber's operative process. A valuable resource for transcription studies is Herbert Ellingford's influential treatise *The Art of Transcribing for the Organ*.[9] Ellingford (1876–1966) was organist at St. George's Hall in Liverpool, where he was the successor to William Thomas Best (1826–1897)—an iconic and profoundly prolific transcriber.[10] With Ellingford's treatise as a guide, I will examine the three organ transcriptions to highlight significant changes, either by reduction or addition, outlining registration practices, and the transfer of dynamic and expression markings.

A valuable resource for transcription studies is Herbert Ellingford's influential treatise *The Art of Transcribing for the Organ*.[11] Ellingford (1876–1966) was organist at St. George's Hall in Liverpool, where he was the successor to William Thomas Best (1826–1897)—an iconic and profoundly prolific transcriber.[12] With Ellingford's treatise as a guide, I will examine the three organ transcriptions to highlight significant changes, either by reduction or addition, outlining registration practices, and the transfer of dynamic and expression markings.

[9] Thomas Joyce, "An Original Transcription for the Organ: *Serenade for Strings, Op. 48* by Pyotr Ilyich Tchaikovsky, Including a Comprehensive History of Organ Transcription and Relevant Organ Design," DMA diss., University of Washington, 2009: 67-69.
[10] Herbert Ellingford, *The Art of Transcribing for the Organ,* (New York: H. W. Gray Company, 1922), back cover.
[11] Thomas Joyce, "An Original Transcription for the Organ: *Serenade for Strings, Op. 48* by Pyotr Ilyich Tchaikovsky, Including a Comprehensive History of Organ Transcription and Relevant Organ Design," DMA diss., University of Washington, 2009: 67-69.
[12] Herbert Ellingford, *The Art of Transcribing for the Organ,* (New York: H. W. Gray Company, 1922), back cover.

Before presenting the case studies, I will give an overview of organ construction and design—outlining its congruency with transcription possibilities. Johann Sebastian Bach's famous organ transcriptions, mainly of Vivaldi concertos–made during his Weimar period around 1713–14–are a landmark in the history of transcription for the keyboard, and specifically the organ. Though viewed as a rarity by organists, specific registrations were a significant component of Bach's sophisticated transcriptions.[13] In his transcription (BWV 596) of the opening movement of Antonio Vivaldi's *Concerto in D Minor* (RV 93), originally for flute, strings, and continuo*,* Bach implements a registration of only 4' flute stops — a rather unusual choice due to its light tone. Baroque consoles are usually confined to 61 keys, making Vivaldi's notated d'" in the solo violin impossible on the organ if using an 8' registration. Instead, Bach registers 4' foundation stops to recreate the violin's passage successfully. By navigating technical difficulties like this one, Bach demonstrated the artistic potential of transcribing pieces for the organ, leading them to become equally significant as other solo works for the instrument.

Advances in organ design fabricated new possibilities for transcriptions. In the Romantic period, organ builders devised instruments that were easier to play, offering performances rich in expression. Baroque organists conventionally required stop pullers to select or deselect stops on the console to create dynamic shifts, which were "stair-stepped" rather than gradual. Connecting timbre with dynamic intensity was not an ideal setup for composers and transcriptionists of the Romantic era. Orchestral music of the period incorporates many timbral shifts, and Romantic organ builders sought to follow suit by designing instruments that gave the performer greater control with more autonomy and less effort. Such innovations were initiated by English organ builder Charles Spackman Barker (1806–1879), who invented a device that used "the wind

[13] Quentin Faulkner, "Information on Organ Registration From a Student of J.S. Bach," *The American Organist* Vol. 27 (1993): 58.

pressure of the organ bellows to help the organist's fingers when several keyboards were coupled together."[14] Called a Barker lever, this apparatus allowed the organist to play *legato* phrases with ease. Iconic French organ builder Aristide Cavaillé-Coll (1811–1899) built instruments capable of a dynamic range" that "imitated the romantic orchestra's."[15] He achieved this level of imitation with two mechanical refinements. His swell shade was operated by a spring-loaded lever, allowing for gradual dynamic shifts, and he strengthened the wind pressure on some consoles so that melodic phrases could be heard more clearly.[16] Barker and Cavaillé-Coll's innovations meant that organists could transcribe dynamically complex Romantic symphonic works for the organ and have them be played with ease.

In the twentieth century, American builders E. M. Skinner and C. B. Fisk designed pipe organs with ranks that could replicate specific sounds of an orchestra with precision.[17] These so-called symphonic organs were truly capable of reproducing orchestral works in transcriptions. Listeners enjoyed hearing transcriptions on symphonic organs because of their ability to recreate orchestral sounds on an instrument that one person controls.[18] Organ transcriptions, in some communities, became the most common way of hearing European orchestral works.[19]

The following case studies treat transcriptions by Edwin Lemare, Calvin Hampton, and William Westbrook to mark their appeal in a significant chapter of the history of organ transcriptions. Lemare and his 1910 reworking of Edward Elgar's *Une Idylle* highlight the organ's ability to be conserved to convey a musical conversation between solo and

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[14] Craig Whitney, *All The Stops: The Glorious Pipe Organ and Its American Masters, (*New York, NY: PublicAffairs, Inc., 2003): 7.
[15] Craig Whitney, *All The Stops,* 7.
[16] Michał Szostak, "An Appreciation of Aristide Cavaillé-Coll on the 120th Anniversary of His Death," *The Organ* Vol. 387 (2019): 6-21.
[17] Orpha Ochse, *The History of the Organ in the United States,* (Bloomington, IN: Indiana University Press, 1975): 364.
[18] Ochse, *The History of the Organ in the United States,* 364-366.
[19] Ochse, 344.

accompaniment instruments—a rather intimate form of musical expression for the organ. Conversely, Hampton utilizes the sheer power of the symphonic organ to recreate the immense magnitude of sound delivered by the nineteenth century orchestra, as illustrated in his 1977 arrangement of César Franck's *Symphony in D Minor*. Westbrook's transcription marks a significant place in the history of transcriptions. His 1880 reworking of Richard Wagner's *Tannhäuser March* employs specific organ registrations recreate operatic vocal solos and choruses—a remarkably challenging feat to achieve. Westbrook's arrangement was one of the first transcriptions to demonstrate that operatic works are possible to be recreated on the organ. Ultimately, these transcriptions of various genres will reveal contemporary and modern approaches to transcription that will be revisited in Chapters 3 and 4.

A Solo Transcription: Edwin Lemare's Transcription of Edward Elgar's *Une Idylle, Op. 4* for Violin and Piano

One of the most notable organ transcribers was English composer and organist Edwin Lemare (1865–1934). Lemare began his career as a concert organist at a time when transcriptions were considered controversial.[20] Some argued that transcriptions distorted a piece's meaning, while others valued the creative insights behind the practice. Lemare sought to spotlight the symphonic organ's ability to recreate orchestral sounds. He established a personal goal of raising "the organ to its proper position as a solo instrument."[21] Lemare ultimately arranged over 800 transcriptions of various genres, though only 270 are currently published.[22] One of his most significant accomplishments was transcribing several operas by Richard

[20] Ter Ellingson, "Transcription," in L. Macy (ed.) *Grove Music Online* (2001).
[21] Edwin Lemare, quoted in Wayne Leupold, 'Preface,' in *The Organ Music of Edwin H. Lemare,* series 1, vol. 1, (1990): 3-7.
[22] Sverker Jullander, "Transcription as the Performer's Strategic Tool: The Case of Edwin Lemare and the Organ," *Performance Online,* Vol. 3, no. 1, (2008): 6.

Wagner—a feat rarely attempted by other transcribers.[23] Alongside his talent and performing abilities, Lemare is remembered for his achievements in writing transcriptions for the organ and ultimately contributing to the instrument's revival.

One of Lemare's lesser-known transcriptions is of Edward Elgar's *Une Idylle,* Op. 4*,* a work originally scored for solo violin and piano. In transcribing, Lemare rarely sought to deviate from the composer's intentions but instead followed the original score as closely and faithfully as possible.[24] However, Lemare's version of *Une Idylle* is an example in which he makes creative changes to the original orchestration to make the piece sound as if it were originally written for the organ.

Une Idylle begins with a mellifluous G major lyrical phrase on the piano, serving as a short introduction before the violin enters. The first significant change occurs at measure 4, where the violin's hauntingly beautiful melody is accompanied in the piano by lyrical phrases (Fig. 1.1). Lemare deviates from the original score by reorchestrating the accompaniment with a hymn-like texture (Fig. 1.2). These changes showcase the organ's capacity to perform homophonic textures.[25]

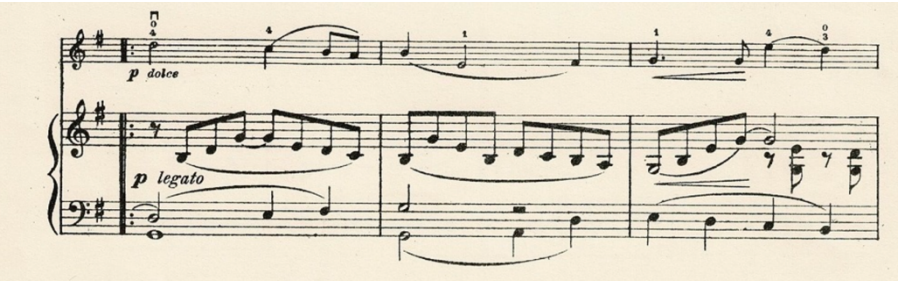


Fig. 1.1, Elgar, *Une Idylle*, measures 4-6, Score, (London: Edwin Ashdown Ltd., 1910).

[23] Sverker Jullander, 8.
[24] Nelson Barden, "Edwin Lemare, Part Four: San Francisco, Portland, Chattanooga, Hollywood," *The American Organist,* 20. No. 6 (1986): 76-82.
[25] Sverker Jullander, "The Performer's Strategic Tool," 3.

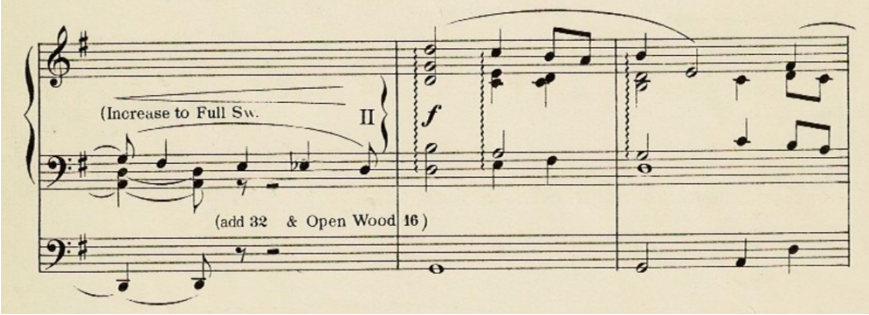


Fig. 1.2, Elgar, *Une Idylle*, transcribed for organ by Edwin Lemare, measures 3-5, Score, (London: Edwin Ashdown Ltd., 1910).

Lemare's homophonic treatment continues through measure 15 (Fig. 1.4), realigning the transcription with the original score at measure 16 (Fig. 1.3). At this moment, Lemare isolates the solo voice by using two manuals: the violin part is played with an 8' reed and an 8' flute, with Tremulant to emulate the violin's vibrato. David Hurwitz accurately explains how the organ can produce such enthralling vibrato tones:

> There are essentially two systems employed in creating vibrato on the organ: the Tremulant, a mechanical device which staggers the wind flow to the pipes with varying degrees of rapidity, and 'Celeste' tuning (to use the modern term), which involves opposing two or more ranks of pipes, with the additional ranks tuned slightly sharp or flat to the fundamental pitch. The result creates acoustic 'beats' that approximate a genuine pitch vibrato, although this analysis reveals that the Tremulant also can be used to stand in for the same effect. A crucial point in considering these vibrato analogues on the organ lies in the fact that they are frequently the product of two or more ranks of pipes played together. This is invariably true of Celeste stops, and often the case when using the Tremulant, depending on which stops or larger divisions the device modifies. The need to blend the basic vibrato timbre with additional stops to create a desired sonority means that organ vibrato is 'orchestral' on its face.[26]

By registering the use of the Tremulant (marked "Trem.") within the Swell division, Lemare created a timbral effect similar to that of a solo violin blending with piano accompaniment.

[26] David Hurwitz, "Vibrato, the Orchestral Organ and the 'Prevailing Aesthetic' in Nineteenth-Century Symphonic Music," *Nineteenth-Century Music Review,* Vol. 11 (2014): 95.

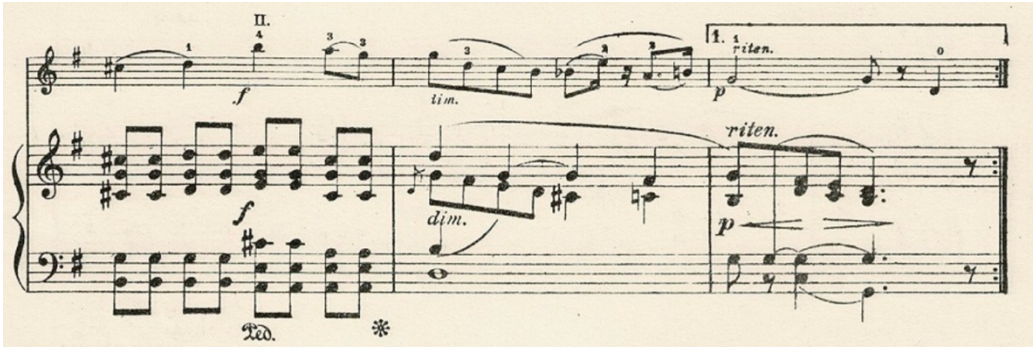


Fig. 1.3, Elgar, *Une Idylle*, measures 13-15, Score, (London: Edwin Ashdown Ltd., 1910).

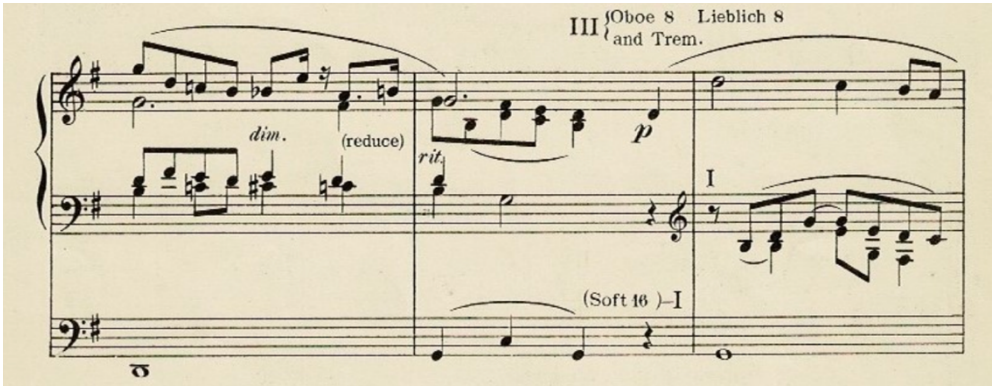


Fig. 1.4, Elgar, *Une Idylle*, transcribed for organ by Edwin Lemare, measures 14-16, Score, (London: Edwin Ashdown Ltd., 1910).

The last significant textural change in Lemare's transcription occurs at measure 20. Instead of reducing or reorchestrating notes, Lemare instead appends new material. The right hand performs the melody, now in the supertonic, while the left hand reproduces the accompaniment's arpeggiated figures (Fig. 1.6). In reorchestrating, Lemare brings forth an interesting countermelody (E – A – F – B), one merely suggested in Elgar's original score (Fig. 1.5). Lemare's polyphonic addition demonstrates the organ's ability to highlight intricate melodic details of a piece that might otherwise be considerably subdued.

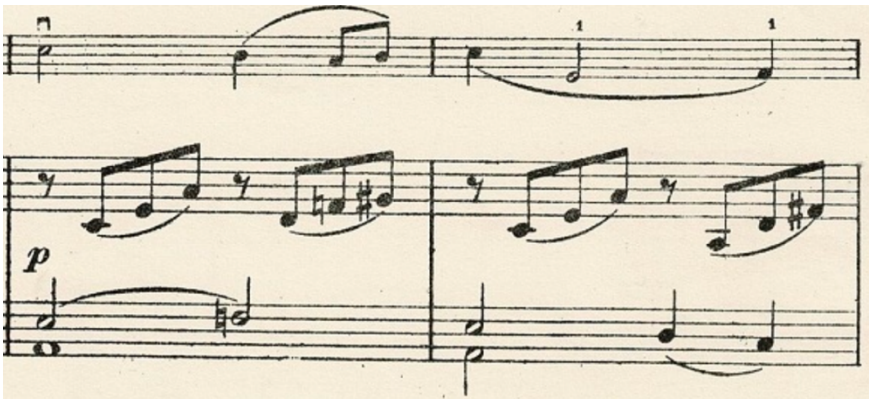


Fig. 1.5, Elgar, *Une Idylle*, measures 8-9, Score, (London: Edwin Ashdown Ltd., 1910).

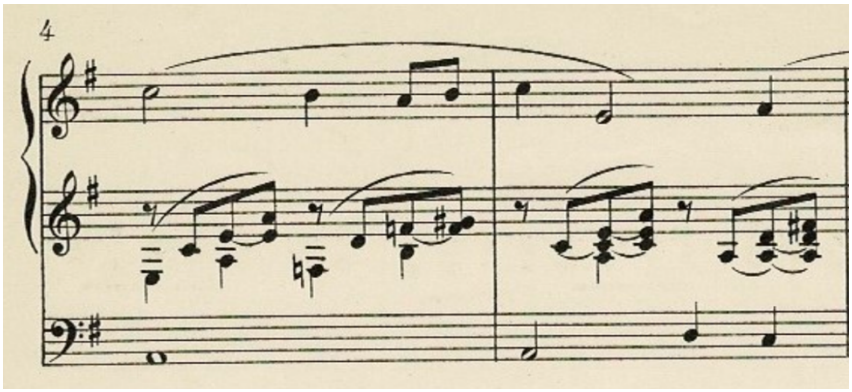


Fig. 1.6, Elgar, *Une Idylle*, transcribed for organ by Edwin Lemare, measures 20-21, Score, (London: Edwin Ashdown Ltd., 1910).

Let us take note of Lemare's registration markings in *Une Idylle.* Lemare provides idiomatic registrations that convey the gently charming characteristics of the original medium. Few registrations are specific, leaving room for the individual organist to explore timbral possibilities on their instruments. For example, in the Choir division, Lemare asks for "soft 8' and 4' stops"—a rather generic registration (Fig. 1.7). These classes of stops can either be flutes or soft-speaking diapasons. Celestes may be an option as well, but, as Hurwitz noted, these can create a string-like effect in the overall timbre that is undesirable in this context. The Choir division aims to represent the piano's warmly stated accompaniment. For this, flutes and soft-speaking principals can be used.

The Great division calls for diapasons in both 16’ and 8’ with the Swell (III) coupled. This effect produces a full tone on the largest division, a setting primarily used at the homophonic rendition of Elgar’s opening theme (Fig. 1.4). The Swell uses soft 8’ and 4’ stops, while the Pedal calls for soft 16’ and 8’ sounds with the Swell coupled to the division. A Subbass 16’ (a common flute-based stop with a rounded foundation), Lieblich Gedackt 16’ (a soft and reserved foundational flute stop), or a Diapason 16’ (a warm and present foundational stop) may suffice. The only registration change occurs at measure 16, where the texture shifts to a solo with accompaniment (Fig. 1.4). Lemare prescribed a manual change from the Great to the Choir using only 8’ and 4’ foundational stops. The right hand is registered to the Swell division by using an 8’ Oboe to represent the solo violin voice. Paired with a Lieblich 8’ as Lemare suggests, a warmer sound presence is likely to result. The prescribed Tremulant creates a “shaky, solo-like” timbre to the Swell division, producing a voicing similar in spirit to a solo violin. Lemare’s creative registrations eloquently represent the idiomatic qualities of the original piece on the organ.

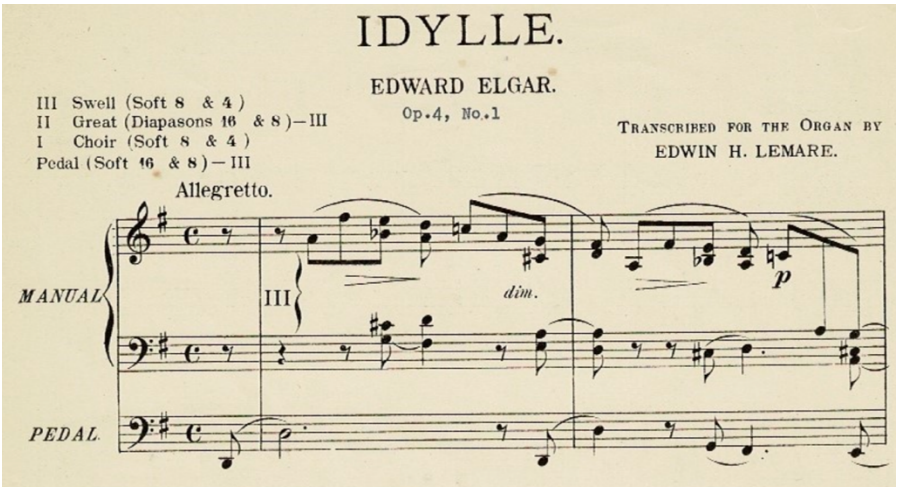


Fig. 1.7, Elgar, *Une Idylle*, transcribed for organ by Edwin Lemare, opening measures, Score, (London: Edwin Ashdown Ltd., 1910). Note Lemare’s registration markings.

Lemare's transcription faithfully follows Elgar's original score in many of its markings. He implements nearly every one of Elgar's dynamic markings and tempo indications. Figures 1.8 and 1.9 show that both versions indicate *Allegretto* as the beginning tempo marking and retain the *piano* in measure 2. Keeping Elgar's markings throughout the transcription preserves the character of the piece on the organ.

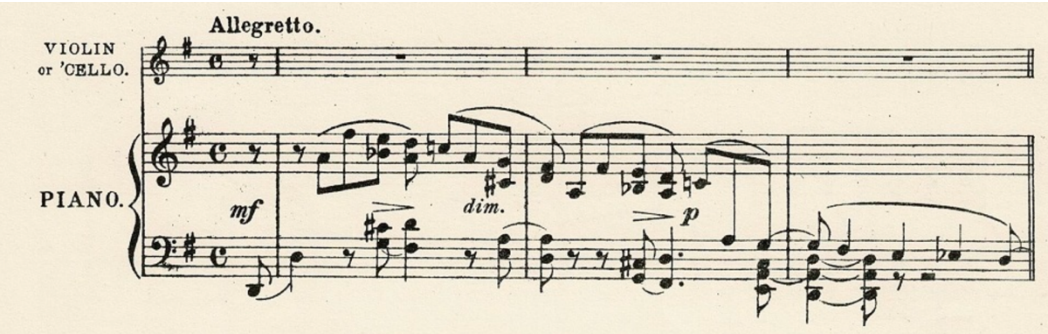


Fig. 1.8, Elgar, *Une Idylle*, measures 1-3, Score, (London: Edwin Ashdown Ltd., 1910).

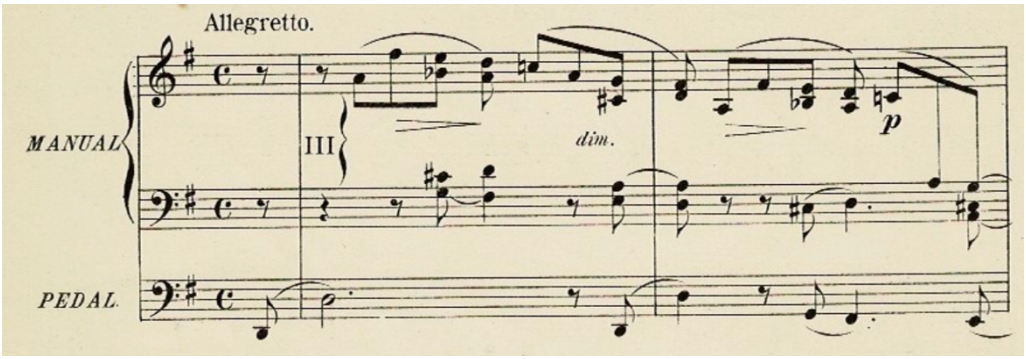


Fig. 1.9, Elgar, *Une Idylle*, transcribed for organ by Edwin Lemare, measures 1-2, Score, (London: Edwin Ashdown Ltd., 1910).

Lemare also follows Elgar's expressive markings. At measure 4 in the original score (Fig. 1.10), for instance, the opening passage in the piano is marked *legato.* Lemare follows suit in his organ transcription, but the indication—changed to *sempre legato*—does not occur until measure 17 (Fig. 1.11), after the homophonic rendering of the opening theme in measures 4 through 15.

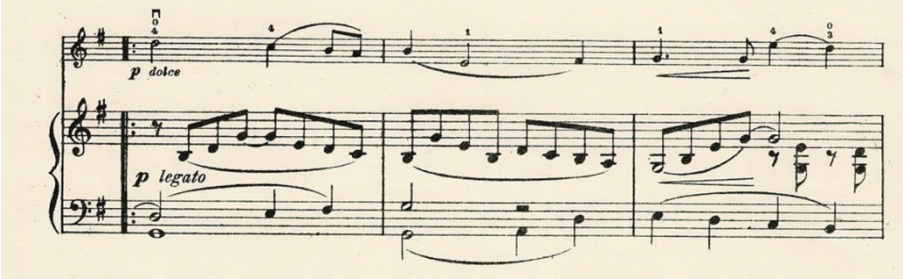


Fig. 1.10, Elgar, *Une Idylle*, measures 4-6, Score, (London: Edwin Ashdown Ltd., 1910).

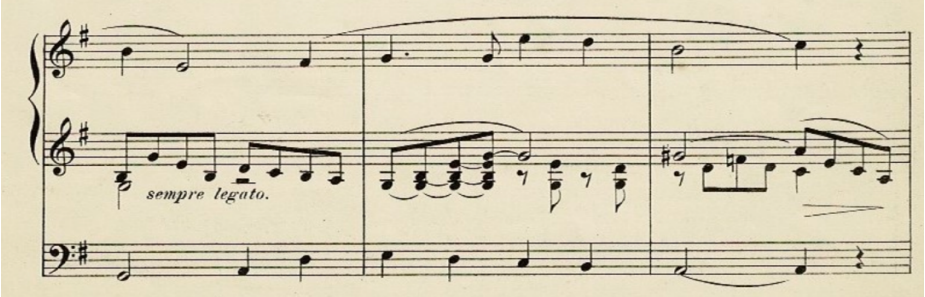


Fig. 1.11, Elgar, *Une Idylle*, transcribed for organ by Edwin Lemare, measures 17-19, Score, (London: Edwin Ashdown Ltd., 1910).

The only significant departure from Elgar's markings occurs at measure 4 (Figs. 1.1 and 1.2), where instead of *piano*, Lemare uses a *forte* on the Great manual. This timbral change from the Swell division to the Great will likely create a noticeable dynamic shift from soft to loud on the organ. The reason behind Lemare's change of dynamic markings remains unknown, but one theory suggests that the opening statement bears greater significance when played on the Great manual—the loudest division on the organ—, similar to hymn playing.[27] If played on an instrument with a Great division expression pedal, the timbral shift may be successful as long as the volume is controlled. Otherwise, the effect can result in the opening "solo" passage being presented with a tremendous amount of sonic force. Though Lemare's transcription contains

[27] Organists may provide an introduction for hymns on quieter divisions to establish the key signature and tempo. When the first stanza is sung, organists typically use the Great division to provide a fuller and rounder sound to accompany the congregation. For more on hymn playing, see David Heller, *Manual on Hymn Playing: A Handbook for Organists* (Chicago, IL: GIA Publications, 1992).

some changes, namely through reorchestration and dynamic markings, his organ rendition of *Une Idylle,* Op. 42 remains an excellent model for other transcribers to follow.

Though Lemare's transcription serves as an excellent transcription for others to model after, the work is far from a perfect rendition. According to Jaap Kunst, transcriptions, in theory, will, perhaps inevitably confront a gap between their amended state and their original counterparts.[28] Lemare's organ version of *Une Idylle* manifests the organ as incapable of capturing acoustical nuances associated with the piano and violin. For example, the nature of the piano's sound cannot be accurately recreated on the organ using standardized stops. Attempts have been made in designing stops to sound like the piano, such as the rare Terpodion 8', whose sounds are produced from "open cylindrical metal pipes [with] wide and low mouths."[29] However, such stops are "of little tonal value."[30] The charitable sound quality of the violin is nearly impossible to recreate idiomatically on the organ as well. Some consoles feature Violin 8' stops to imitate the sound of the orchestral violin, though these sounds often produce tones "so assertive and penetrating," often rendering the voice "unsuitable for general combinatorial purposes."[31] Instead of pursuing idiomaticity, Lemare inscribes abstract registrations (see Fig. 1.7) to allow organists to experiment with selecting appropriate stops on their instruments while keeping the spirit of the original instruments intact through reorchestration.

In summary, Lemare's arrangement of Elgar's *Une Idylle* captures the violin's and piano's entrancing characteristics on the organ. The transcription showcases that the organ—and all of its sheer power—can be reserved to reproduce subtle intricacies between solo and accompaniment

[28] Jaap Kunst, quoted in Nazir A. Jairazbhoy, "The 'Objective' and Subjective View in Music Transcription," *Ethnomusicology,* Vol. 21, No. 2 (1977): 263.
[29] George Ashdown Audsley, *Organ-Stops and Their Artistic Registration: Names, Forms, Construction, Tonalities, and Offices in Scientific Combination,* (New York: H. W. Gray Co., 1949): 252.
[30] Audsley, 252.
[31] Audsley, 278.

voices effectively. Although some deviations are present, Lemare's transcription process ultimately shows a near direct note-for-note transfer onto the organ, supplementing it with the composer's original dynamic and expressive markings. The result manifests a faithful following to the original score and the composer's expressive intent, providing a magnificent recreation of Elgar's work on the organ.

An Orchestral Transcription: Calvin Hampton's Transcription of César Franck's *Symphony in D Minor*

Calvin Hampton (1938–1984) was an American composer and organist who specialized in writing church pieces, many of which he premiered while in residence at Calvary Episcopal Church in New York City. Regarded as a brilliant composer and concert organist, Hampton composed many works for organ, choral, and chamber ensembles in his short life and was a prolific transcriber.[32] His organ transcriptions include César Franck's *Symphony in D Minor* (1977). Its third movement, "Allegro ma non troppo," will be used to illustrate Hampton's transcription process.

Hampton's rendition of the *Symphony* is considered a sophisticated concert piece. The work combines timbres, textures, and dynamics to deliver compellingly symphonic sounds on the organ. He also uses pipe chambers throughout the performing space, creating an immersive listening experience. Being a concert organist who presumably knew the organ works of César Franck, Hampton mindfully recreates the *Symphony* to make the transcription sound as if the composer had originally written the piece for the instrument.

Though Hampton's transcription retains many of Franck's salient characteristics, modifications to the orchestration accommodate the limitations of organ playing. Hampton's first

[32] Margaret Campo, "A Survey Of Selected Organ Works By Calvin Hampton," DMA Diss., Louisiana State University, 1998, 6.

notable alteration occurs at the beginning of "Allegro ma non troppo" where he alters the strings' tremolo figures (Fig. 1.12). Instead of duplicating the string's tremolo sequences, Hampton uses an alternating eighth-note D-D' figure in the right hand (Fig. 1.13). Though the organ can reproduce tremolo figures, this effect does not translate well on the instrument. Since the organ sound is continuous when keys are held down (as opposed to the decaying sound on a piano), tremolos are simply not necessary. Ellingford's treatise discourages the use of tremolos because "at the high speed one note will run into the other, and this merging of one sound into the next, results in the effect of one continuous sound, or at best, a sustained wobble!" [33] If Hampton reapplied the tremolos in their original form, the result would presumably sound like a held D-D' octave. By modifying the right hand to oscillating D-D' figures, Hampton preserves the strings' timbral effect on the organ, lowering the risk of such an undesirable "sustained wobble." He continues this adjustment throughout the movement where the strings perform similar patterns. Hampton's alterations demonstrate how transcribers should aim to represent the spirit of a texture, not necessarily its original notation.

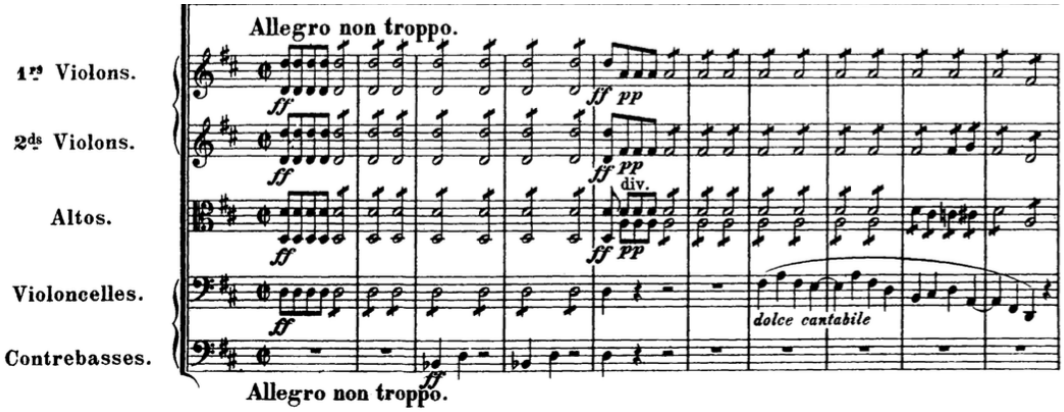


Fig. 1.12, Franck, *Symphony in D Minor,* "Allegro ma non troppo," measures 1-10, Score, (Paris: Hamelle, n.d., 1890).

[33] Herbert Ellingford, *The Art of Transcribing for The Organ,* 119.

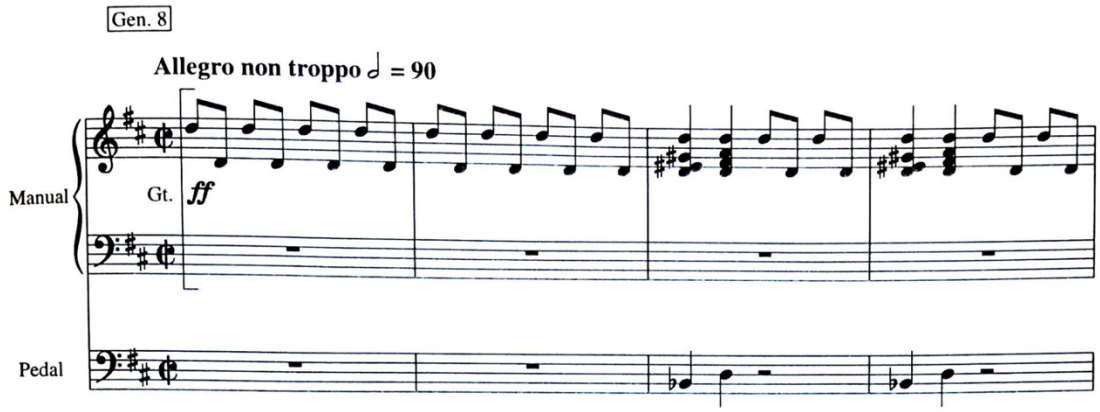


Fig. 1.13, Franck, *Symphony in D Minor,* transcribed for solo organ by Calvin Hampton, "Allegro ma non troppo," measures 1-4, Score, (Colfax, NC: Wayne Leupold Editions, Inc., 2006). © 2006 by Wayne Leupold Editions, Inc. Used by Permission.

Hampton's second significant modification occurs at measure 165. Here, he condenses multiple lines onto a single manual. In the original score, Franck employs what appears to be a polyrhythmic conversation between the violas and violin IIs (Fig. 1.14). Hampton extracts both voices and combines them in the left hand on the Choir division to maintain this polyrhythmic conversation while the solo voice projects through the texture on the Great (Fig. 1.15). It would have been possible for Hampton to retain only one of these two lines to maintain simplicity. Ellingford encourages organists to "[e]liminate the *unessential,* and lay out the *essential* to the best advantage on the organ."[34] Instead, Hampton preserves Franck's unique melodic interaction by combining two voices onto one manual. Maintaining this conversation was, for Hampton, most essential. His modifications show that transcribers should aim to reproduce essential material on the organ, eliminating unnecessary voicings where possible.

[34] Herbert Ellingford, *The Art of Transcribing for the Organ,* 3.

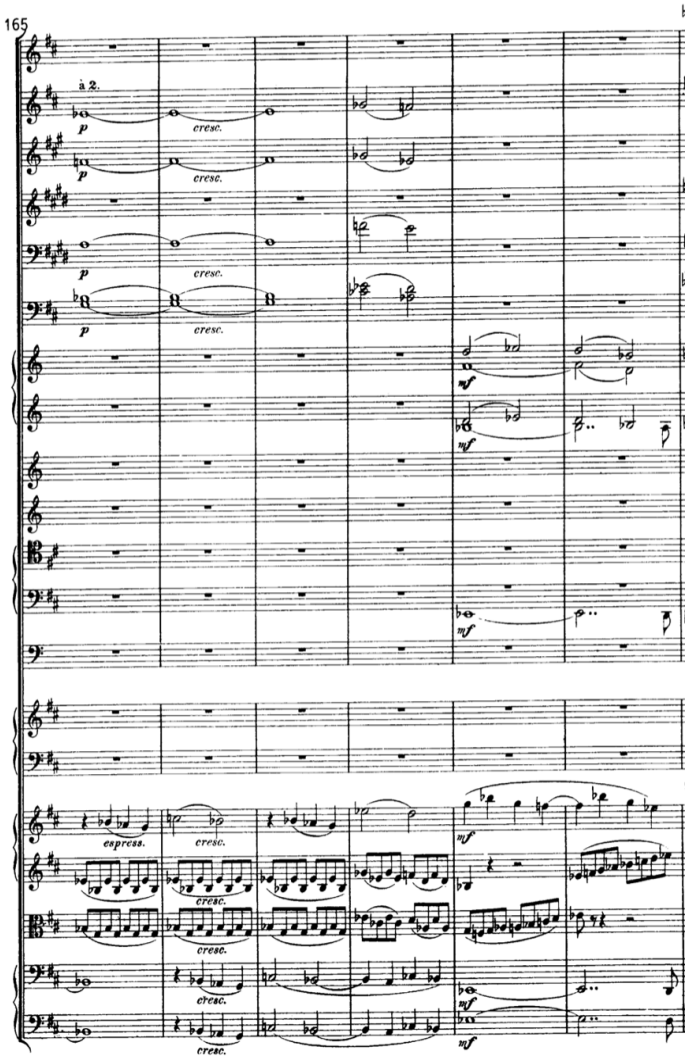


Fig. 1.14, Franck, *Symphony in D Minor,* "Allegro ma non troppo," measures 165-170, Score, (Paris: Hamelle, n.d., 1890).

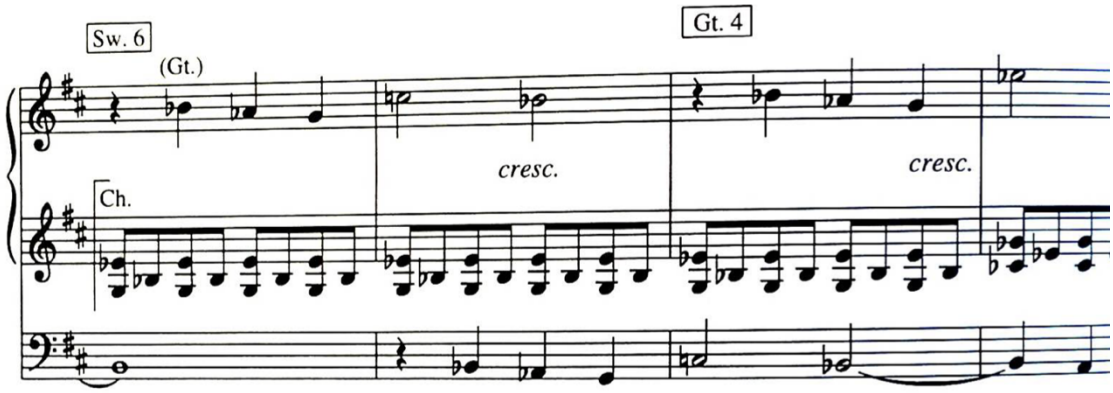
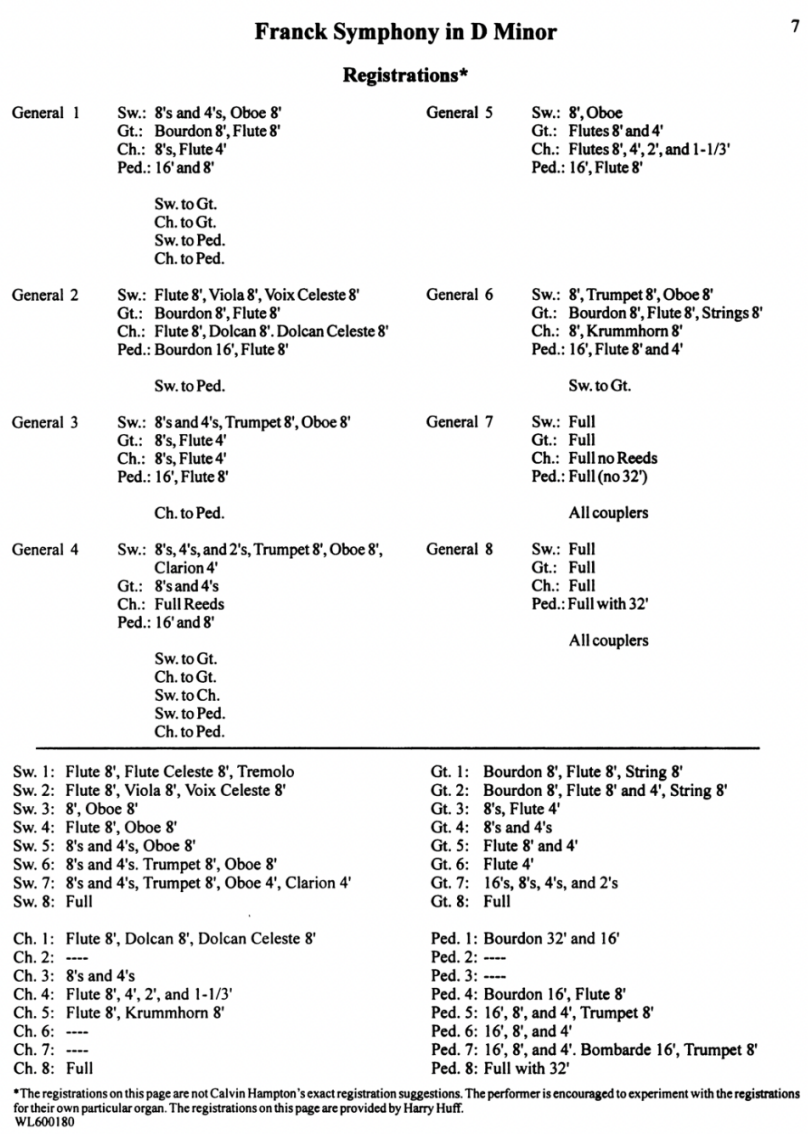


Fig. 1.15, Franck, *Symphony in D Minor,* transcribed for solo organ by Calvin Hampton, "Allegro ma non troppo," measures 165-168, Score, (Colfax, NC: Wayne Leupold Editions, Inc., 2006).

Let us now consider Hampton's registrations. Like Lemare, Hampton does not include specific registrations in the score, leaving the organist with the task of determining stops to use on their instruments. However, the published score is prefaced by a general registration by Harry Huff for the console at Calvary Episcopal Church (Fig. 1.16). An editorial note states that "The performer is encouraged to experiment with the registrations for their own particular organ."[35] Huff's well-rounded registration features eight general pistons with eight manual pistons. While other instruments may not have so many pistons available, Huff's directions are, nonetheless, a helpful resource in guiding organists in registering Hampton's transcription of *Symphony in D Minor*.

[35] Cesar Franck, *Symphony in D Minor* transcribed for organ by Calvin Hampton. (Colfax, NC: Wayne Leupold Editions, Inc., 2006): 7.



Franck Symphony in D Minor 7

Registrations*

General 1	Sw.: 8's and 4's, Oboe 8' Gt.: Bourdon 8', Flute 8' Ch.: 8's, Flute 4' Ped.: 16' and 8' Sw. to Gt. Ch. to Gt. Sw. to Ped. Ch. to Ped.	General 5	Sw.: 8', Oboe Gt.: Flutes 8' and 4' Ch.: Flutes 8', 4', 2', and 1-1/3' Ped.: 16', Flute 8'
General 2	Sw.: Flute 8', Viola 8', Voix Celeste 8' Gt.: Bourdon 8', Flute 8' Ch.: Flute 8', Dolcan 8'. Dolcan Celeste 8' Ped.: Bourdon 16', Flute 8' Sw. to Ped.	General 6	Sw.: 8', Trumpet 8', Oboe 8' Gt.: Bourdon 8', Flute 8', Strings 8' Ch.: 8', Krummhorn 8' Ped.: 16', Flute 8' and 4' Sw. to Gt.
General 3	Sw.: 8's and 4's, Trumpet 8', Oboe 8' Gt.: 8's, Flute 4' Ch.: 8's, Flute 4' Ped.: 16', Flute 8' Ch. to Ped.	General 7	Sw.: Full Gt.: Full Ch.: Full no Reeds Ped.: Full (no 32') All couplers
General 4	Sw.: 8's, 4's, and 2's, Trumpet 8', Oboe 8', Clarion 4' Gt.: 8's and 4's Ch.: Full Reeds Ped.: 16' and 8' Sw. to Gt. Ch. to Gt. Sw. to Ch. Sw. to Ped. Ch. to Ped.	General 8	Sw.: Full Gt.: Full Ch.: Full Ped.: Full with 32' All couplers

Sw. 1: Flute 8', Flute Celeste 8', Tremolo	Gt. 1: Bourdon 8', Flute 8', String 8'
Sw. 2: Flute 8', Viola 8', Voix Celeste 8'	Gt. 2: Bourdon 8', Flute 8' and 4', String 8'
Sw. 3: 8', Oboe 8'	Gt. 3: 8's, Flute 4'
Sw. 4: Flute 8', Oboe 8'	Gt. 4: 8's and 4's
Sw. 5: 8's and 4's, Oboe 8'	Gt. 5: Flute 8' and 4'
Sw. 6: 8's and 4's. Trumpet 8', Oboe 8'	Gt. 6: Flute 4'
Sw. 7: 8's and 4's, Trumpet 8', Oboe 4', Clarion 4'	Gt. 7: 16's, 8's, 4's, and 2's
Sw. 8: Full	Gt. 8: Full
Ch. 1: Flute 8', Dolcan 8', Dolcan Celeste 8'	Ped. 1: Bourdon 32' and 16'
Ch. 2: ----	Ped. 2: ----
Ch. 3: 8's and 4's	Ped. 3: ----
Ch. 4: Flute 8', 4', 2', and 1-1/3'	Ped. 4: Bourdon 16', Flute 8'
Ch. 5: Flute 8', Krummhorn 8'	Ped. 5: 16', 8', and 4', Trumpet 8'
Ch. 6: ----	Ped. 6: 16', 8', and 4'
Ch. 7: ----	Ped. 7: 16', 8', and 4'. Bombarde 16', Trumpet 8'
Ch. 8: Full	Ped. 8: Full with 32'

*The registrations on this page are not Calvin Hampton's exact registration suggestions. The performer is encouraged to experiment with the registrations for their own particular organ. The registrations on this page are provided by Harry Huff.
WL600180

Fig. 1.16, registration markings provided by Harry Huff in Franck, *Symphony in D Minor,* transcribed for solo organ by Calvin Hampton, page 7, Score, (Colfax, NC: Wayne Leupold Editions, Inc., 2006). © 2006 by Wayne Leupold Editions, Inc. Used by Permission.

Huff's registrations provide excellent reproductions of the wide array of timbres used in the *Symphony.* The term "full" is used on several pistons in which the organist uses as many stops as possible. These include diapasons, flutes, mixtures, mutations, and reeds. Combining these stops creates a thrillingly lively, even bombastic sound evocative of a full orchestra playing *forte*. An intriguing registration possibility occurs at measure 354 of the "Allegro ma non Troppo" (Fig. 1.18). Franck has the harp perform arpeggiated chords while the strings provide

supporting accompaniment (Fig. 1.17). Huff's registration asks for 8' strings (Voix Celeste 8', Dolcan 8', Dolcan Celeste 8', for example) along with 8' flutes by using General 2 and Great 2 pistons. This registration is an alternative to creating a harp-like texture by using solely foundational stops, but, for consoles that feature orchestral stops (Harp, Celesta, Timpani, for example), the Harp stop combined with Huff's registrations may portray the idiomatic quality of the orchestral harp more accurately. Though somewhat abstract, Huff's registrations effectively generate a superb representation of Franck's *Symphony* on the organ. His version retains the lyrical and homophonic textures that are iconic to the composer, making the work sound almost as if Franck originally wrote the *Symphony* for the organ.

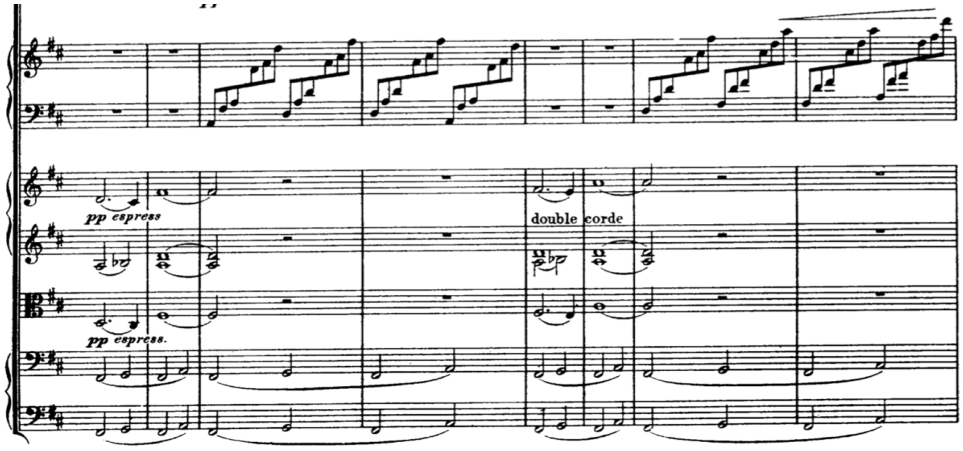


Fig. 1.17, Franck, *Symphony in D Minor,* "Allegro ma non troppo," measures 352-359, Score, (Paris: Hamelle, n.d., 1890).

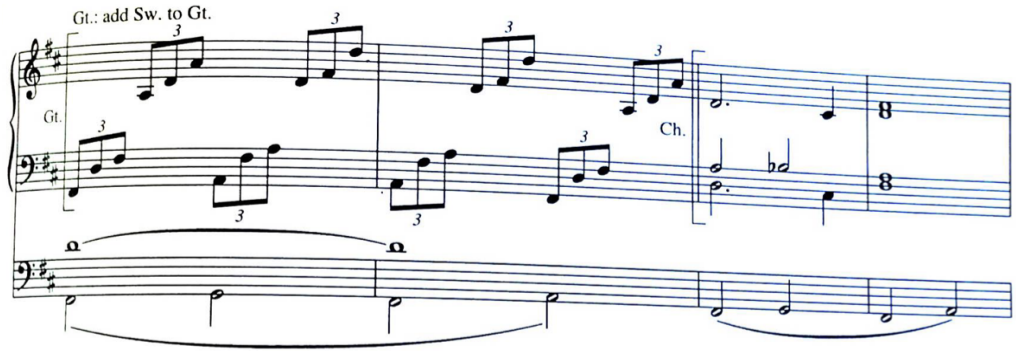


Fig. 1.18, Franck, *Symphony in D Minor,* transcribed for solo organ by Calvin Hampton, "Allegro ma non troppo," measures 354-357, Score, (Colfax, NC: Wayne Leupold Editions, Inc., 2006). © 2006 by Wayne Leupold Editions, Inc. Used by Permission.

Though Hampton's transcription retains much of Franck's most characteristic qualities, he omits informative performance markings. The first observed omission occurs at measure 49 (Fig. 1.20). Here, the cellos and bass clarinets provide an evocative response to the opening theme. Hampton transfers the essential material to the organ. However, he omits Franck's indication of *espress. e marcato* at measure 49 (Fig. 1.19). Retaining the marking in the transcription would increase the chance of yielding expressive *legato* phrasing that is full of passion and emotion.

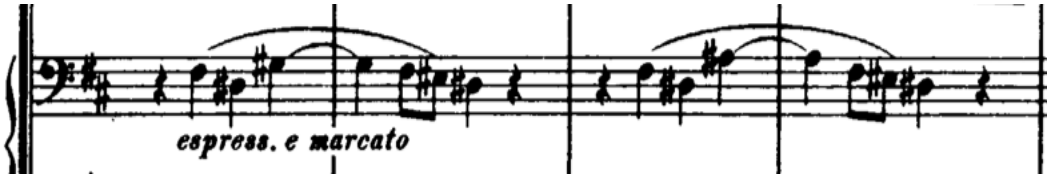


Fig. 19, Franck, *Symphony in D Minor,* "Allegro ma non troppo," measures 49-52, Score, (Paris: Hamelle, n.d., 1890).

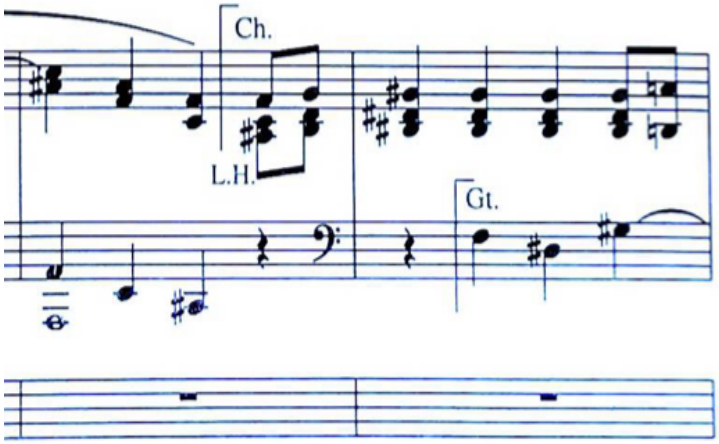


Fig. 1.20, Franck, *Symphony in D Minor,* transcribed for solo organ by Calvin Hampton, "Allegro ma non troppo," measures 48-49, Score, (Colfax, NC: Wayne Leupold Editions, Inc., 2006). © 2006 by Wayne Leupold Editions, Inc. Used by Permission.

The second area in which Hampton omits one of Franck's indications occurs at measure 72. Here, Franck writes a B major chorale-like theme performed by the brass (Fig. 1.21). Like in Franck's *Trois Chorals* (1889–1890), Hampton creates a similar hymn-like texture on the organ

by calling for multiple reeds on the Swell division (Fig. 1.22). He adds *mezzo-forte* and *piano* dynamic markings not found in the original, but omits the critical indication of *dolce cantabile* above the brass parts (Fig. 1.22). Reed stops like the Trumpet, Trombone, and Clarion often produce loud and exciting sounds and, when played in the wrong context, can often distort delicate emotional nuance—a profound characteristic of Franck's organ music. If marked *dolce cantabile*, organists would likely perform the following passage with a lyrical, chorale-like quality, ensuring the reed stops are not strident or overbearing. Hampton's transcription indicates that transcribers should follow the composer's expressive and dynamic markings as closely as possible, potentially yielding a more compelling rendition of a piece on the organ.

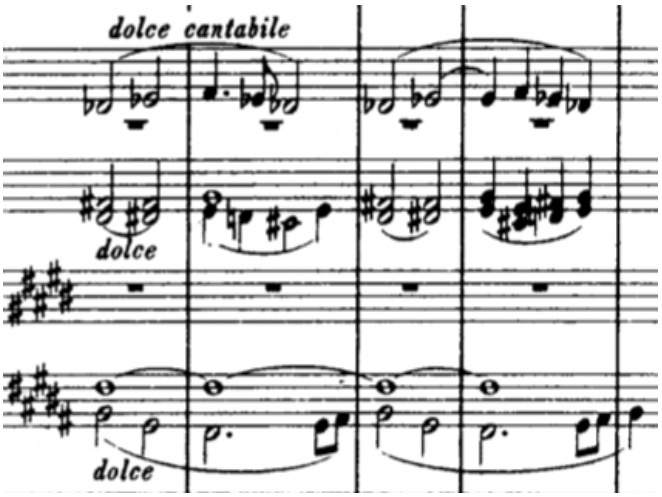


Fig. 1.21, Franck, *Symphony in D Minor,* "Allegro ma non troppo," measures 72-75, Score, (Paris: Hamelle, n.d., 1890).

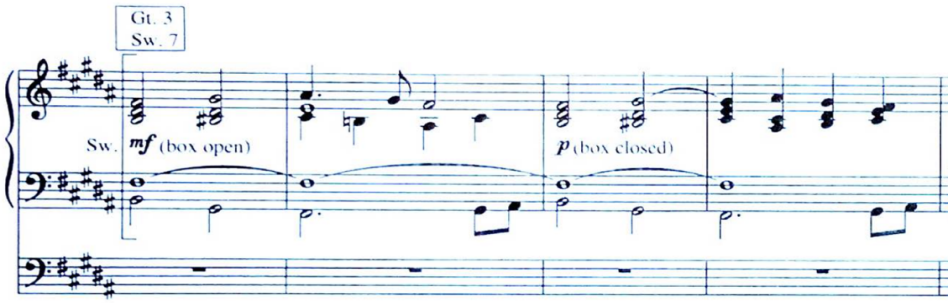


Fig. 1.22, Franck, *Symphony in D Minor,* transcribed for solo organ by Calvin Hampton, "Allegro ma non troppo," measures 72-75, Score, (Colfax, NC: Wayne Leupold Editions, Inc., 2006). © 2006 by Wayne Leupold Editions, Inc. Used by Permission.

In summary, Hampton's transcription of Franck's *Symphony in D Minor* reflects this masterpiece in its own right, preserving essential aesthetic features. The work demonstrates that organs are capable of reproducing the sheer magnitude of sonic strength and differentiation of texture typical of symphonies. With Hampton's creative approach, Franck's melodic material, expression, and colorful timbres are well preserved on the organ. His transcription method demonstrates a somewhat reductive process by focusing on essential musical structures and eliminating less essential components. Though the result yields a somewhat "skeletal" structure compared to the original score, Hampton's arrangement still provides a beautifully compelling rendition of Franck's *Symphony* on the organ.

An Opera Transcription: William Westbrook's transcription of Richard Wagner's "March" from *Tannhäuser*, WWV 70

Extant information on William J. Westbrook (1831–1894) is limited, but a profile in *The Church Musician* notes that he was a gifted organist and prolific transcriber.[36] Born in London to a family of educators, Westbrook did not receive much musical training in his youth. There was apparently a dilapidated harpsichord in his family's parlor, and, because of its poor condition, Westbrook did not establish a strong affinity for keyboard instruments. His training only began at age seventeen, when he began to study the organ; yet within two years he was made organist of St. Bartholomew's, Bethnal Green.[37] He continued to study keyboard performance and, after some "very heavy study," completed a Mus.D. degree.[38] Westbrook composed several works for the organ, including sonatas, preludes and fugues, variations, and marches. With a gift for

[36] William J. Westbrook, "Sketches of Musicians," *The Church Musician* Vol. 2, no. 24 (1892): 223.
[37] Westbrook, 223.
[38] Westbrook, 223.

"hearing with the eye," Westbrook also transcribed works for the organ.[39] As a transcriber, Westbrook "obtains as much effect as possible in an arranged piece without making the performance of the music too difficult, and he never creates needless difficulties."[40] This description well applies to his 1880 arrangement of Richard Wagner's "March" from *Tannhäuser,* which illustrates the organ's ability to recreate operatic works.

Composed between 1843 and 1845 in Dresden, *Tannhäuser* is one of Richard Wagner's most familiar Romantic operas. The opera already anticipates Wagner's self-coined concept of *Gesamtkunstwerk* (total work of art)–an art form that aimed to unite poetics, music, and drama as one cohesive performing unit.[41] One memorable scene in *Tannhäuser* is the "March" from the *Sängerkrieg* (song contest) in Act II, Scene 4. This Scene set in the famous *Wartburg* castle draws attention because of the loud trumpet figures and the pompous, chorale-like orchestration (Sehr Gehalten). Wagner utilized both instrumentation and orchestration to create a fitting sense of royalty in the texture, which is evident in the trumpet's opening motif consisting of ascending contours and dotted eighth-note rhythms:

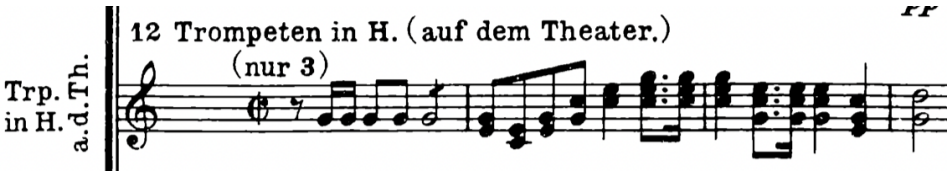


Fig. 1.23, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, measures 1-4, Score, (Leipzig: C.F. Peters, n.d., 1920).

By using the trumpets, Wagner rivets the listeners' attention by sporadically reiterating this striking motif throughout the rest of the Scene. Furthermore, the role of these brass fanfares is

[39] Westbrook, 223.
[40] Westbrook, 224.
[41] However, Wagner only developed the notion of *Gesamtkunstwerk* in writings that postdated *Tannhäuser.* In this general context, see among other studies Lawrence Kramer, "Wagner's Gold Standard: *Tannhäuser* and the General Equivalent," *Cambridge Opera Journal,* Vol. 21, no. 2 (2009): 140.

closely coordinated with the stage action, as is indicated by the direction "auf dem Theater" ("on stage"). Wagner's use of trumpets, of a melodious choral-like orchestration, and of evocative diverse instrumentation have inspired and provoked organists such as Westbrook to transcribe this "March" for the organ. However, it is not an easy task to convey so many aesthetic and acoustic dimensions in an organ transcription.

Like Lemare and Hampton, Westbrook made changes in the transcription to account for the limitations of the organ. The first notable change is found already in the key signature. The transcribed version of the "March" is scored in B-flat major instead of Wagner's original key of B major.[42] It is unclear why Westbrook transposed the "March" down a half-step, but one possibility is simply that reading two flats instead of five sharps is easier to read.

Westbrook's second significant change is to revoice specific chords on the manuals. Like Hampton, Westbrook also condenses notes from the original score to render playable chords on the manuals. This condensing first occurs at the B-flat major cadence at measure 6 in the right hand (Fig. 1.24). Westbrook extracts the notes from violin I, violin II, and cellos and incorporates them into a B-flat major triad. Westbrook also adds a D below the chord to provide a more prominent tonal structure.

[42] B-flat Major is a standardized key for modern valved brass trumpets. Although brass technology was still in flux during the nineteenth century, this observation may contribute to Westbrook's change in the key signature. I would like to thank Shawn Keener for sharing this imperative information.

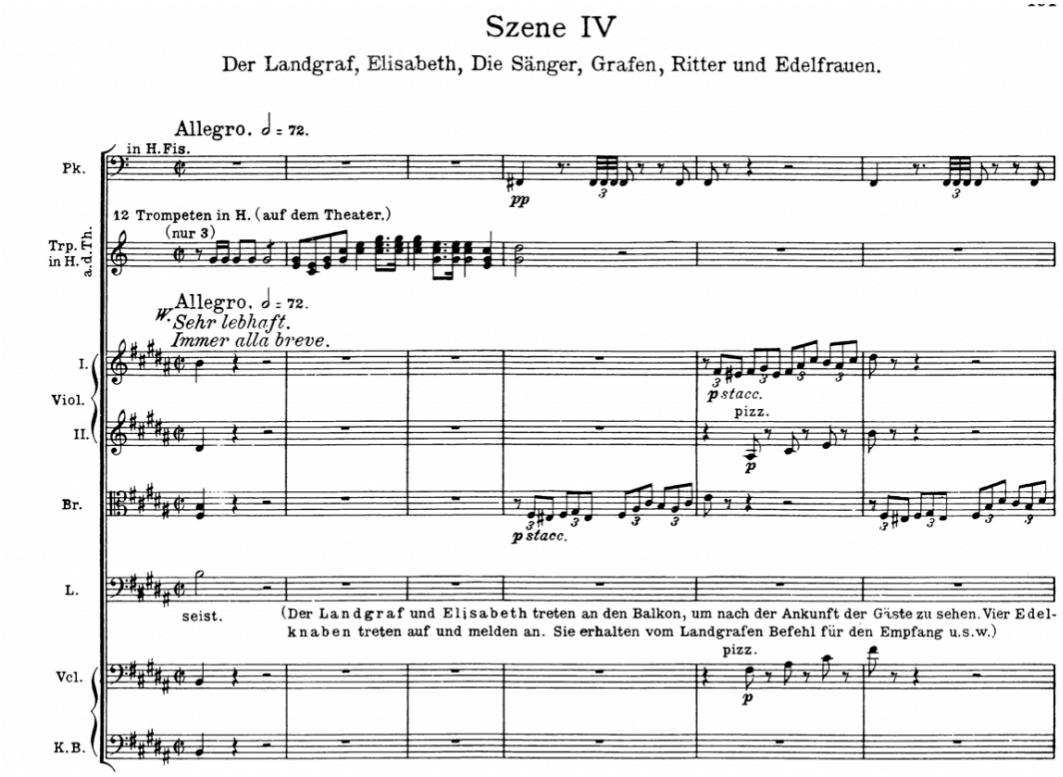


Fig. 1.24, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, measures 1-6, Score, (Leipzig: C.F. Peters, n.d., 1920).

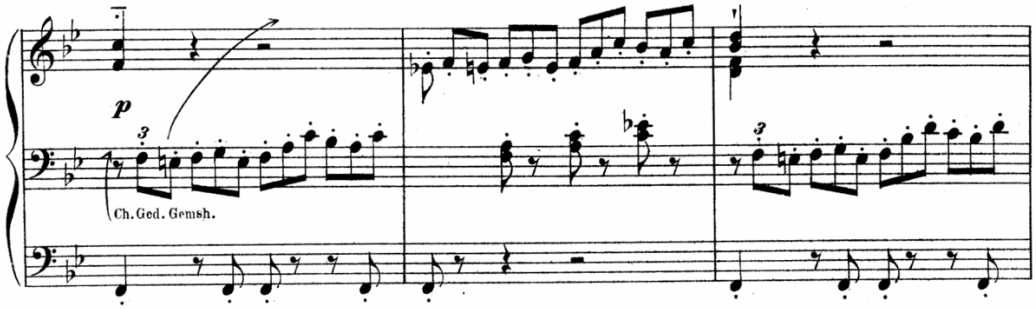


Fig. 1.25, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, transcribed for solo organ by William Joseph Westbrook, measures 4-6, Score, (London: Schott & Co., n.d.).

It is uncertain why Westbrook reorchestrated the cadence this way, but tonal clarity might be one consideration. Westbrook very well could have reproduced the original notes of only B-flat and D (when transposed). However, the addition of the fifth and the third below solidify the identity of a first-inversion B-flat major triad. Westbrook demonstrates that condensing notes and adding

tones to a chord is acceptable for transcribers when reorchestrating voices, but harmonic nuances are admittedly changed by these alterations.

The next condensed voicing occurs at measure 24, where the chorale-like theme appears. Westbrook preserves Wagner's majestic theme (Fig. 1.26), though he doesn't preserve the direction "sehr gehalten" ("very deliberate") and he condenses each voice to two staves on the Swell division (Fig. 1.27). When appropriately registered, the result likely yields a faithful reproduction of the orchestra's warm timbres, highlighting the regal quality of the music.

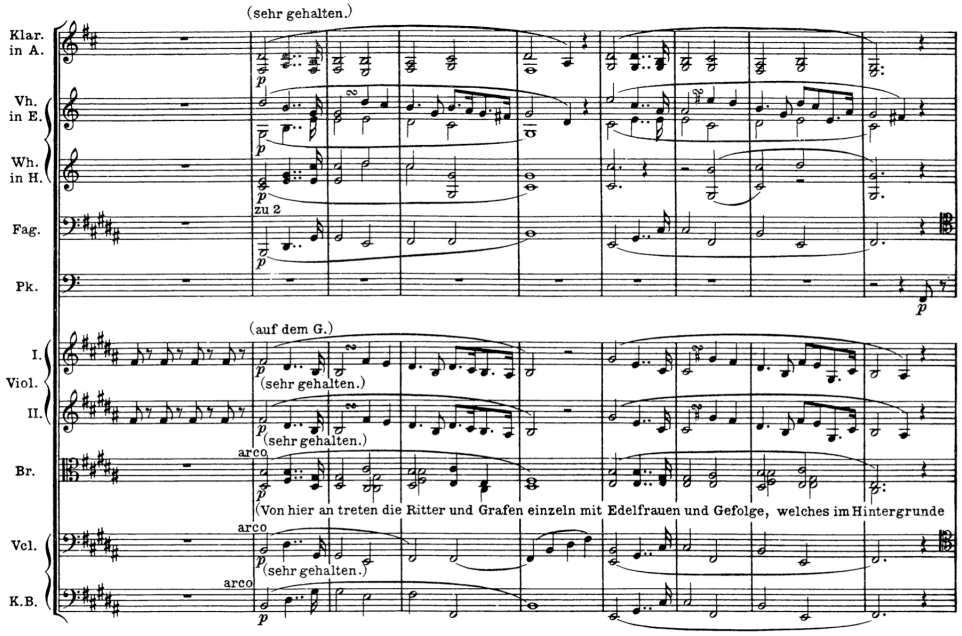


Fig. 1.26, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, measures 23-31, Score, (Leipzig: C.F. Peters, n.d., 1920).

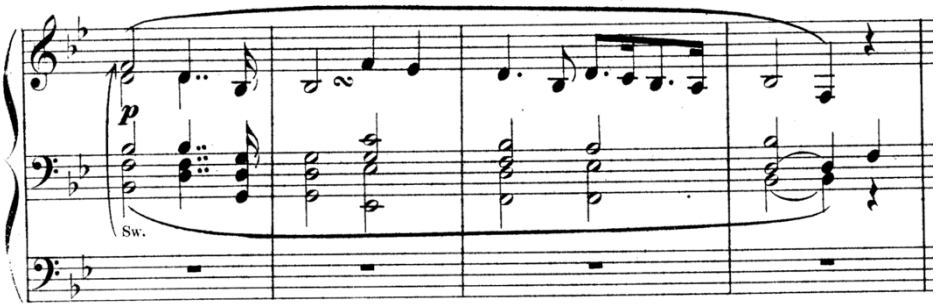


Fig. 1.27, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, transcribed for solo organ by William Joseph Westbrook, measures 24-27, Score, (London: Schott & Co., n.d.).

Another significant change to the score occurs at measure 100, where the chorus sings "wo lange noch der Ruf erschalle" ("where the cry resounds for a long time"). Wagner orchestrates the melody as a descending B major triad. In his transcription, Westbrook assigns the left hand to double the right hand's chords, duplicating the chorus's homophonic texture (Fig. 1.28). In doing so, Westbrook generates timbral space, recreating a similar blend of color between the winds and the TTBB voices on the organ. The challenge is to keep one hand available to perform the rhapsodic melismas that follow in the violin I and II lines. To accomplish this challenge, Westbrook changes the duration of the right hand's chord at measure 101 to an eighth-note, allowing this hand to perform the violin figures. Westbrook's modifications ultimately show great sensitivity when orchestrating each voice, ensuring it can be carefully carried over onto the organ within playable means.

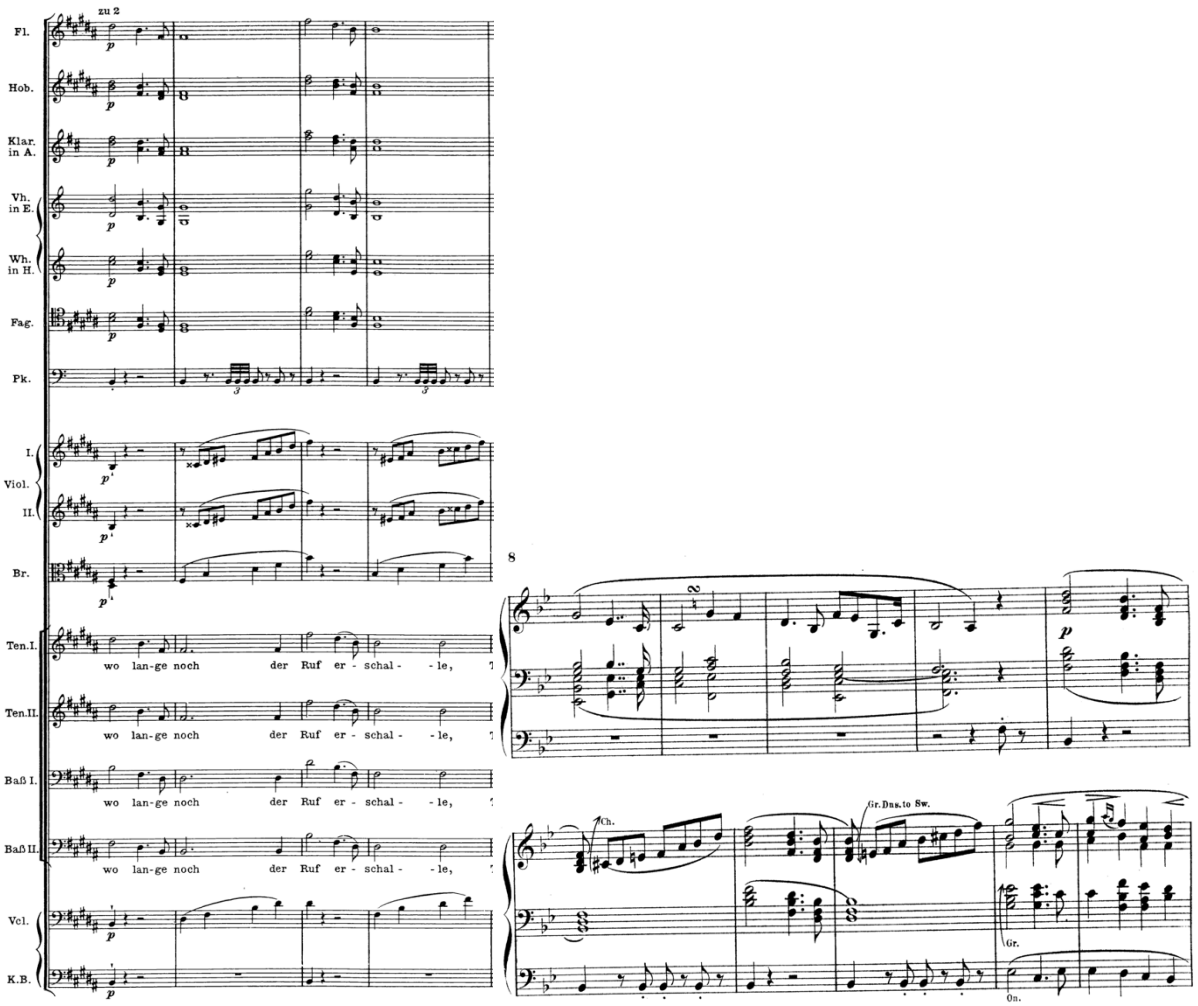


Fig. 1.28, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, measures 100-104, Score, (Leipzig: C.F. Peters, n.d., 1920) (Left) and Wagner, *Tannhäuser*, "Grand March" from Act II, Scene 4, transcribed for solo organ by William Joseph Westbrook, measures 96-105, Score, (London: Schott & Co., n.d.) (Right).

Westbrook did not add much additional material to his transcription. There is just one notable exception: the duration of notes. One such instance occurs at measure 40 in the left hand (Fig. 1.29). Here, Westbrook retains the pulsing quarter-note triads from the horns and bassoon accompaniment, but the low F in the left-hand is transformed to a drone. A similar sustaining figure is not found in the original score, confirming Westbrook's emendation.

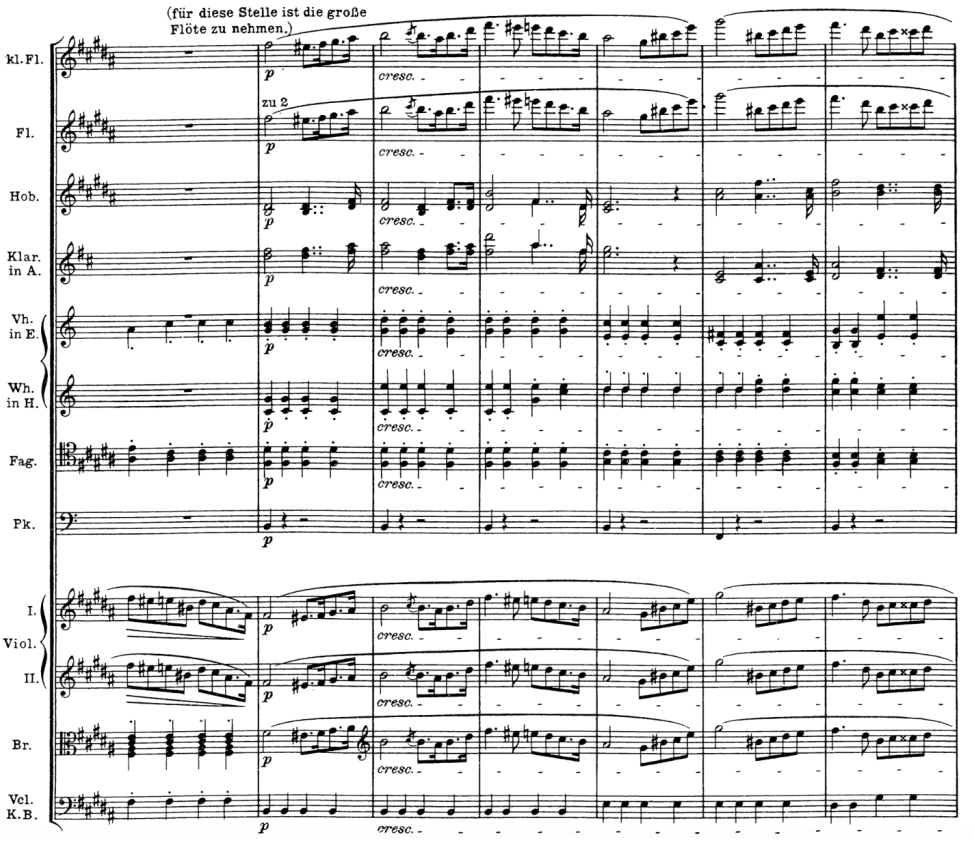


Fig. 1.29, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, measures 39-45, Score, (Leipzig: C.F. Peters, n.d., 1920).

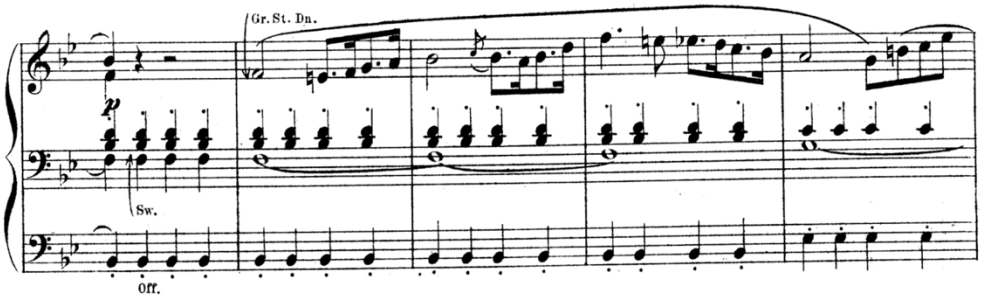


Fig. 1.30, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, transcribed for solo organ by William Joseph Westbrook, measures 39-43, Score, (London: Schott & Co., n.d.).

Ellingford's treatise helps clarify the context of Westbrook's alteration. He states that one should "alter the context or figures of an instrumental part, rather than reproduce an idiom which does not belong to the organ."[43] Wagner's rhythmical patterns in the original score could well

[43] Herbert Ellingford, *The Art of Transcribing for the Organ,* (New York: H. W. Gray & Co., 1922), 3.

have been played on the organ, though tonal clarity may be at stake. Westbrook's alteration to the low F may relate to the organ's ability to produce crisp and precise articulation. When playing repeated *staccato* notes on the organ, the result can potentially distort the intended effect, often yielding a sound that is too "choppy" and "overly detached."[44] Westbrook's transcription, however, shows he selectively alters the rhythm in the F to a droning whole-note configuration, ensuring that the overall tonal clarity of the organ remains pronounced.

Westbrook seldom provides registrations in his transcription. In the opening measure, he prescribes a Trumpet 8' in the Great, with the Pedal division marked "16' and 8'" without any specific stops (Fig. 1.29). Westbrook may have desired a diapason chorus of 8' and 16' to provide a supportive tonal foundation.[45] The lack of specific stops is presumably used to allow organists to showcase their own artistic approach to registration. An example of Westbrook's abstract registrations is marking "Ch. to Sw. with Reed." The only other specific registration marking occurs at measure 108 (Fig. 1.30). Here, Westbrook registers the right hand to play the melody with strings, diapasons, and an essential melodic stop, a Salicional. A Salicional is significant because it provides a "rounder, richer voicing" to the overall texture, almost as if a human voice is speaking.[46] By registering a Salicional, Westbrook's registration effectively generates a timbre more like Wagner's tonally rich vocal chorus. The remaining registration is marked "full," meaning the organ is employing all classes of stops.

Let us consider that other stops are strongly recommended to be supplementally registered beyond Westbrook's indications of a Salicional and ambiguous 8' and 16' markings (Fig. 1.31). Figure 1.32 shows Westbrook assigns the left hand to provide accompaniment on the

[44] Jack Goode, *Pipe Organ Registration,* (New York: Abingdon press, 1964), 178-179.
[45] The Pedal division aims to provide support to the upper voices. A flute chorus may lack body and strength. Principals and other related stops are encouraged when registering this division.
[46] George Ashdown Audsley, *Organ Pipes and Their Artistic Registration,* (New York: H. W. Gray Co., 1949), 245.

Swell division. For this, a well-rounded and unobtrusive combination of 8' foundational stops should be used, including a Principal 8', Flute 8', and Montre 8', which all serve to provide tonal substance. The enthralling melody resides in the right hand on the Great manual with couplers from the Choir, Swell, and, presumably, other divisions. To ensure the tune is heard above the accompaniment, one consideration would be to register strong 8' and 4' foundational stops, a malleable 8' reed (Clarinet 8' or Oboe 8', for example) and a Twelfth 2 2/3'. The pedals should include supportive 16' and 8' stops to provide ample support to the tonal structure, much like the Swell division. Though largely schematic, Westbrook's registrations leave ample opportunities for organists to explore the challenges of reproducing Wagner's orchestral sounds on their instruments.

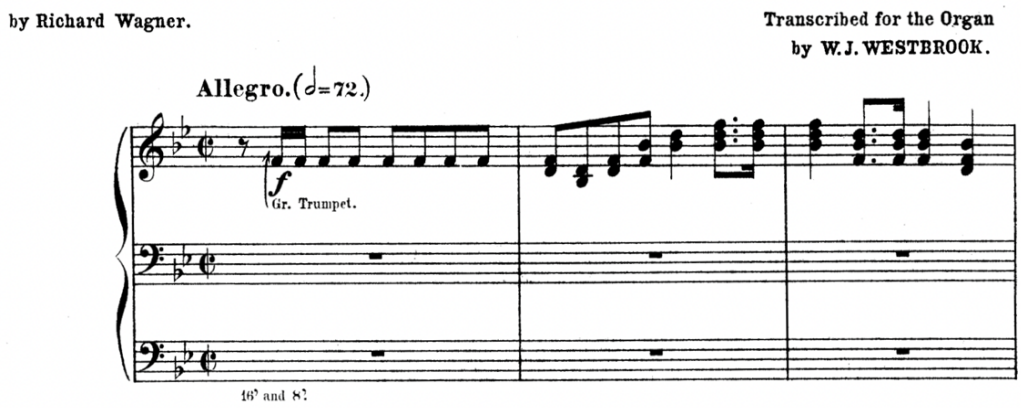


Fig. 1.31, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, transcribed for solo organ by William Joseph Westbrook, measures 1-3, Score, (London: Schott & Co., n.d.). Keep note of "16' and 8'" below the first measure.

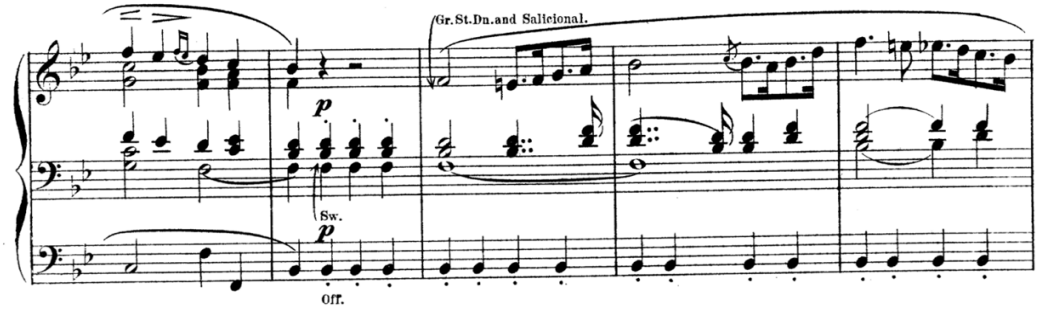


Fig. 1.32, Wagner, *Tannhäuser,* "Grand March" from Act II, Scene 4, transcribed for solo organ by William Joseph Westbrook, measures 106-110 Score, (London: Schott & Co., n.d.).

Apart from orchestration changes and registrations, Westbrook's transcription carefully follows Wagner's dynamic and tempo markings. He preserved every single dynamic and tempo marking in his transcription, which ultimately shows great respect to the composer's original intentions. For example, at the beginning of the piece, Wagner marks "Allegro" with a metronome marking of a half-note equaling 72 BPM. Wagner was deliberate with his metronome markings, and Westbrook sought to respect his intentions in the transcription.[47] Westbrook's transcription ultimately represents a faithful rendition of Wagner's "March" on the organ by retaining as much original material as possible while maintaining simplicity in the orchestration. Of course, significant dimensions of a work like Wagner's *Tannhäuser* also elude capture in any transcription for the organ.

Even though Westbrook's transcription can subjectively be considered a compelling recreation of Wagner's *Tannhäuser*, some limitations prevent the arrangement from being a perfect reflection. Most obvious is the organ's inability to recreate nuances associated with the human voice, especially diction. Though most organs feature a Vox Humana 8', which is designed to emulate a singing human voice, the stop, nor any stops, cannot physically replicate sung text, much like Wagner's robust operatic choruses.[48] In addition, the subtleties of the woodwinds' attacks and releases cannot be easily replicated on the organ. Examining Figure 1.29 shows the bassoons and French horns perform pulsating accompaniment figures, which Westbrook carries over in the left hand in his transcription. While the tonal spirit of these voices may be captured on the organ, their subtle tonal nuances are lost. The gentle attack from the bassoons and the warmth from the French horns cannot be accurately portrayed on the organ

[47] Michael Allis, "Richter's Wagner: A New Source for Tempi in 'Das Rheingold,'" *Cambridge Opera Journal,* Vol. 20, no. 2 (2008): 120.
[48] George Ashdown Audsley, *Organ Pipes and Their Artistic Registration,* (New York: H. W. Gray Co., 1949), 286.

using standardized stops. Lastly, Westbrook seems to eliminate one of Wagner's countermelodies. Revisiting Figure 1.29 displays a dual-voiced dialogue between the oboes and clarinets. Turning to Westbrook's transcription reveals he left out this melodic dialogue completely to, perhaps, accommodate the limitations of organ playing. Since all limbs of the organist are occupied performing the melody and accompaniment, there is no room to incorporate this countermelody. Though the transcription contains subtle deficiencies from being a perfect recreation, Westbrook's organ rendition of *Tannhäuser* still poses as a brave step towards transcribing a sophisticated work from an already complex genre for the organ.

* * *

These three case studies reveal individualized approaches to transcribing works from different genres for the organ. Lemare, Hampton, and Westbrook all showed great care when approaching reorchestrating material for the organ, ensuring the composer's intended effects are preserved as much as possible in the new medium. These transcriptions also reveal that transcribers both added and reduced the original notation to accommodate the limitations of organ playing. Lastly, these works show the need for transferring the composer's performance markings to the organ to enhance their arrangements. These transcriptions showcase the organ as an adaptable instrument that is quite capable of recreating pieces in a new light, even embracing genres as rich and complex as nineteenth-century opera and symphony.

CHAPTER 2: *GLASSWORKS* AS A BRIDGE BETWEEN CLASSICAL AND POPULAR MUSICAL SPHERES

The centerpiece of this dissertation is an organ transcription of Philip Glass's *Glassworks* (1982), a landmark minimalist composition that has achieved broad appreciation from classical and popular music listeners alike. The inspiration for this transcription arose from hearing Latvian organist Iveta Apkalna perform Glass's *Mad Rush* on the Walt Disney Concert Hall organ in May, 2019. Apkalna's program featured several contemporary organ works, especially by Baltic composers, and highlighted the organ's expressivity and the performer's dexterity.[49] Her organ rendition of *Mad Rush* reproduced Glass's repetitive textures consistently and coherently on the Glatter-Götz/Rosales organ, using the various pipe chambers across the performance space in a captivatingly energetic rendering of the music. The piece was the climax of the concert and triggered a standing ovation from the capacity audience. Such a positive response revealed audience receptivity to minimalist works rendered on the organ.

I chose to transcribe *Glassworks* for its technical potential and repertory appeal. An organ rendition of *Glassworks* requires technical endurance, creating an opportunity for virtuosic display. Iveta Apkalna's performance of *Mad Rush* drew attention for this reason. "Apkalna's technical control is staggering," Malcolm Riley writes in *Gramophone, "*Her playing has poise as well as purpose. These 'endless toccatas' simply shimmer, producing a soothing, ethereal élan."[50]

[49] Iveta Apkalna, organist, "Mad Rush," by Philip Glass, Walt Disney Concert Hall, Los Angeles, CA, May 19, 2019.
[50] Malcolm Riley, "J.S. Bach; Glass Organ Works," *Gramophone.co.uk,* https://www.gramophone.co.uk/review/js-bach-glass-organ-works

Like *Mad Rush, Glassworks* offers a landscape of "endless toccatas" and appeals to classical and popular audiences. Ultimately, an organ version of *Glassworks* can disseminate Glass's music to the organ community and expand the organ repertoire with a work of crossover appeal. The present chapter explores the aesthetics of the piece—its instrumentation, form, and style—focusing on its combination of classical and popular musical elements.

Musical Minimalism

Before exploring *Glassworks* in detail, let us pause to define "minimalism" and outline this artwork's initial reception in the United States. Composed in 1981 and published the following year, *Glassworks* shows Philip Glass's ambition to embody minimalism "at its best."[51] What does minimalism involve when it is "at its best"? The *Oxford Musical Dictionary* defines minimalism as a "term borrowed from the visual arts to describe a style of composition characterized by an intentionally simplified rhythmic, melodic, and harmonic vocabulary."[52] The style began in America in the 1960s. Some critics barely considered this highly repetitive style music, especially compared to other contemporary works. According to John Rockwell, minimal music was "damned by its enemies as so lacking in complexity and emotional range that it [could] hardly be called 'serious' at all."[53] To classical musicians used to the atonality of more sophisticated compositions, such as those by Alban Berg, Arnold Schoenberg, and Igor Stravinsky, minimalism's simple nature seemed to lack body, character, or expression.[54]

While Oxford's definition of minimalism is not wrong, it is more superficial than the insightful description given by Steve Reich, one of the pioneers of minimal music. In his essay

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[51] Robert Flemming and Richard Kostelanetz, *Writings on Glass: Essays, Interviews, Criticism,* (New York: Schirmer, 1997).
[52] Keith Potter, "Minimalism (USA)," *Grove Music Online,* (January, 2014).
[53] John Rockwell, *All-American Music* (New York: Alfred A. Knopf, 1983), 122.
[54] Timothy A. Johnson, "Minimalism: Aesthetic, Style, or Technique?" *The Musical Quarterly* Vol. 78, no. 4 (1994): 742.

"Music as a Gradual Process" he characterizes minimal music as "a compositional process and a sounding music that are one and the same."[55] His statement resonates with that of contemporary minimalist artist Sol LeWitt. In his essay "Sentences on a Conceptual Art," LeWitt writes about minimalist art in terms of an unfolding process, that "the artist's will is secondary to the process he initiates … [letting it] run its course."[56]

If we blend LeWitt's statement with Reich's, a more convincing perspective on minimal music emerges. Instead of seeing it as an "intentionally simplified" musical style, we can recognize minimalism as a compositional approach in which fundamental patterns are allowed to run their temporal course.

After enduring a harsh critical reception in its early years, minimalism has since gained popularity in classical and popular music realms, ultimately leading to the style becoming established as its own genre. Minimalism, as Brent Heisinger notes, "is now a genuine segment of mainstream contemporary art music…. With its presence in concert halls and opera houses throughout the world along with appearance in rock clubs and at universities, minimal music has unquestionably come of age."[57] Despite his own ambivalence about the term, minimalism can indeed be associated with Glass's approach. Minimalism's dual identity—bridging classical and popular musical spheres—is exemplified in Philip Glass's *Glassworks* through its instrumentation, form, and style.

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[55] Quoted in K. Robert Schwarz, "Steve Reich: Music as a Gradual Process, Part II," *Perspectives of New Music*, Vol. 20, No. ½, (Autumn 1981-Summer 1982): 226.
[56] Alexander Alberro and Blake Stimson, *Conceptual Art: a Critical Anthology*, (Cambridge, MA: MIT Press, 2002): 106-107.
[57] Brent Heisinger, "American Minimalism in the 1980s," *American Music* Vol. 7, No. 4 (Winter, 1989): 431.

Instrumentation in *Glassworks*

Instrumentation is one facet to *Glassworks* that draws the attention of classical and popular music audiences. *Glassworks* is scored for synthesizer, flutes, clarinets, saxophones, French horns, viola, and cello. Glass could have orchestrated the work for synthesizers exclusively, yielding a stronger affinity with popular music. The opposite is also true: the piece could have been scored for classical instruments exclusively. However, with his passion for integration, his vision of establishing a bridge between classical and popular music, Glass blends classical instruments and the synthesizer. Unlike conventional practices, Glass uses the synthesizer not to provide rhythmical background, as in some musical groups, but to supplement natural musical timbres. As Glass expresses in an article from the journal *Electronic Musician*, "I tend not to use synthesizers for invented sounds, but to either extend or imitate acoustics."[58] This type of use can be seen in "Rubric," where the synthesizer (labeled "organ" in the score) provides bright, ethereal timbres to accompany the wall of sound created by the other instruments (Fig. 2.1).

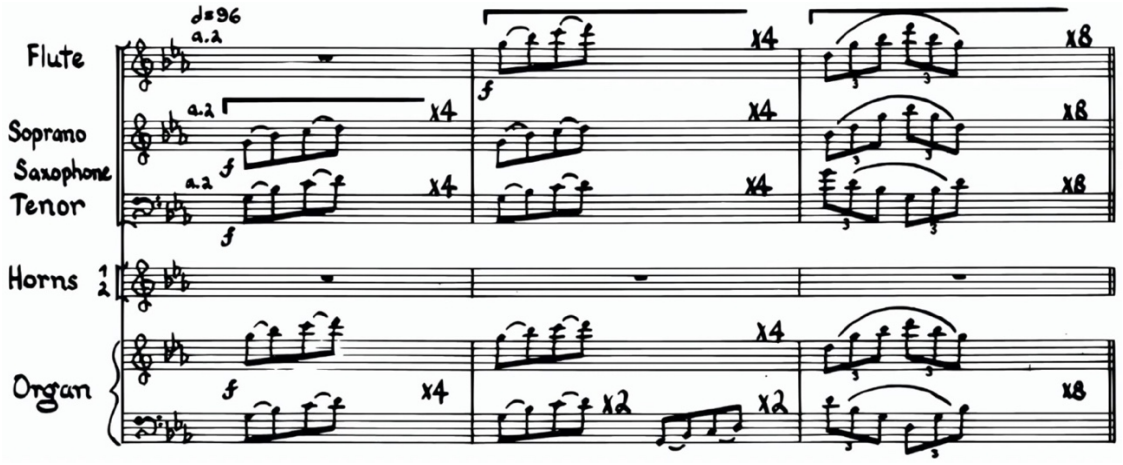

Fig. 2.1, opening measures in "Rubric" from *Glassworks* by Philip Glass.

[58] "Philip Glass, October 1986," *Electronic Musician* Vol. 32 (2) (2016): 12.

"Organ" refers to the organ setting on the Yamaha DX7 keyboard used by the Philip Glass Ensemble. This powerful synthesizer from the 1980s utilizes a digital FM architecture, creating six systemized algorithms, or "operators," that can be changed in pitch and timbre to yield a multitude of sound possibilities, including pianos, organs, and brass.[59] First introduced in 1983, the DX7 offered versatility in a compact package—eliminating the need for multiple workstations on stage. This drew attention from professional and amateur keyboardists around the globe.

> Keyboardists across Europe, North America, and Asia were enamored with the DX7, so much so that it was seen as a replacement for antecedent workhorse synthesizers. Many musicians were smitten with the possibilities, and not only because they were dazzled by a brand-new technology.[60]

The DX7's "bright, digital sound stood in stark contrast to its analog ancestors" and was "a fine complement to the warmth of analog tape."[61] That analog warmth can also be found in the classical instruments of *Glassworks* with their rounded, mid-range frequencies. The DX7's shiny timbre brightens the ensemble, filling in low and high frequencies not easily expressed by classical acoustic instruments alone.

Glassworks also amplifies the acoustic instruments in the ensemble to match the dynamic intensity of the DX7. Glass recounts the hidden potential for ensemble amplification after going to a prominent rock 'n' roll venue in New York City, the Fillmore East. At this iconic hall, Glass "heard big bands like Jefferson Airplane and Frank Zappa … and [he] was totally enamored with

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[59] John M. Chowning, "The synthesis of complex audio spectra by means of frequency modulation," *Journal of the Audio Engineering Society,* Vol. 21, no. 7 (1973), 526-34. See also Megan Lavengood, "What Makes It Sound '80s?," *Journal of Popular Music Studies,* Vol. 31, no. 3 (2019), 78.

[60] In addition, the DX7 was significantly cheaper than other contemporary digital FM workstations, leading Yamaha to sell over 200,000 units, making it one of the most sold synthesizers in history. Though popular, Yamaha discontinued the model three years later. For more on the Yamaha DX7 synthesizer, see Megan Lavengood, "What Makes It Sound '80s?," *Journal of Popular Music Studies,* Vol. 31, no. 3 (2019), 77.

[61] Craig Anderton, "Tracking FM Synths: 20-Year-Old Tips Still Give Modern Tracks Punch," *Keyboard,* (July 2003), 114.

the sight and sound of a wall of speakers vibrating and blasting out high-volume, rhythmically driven music."[62] Being drawn to the sheer power of amplification, Glass began experimenting with these devices to enhance his ensemble's volume. "If you look back," Glass states, "even pieces like 'Music in Fifths' and 'Music in Similar Motion,' which I wrote in 1968, are well articulated… However, a major part of the impact of the music comes through the amplification itself, which raises the threshold experience to a higher level."[63] Glass knew that amplifying classical instruments would anger some audiences: "[Classical music listeners] would never accept music that was amplified and with the kind of bass lines I was running. I knew that was going to make a lot of people angry, and I didn't care."[64] With the well-crafted instrumentation in *Glassworks,* Glass purposefully draws the interest of classical and popular music listeners.

Form in *Glassworks*

Form is another arena in which *Glassworks* draws a crossover audience. *Glassworks'* overall structure betrays its "classical" origins: it follows the slow-fast-slow model seen in *sonata da chiesa* works of the Baroque period. Throughout the seventeenth century, composers, especially those from Italy, created multi-movement sonatas that encompass many different characteristics in one piece. According to J. Peter Burkholder,

> Sonatas in the first half of the seventeenth century consisted of several sections differentiated by musical material, texture, mood, character, and sometimes meter or tempo

and

> [a]s composers developed the genre, these sections became longer and more self-contained. Finally, composers separated these sections into distinct movements, so that the sonata became a multi-movement work with contrasts between movements.[65]

[62] Philip Glass, *Words Without Music,* (London: W. W. Norton & Co., 2015): 229.
[63] Glass, *Words Without Music,* 230.
[64] Glass, 229.
[65] J. Peter Burkholder, et. al., *A History of Western Music,* (New York: W. W. Norton & Co., 2014): 384.

Glass follows a similar form in *Glassworks* by using six movements presenting different timbres, textures, and tempos. Viewed in its entirety, *Glassworks* follows a slow-fast-slow-fast-slow-slow order of movement progression. *Glassworks* begins with "Opening"—a mellow, reflective, and meditative movement for solo piano that serves as a prelude to the entire work. "Opening" gradually transitions *attacca* to its contrasting neighbor, "Floe." Here, Glass introduces the listener to his additive process—a compositional method of expanding and contracting a single melodic idea—through the use of fast-paced rhythmic sequences full of energy and excitement. The third movement, "Islands," returns to a peaceful quality, incorporating a beautiful, slow solo performed by the soprano saxophone. The cello and viola provide an undulating accompanying figure below the melody (Fig. 2.2). "Islands" is the first movement in *Glassworks* to use a solo-plus-accompaniment texture, similar to the middle movements of classical sonatas.

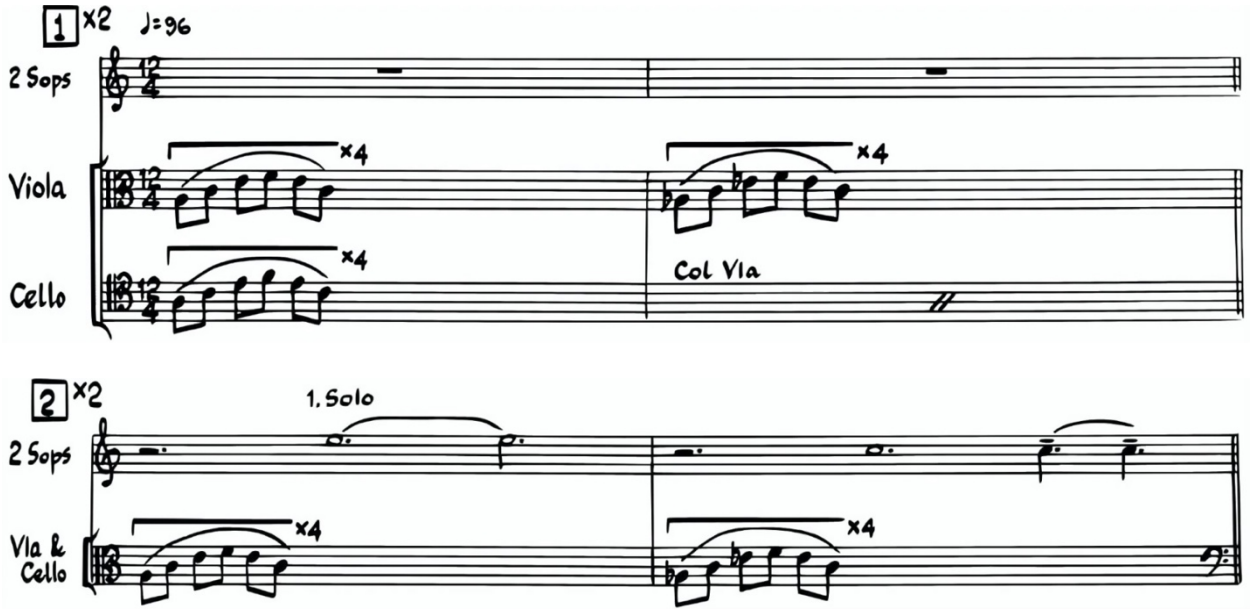

Fig. 2.2, opening measures in "Islands" from *Glassworks* by Philip Glass.

Glass returns to a lively character in "Rubric." This fourth movement is scored for flute, saxophones, French horns, and synthesizer, creating a wall of sound. As in "Floe," the French

horns provide slower, syncopated rhythmical material that contrasts with the lively accompaniment figures (Fig. 2.3):

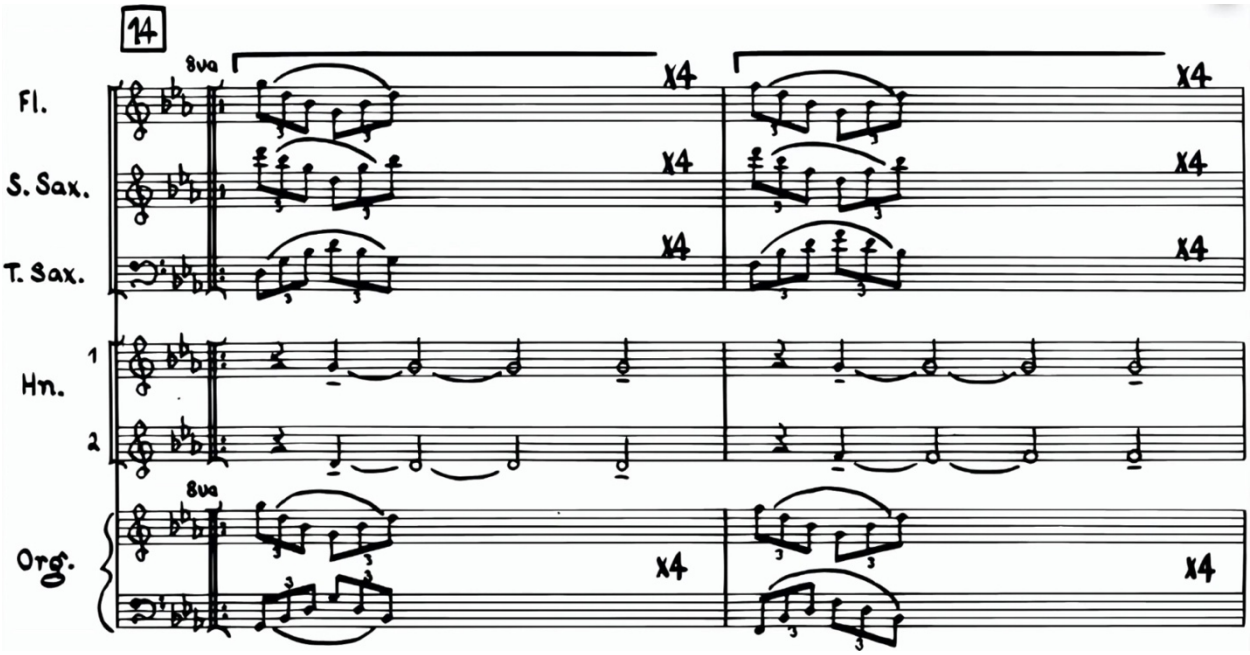

Fig. 2.3, rehearsal 14 in "Rubric" from *Glassworks* by Philip Glass.

The fifth movement, "Facades," returns to a slow tempo and features an accompanied solo texture (solo saxophone plus cellos, violas, and flutes) similar to "Islands." Glass breaks the slow-fast-slow alternation in the sixth movement, "Closing." Instead of concluding with bombast, Glass instead ends *Glassworks* with another soothing and meditative movement. "Closing" uses the same melodic patterns as "Opening" but is scored for the entire ensemble instead of solo piano (keyboard).

Within this multimovement form, some structures in *Glassworks* are similar to rock music. "Closing," for example, is in verse-chorus form—a popular structure used in rock music from the '50s and '60s. The verse, chorus, and bridge sections can be easily distinguished by isolating the harmonic and melodic shifts. As John Covach states in "Form in Rock Music," "[g]enerally speaking, harmonic structure tends to be a primary factor in determining formal

units at all levels of structure."[66] Each verse and chorus section consist of eight measures when accounting their prescribed repetitions, much like phrasings of popular songs. Examining the opening statement shows an opening motif in F minor across eight measures (including the composer's repeats). The tonic (F minor) then shifts to C minor, cadencing on a D-flat major chord--a through-composed progression (Fig 2.4).

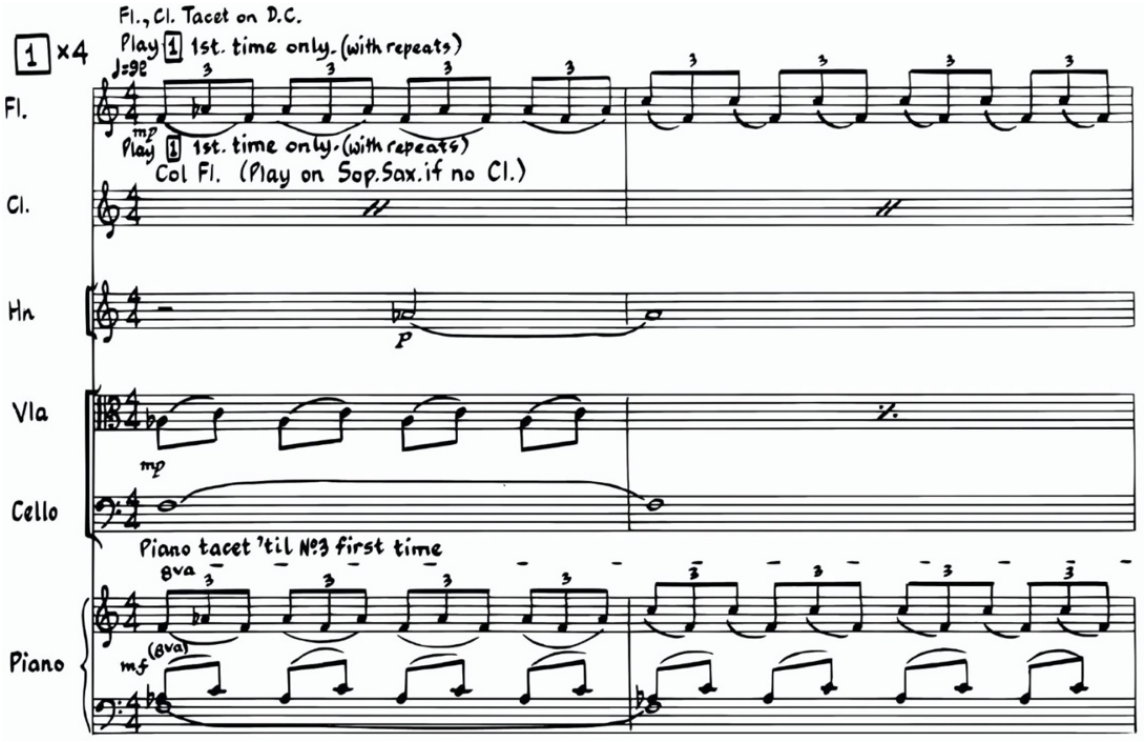

Fig. 2.4, opening measures in "Closing" from *Glassworks* by Philip Glass.
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This motif can be designated as the verse or A section. A notable tonal shift occurs at the sixth measure where Glass introduces a new progression of F minor, B-flat major, E-flat major, and cadencing on G minor, which comprises the chorus or B section (Fig. 2.5).

[66] John Covach, "Form in rock music," *Engaging music: Essays in music analysis* (2005): 66.

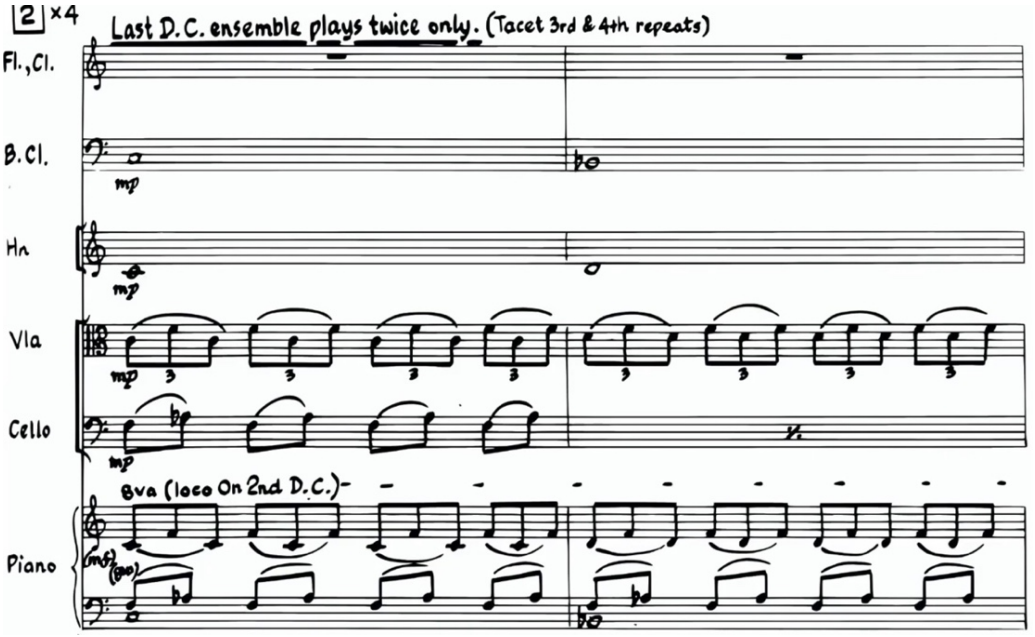

Fig. 2.5, rehearsal 2 in "Closing" from *Glassworks* by Philip Glass.

Another harmonic change occurs at measure 11 (rehearsal 3), where Glass introduces a B-flat dominant seventh chord that shifts to A-flat major, creating the bridge or C section (Fig. 2.6).

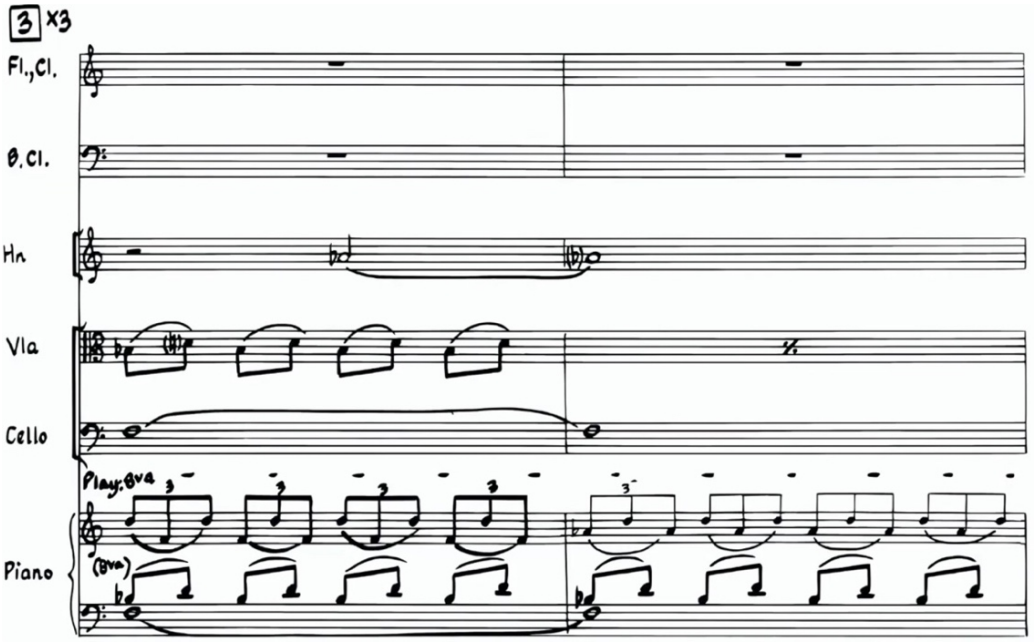

Fig. 2.6, rehearsal 3 in "Closing" from *Glassworks* by Philip Glass.
 Note this section as the "bridge."

The movement then restates the verse, chorus, and bridge once more. Following the second reiteration of these sections, Glass instates another verse and chorus. A verse-chorus song, according to Brad Osborn, can end one of two ways: "by recapitulating the verse or chorus, or by appending an outro or coda to the end of either section."[67] "Closing" finishes with the former by restating the chorus, except the instrumentation reduces to piano only (see Fig. 2.7, "Last D.C. ensemble plays twice only").

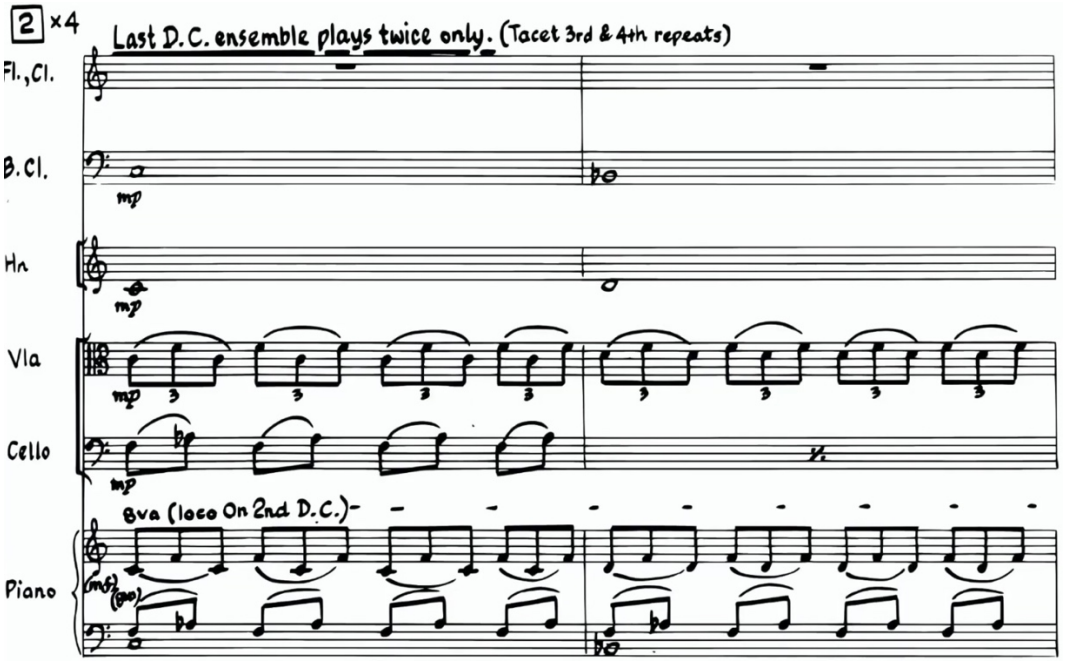

Fig. 2.7, rehearsal 2 in "Closing" from *Glassworks* by Philip Glass.

The structure of "Closing" (ABCABCABB) is similar to The Ronette's 1963 classic "Be My Baby." *Glassworks'* appeal is its structural versatility from both classical and popular musical perspectives.

[67] Brad Osborn, "Subverting the Verse—Chorus Paradigm: Terminally Climactic Forms in Recent Rock Music," *Music Theory Spectrum* 35, no. 1 (2013): 23.

Style in *Glassworks*

The third way *Glassworks* appeals to both classical and popular listeners is through its style. The piece offers a Zen-like "easy listening" contemplative experience for some listeners. "To a certain extent," Annalyn Swan notes in "The Spell of Philip Glass," "Glass's music is anti-intellectual. It is emotion-first, feel-good music that depends, at least for the part of its effect, on high amplification and a glittery, glassy surface."[68] Because minimalism emphasizes repetition and simplified harmonic structures, it reduces the potential for unexpected tonal shifts, which can induce anxiety in some listeners. According to Robert Fink, "[t]he clear patterning and predictably cycles of minimalism can have a mood-regulating effect that goes far beyond the simple warding off of distraction; often there is a strong positive emotional charge"[69] Elisabeth Le Guin describes a similar "sense of comfort and safety" in her defense of minimalism:

> The music establishes an environment, and assures me that that environment will not be disrupted …. With the sense of safety can come pleasure, of the mild diffuse variety—intense pleasure being just as disruptive as fear—and relaxation of mental focus … Actual physical relaxation can follow exposure—at least, willing exposure—to this kind of programming, too: I often feel my breathing slow in response to it. So: a safe 'place' to be; a 'place' where one is pleasantly relieved of the necessity of having to focus.[70]

Glass's music conveys and even encourages this feeling in his listeners, a feeling similar to that conveyed in the cyclical, rhythmically challenging Eastern music he studied in the Middle East and Asia in his youth.[71]

This "easy listening" aesthetic describes the emotional satisfaction conveyed in the fifth movement, "Facades." The opening passage begins with the tonic (A minor) and momentarily explores the secondary chord area (A-flat major). Shortly thereafter, Glass introduces the third

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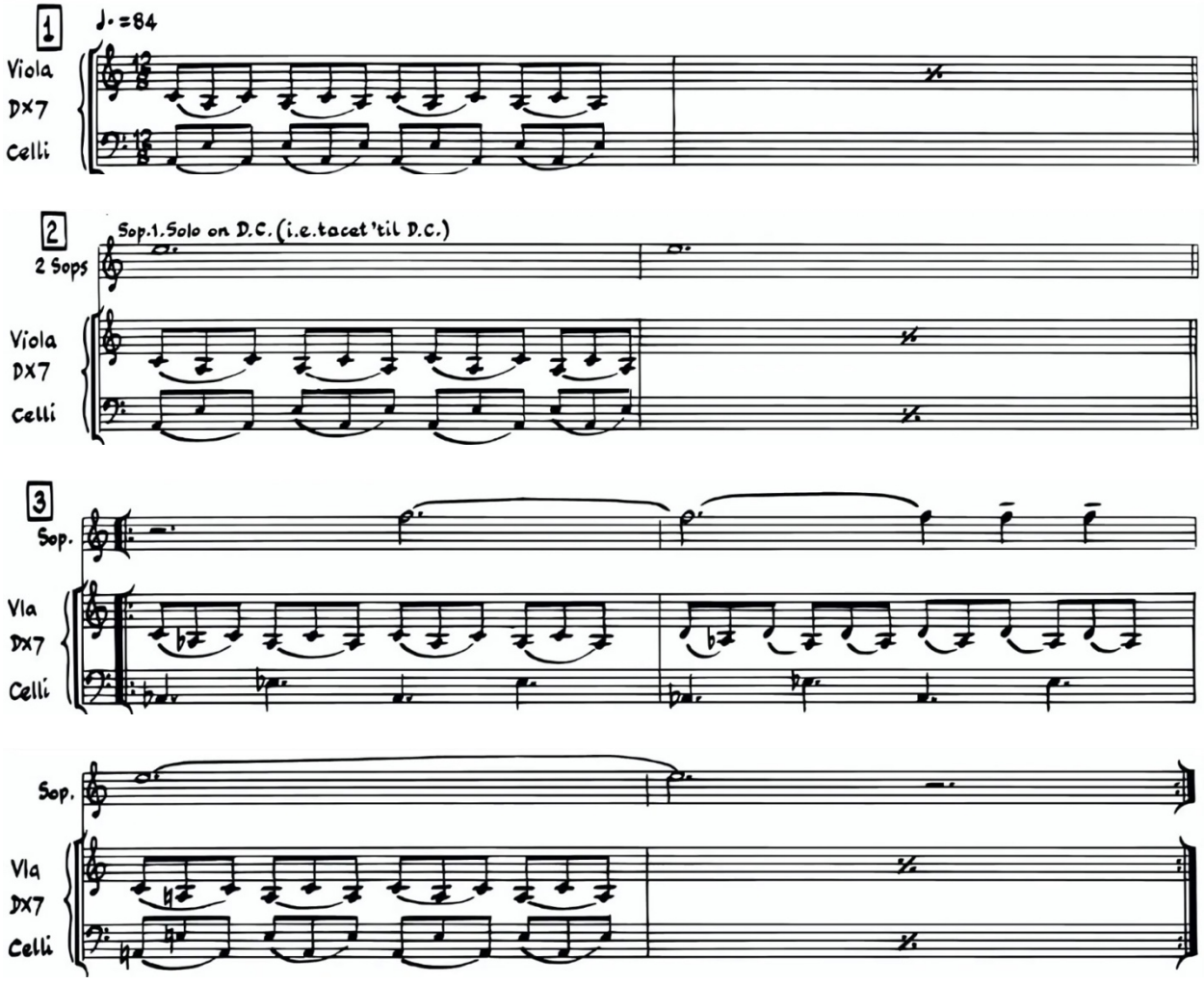
[68] Annalyn Swan, "The Spell of Philip Glass," *The New Republic,* 12 (December, 1983): 31.
[69] Robert Fink, *Repeating Ourselves: American Minimal Music as Cultural Practice,* (London: University of California Press, 2005), 204.
[70] Quoted in Robert Fink, *Repeating Ourselves,* 204.
[71] Philip Glass, *Words Without Music,* 150-151.

and last chord in the harmonic profile: B-flat major. This harmonic progression produces a "rocking" sensation, similar to that of a pendulum—A minor swinging back-and-forth between A-flat major and B-flat major (Fig. 2.8, meas. 253-264). No other chords are introduced in this movement. This harmonic pendulum action, combined with a tempo of a dotted-quarter note equaling a not-too-active 84 BPM, creates a tranquil, "feel good" listening environment. The "anti-intellectual" harmonic structure also creates a cyclical, reassuring motivic pattern. Glass's simple harmonic progression reduces the risk of creating anxiety in the listeners, ultimately leading them to a sonic landscape full of creativity, positivity, and security.



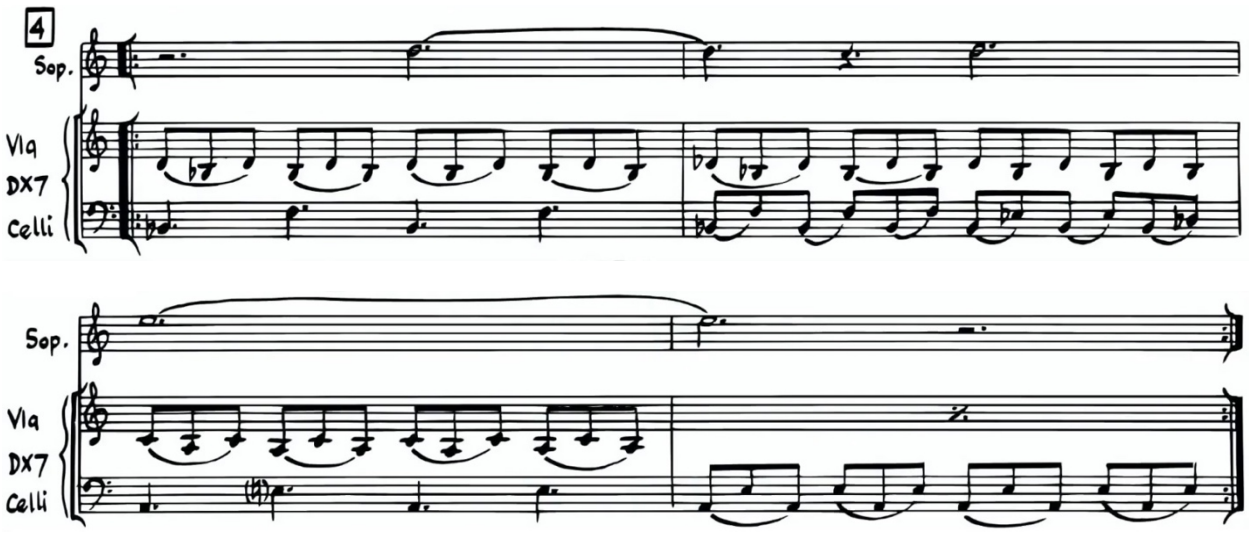


Fig. 2.8, opening measures in "Facades" from *Glassworks* by Philip Glass.

Glassworks also appeals to listeners by conveying an infinite sense of time through repetition of simplified patterns to extraordinary lengths. Glass writes that his music:

> is placed outside the usual time-scale substituting a non-narrative and extended time sense …. [The listener] can perhaps discover another mode of listening—one in which neither memory nor anticipation (the usually psychological devices of programmatic music whether Baroque, Classical, Romantic, or Modernistic) have a place.[72]

His *Music in Twelve Parts* (1971–1974) best represents this quality, as the entire twelve-movement work takes close to five hours to complete. *Glassworks* makes a similar appeal to this alternative mode of listening.

The perception of time as infinite can be experienced in some rock pieces, most notably those by guitarist Carlos Santana. In the late 1960s and early 1970s, Carlos and his band Santana achieved this aesthetic in their music by experimenting with guitar pedals to generate infinitely sustained tones.[73] Melinda LaTour explains Santana's search for eternal sounds:

> Santana attempts exactly that. To win. To live forever. To defeat the inevitable evanescence of sound by generating the possibility of infinite sustain. While all of Santana's playing techniques can be understood as methods to overcome the transitory

[72] Philip Glass, quoted in Wim Mertens et. al., *American Minimal Music,* (London, Kahn & Averill, 2004), 79
[73] Melinda Latour, and Zachary Wallmark, *The Relentless Pursuit of Tone*, 213.

> nature of guitar tone, his intentional use of feedback most clearly offers the symbolic potential to fashion a Messianic pathway to sonic eternity."[74]

By nature, the electric guitar without amplification or effect pedals produces finite tones that quickly fade. However, Santana's creative experimentation with effects pedals allowed him to achieve infinitely sustained tones on his instruments—a groundbreaking discovery for the time.

Glassworks' "Floe" also aims to portray time as infinite. The recombinant textures heard in the flutes, saxophones, and synthesizer change little throughout the movement. For example, rehearsal 5 is where Glass first introduces the accompaniment figures in contrary motion that anchor the whole movement (Fig. 2.9). These simple patterns continue for the remainder of the seven-minute movement (see rehearsal 18 in Fig. 2.10). The only notable change of texture is in the French horns, which play melodic sequences in half-note figures (Fig. 2.10).

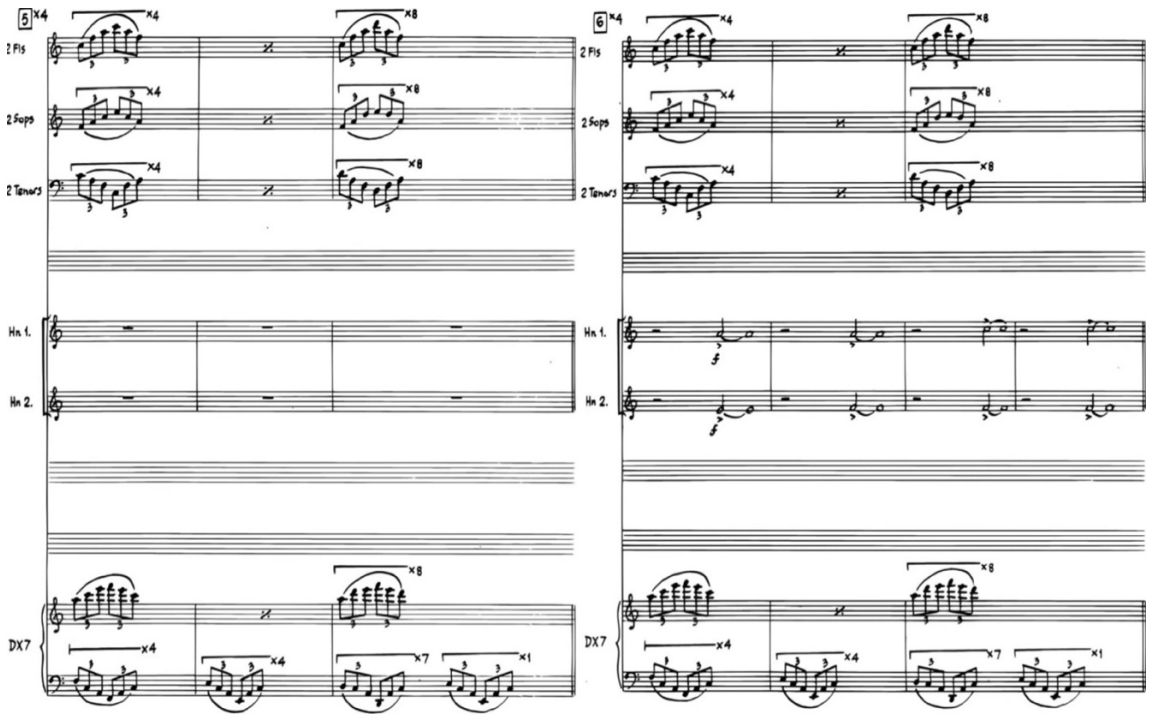


Fig. 2.9, rehearsals 5 and 6 in "Floe" from *Glassworks* by Philip Glass.

[74] Latour and Wallmark*, The Relentless Pursuit of Tone,* 225.

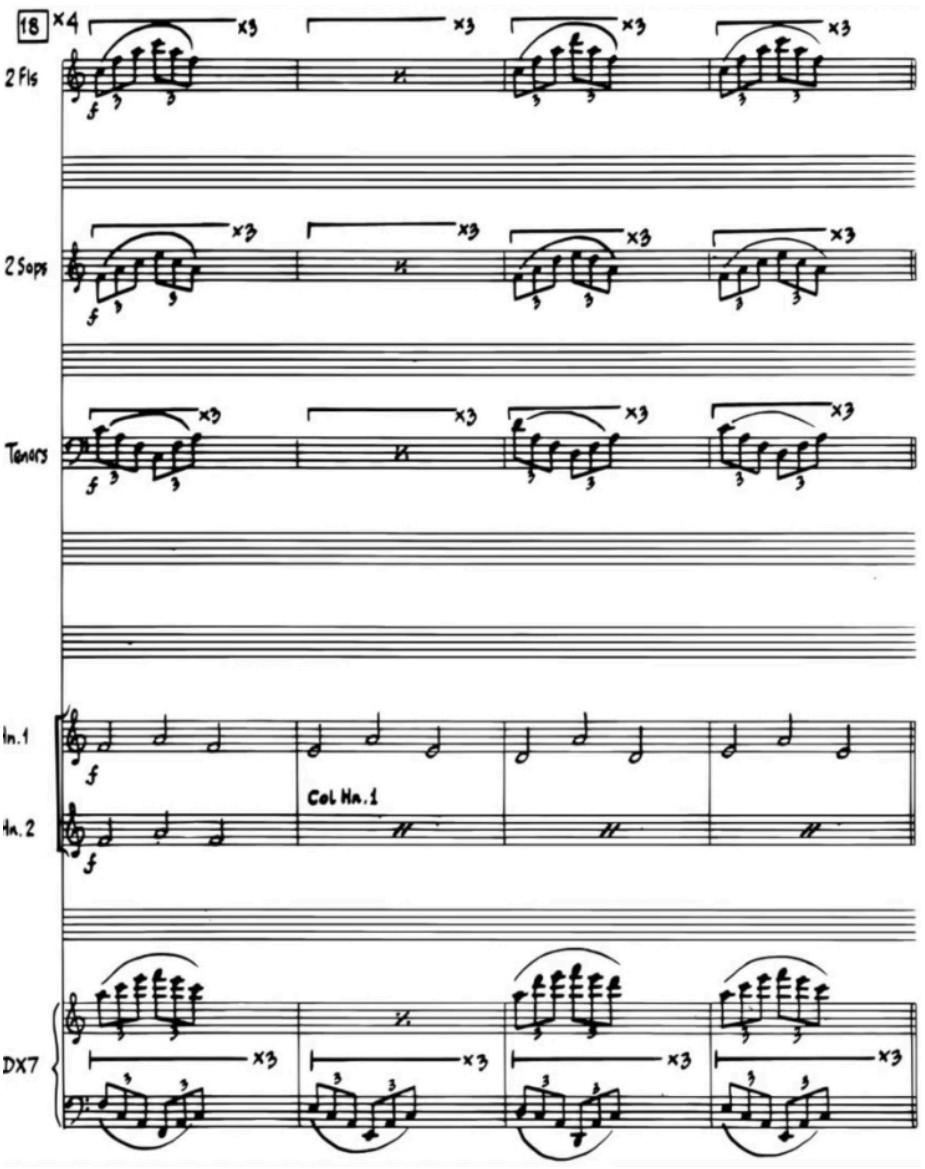


Fig. 2.10, rehearsal 18 in "Floe" from *Glassworks* by Philip Glass.

Like Santana's infinitely sustained tones, "Floe" uses incessant repetitive textures to express time as an infinite concept.

Lastly, with harmonic complexity eliminated, listeners of Glass's music are more likely to focus on rhythm—just as they were with rock, disco, and dance music of the 1970s.[75] "There

[75] Richard Sennett, "Twilight of the Tenured Composer," *Harper's* 269 (December 1984): 67.

is the simplicity," Bernard Holland recalls in listening to Glass's music from a popular musical lens,

> Mr. Glass's famously simple triads and stepwise movements refer precisely to rock music's de-emphasis of harmonic complication. There are the equally famous repetitions, which connect, among other things, with rock's preference for metronomic patterns.[76]

"Floe" is an excellent example of Glass simplifying harmonic progressions to emphasize polyrhythmic sequences. At rehearsals 20 and 21 for example (Fig. 2.11), the majority of the ensemble is performing flowing eighth-note triplet figures across the unchanging F major–A minor–D minor–A minor progression. The second flutes, soprano saxophone, and tenor saxophones are performing figurations in quarter-note triplets. To add more rhythmic "spice," the French horns play quarter note patterns. Taken together, these rhythms interact to create a whirlwind of a listening experience. Because Glass uses a recombinant yet straightforward harmonic progression, listeners can focus on movement's rhythmic complexity.

[76] Bernard Holland, "Listening to Philip Glass and Hearing Links to Rock: Listening to Glass and Hearing Links to Rock," *ProQuest Historical Newspapers: New York Times,* (1997): 4.

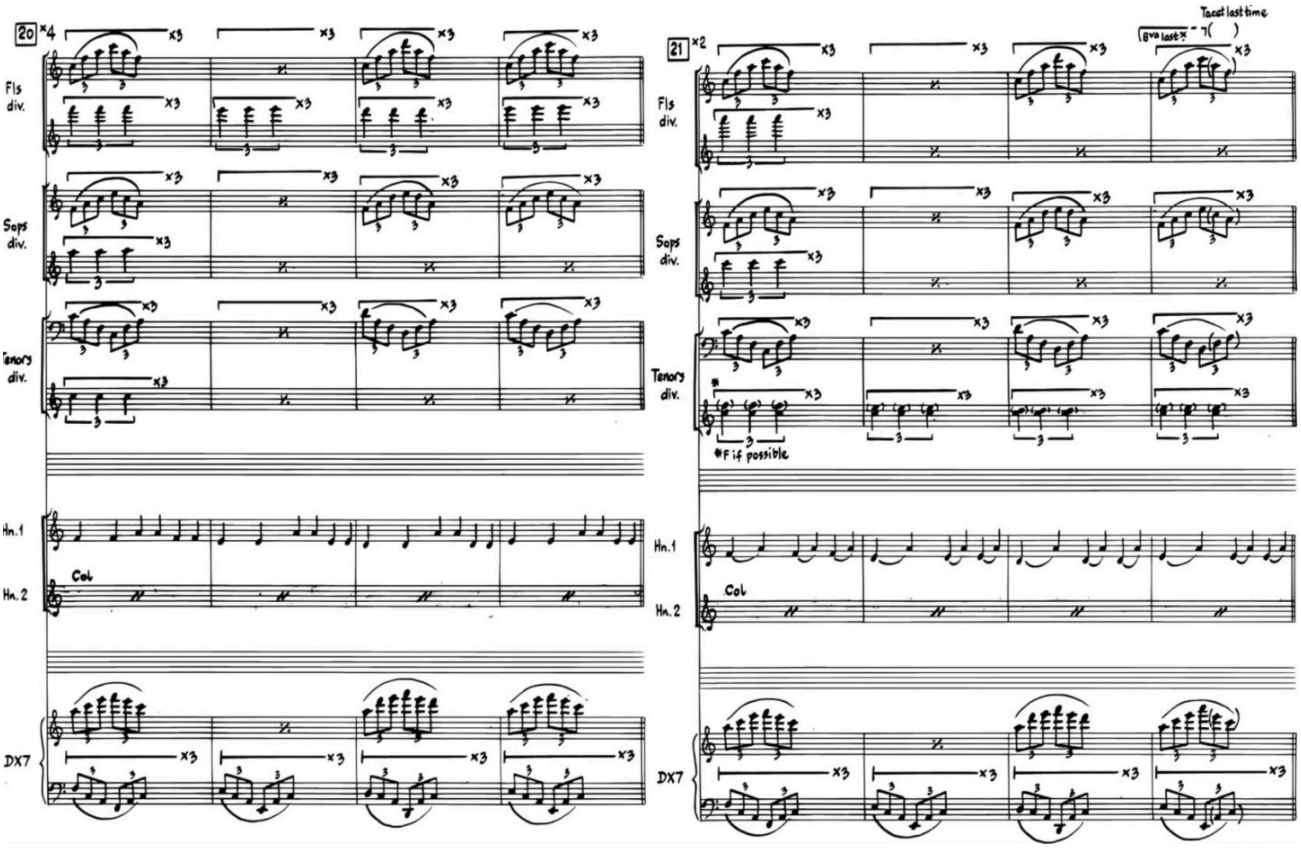


Fig. 2.11, rehearsals 20 and 21 in "Floe" from *Glassworks* by Philip Glass.

* * *

As a quintessential minimalist work, *Glassworks* has qualities that draw music listeners from both classical and popular audiences. By combining synthesizer and amplified classical instruments, Glass made unconventional instrumentation decisions. The formal structure of *Glassworks* is a similar melding, using popular verse-chorus form in some movements, while the entire piece is stitched together using the *sonata da chiesa's* "slow-fast-slow" movement succession. The piece's "easy listening" aesthetic, portrayal of time as endless, and dynamic polyrhythms come together to form a stylistic profile that will impress listeners from many perspectives.

CHAPTER 3: ON TRANSCRIBING *GLASSWORKS* FOR THE ORGAN: A METHODOLOGY

This chapter presents my process of transcribing *Glassworks* for the organ and discusses the obstacles that occurred. When complications surfaced, I consulted Herbert Ellingford's treatise, *The Art of Transcribing for the Organ*. I also revisited the aforementioned transcribers in Chapter 1 to solidify my transcription process. My goal for the transcription was to "make that which is arranged for the organ sound as though it had been originally written for it."[77] Given that *Glassworks* was originally scored for a chamber ensemble, registration possibilities were endless. However, as Sir Hubert Parry suggests, "[t]he object of arrangement is to make that which was written in one musical language, intelligible in another"—suggesting the transcription reflects the original version's tonal qualities in spirit, not in letter.[78] (Registrations are considered in Chapter 4.) Because Glass's music focuses on the perception of interactive musical lines and polymeters, my consideration of transcribing *Glassworks* from a listener's perspective is paramount. To inform perception, I will refer to the Philip Glass Ensemble's 1982 recording of *Glassworks*.[79]

"1: Opening" (solo keyboard)

Being scored for solo keyboard, "Opening" was easy to transcribe for the organ. In the first measures (Fig. 3.1) the texture is in three voices that easily translate to organ notation regularly in three staves. The right hand's triplet figures and the left hand's eighth-note patterns in the piano were directly transferred to the right and left hands of the organ. The extended bass notes in the piano's left hand were allocated to the Pedal division. This direct, note-for-note

[77] Herbert Ellingford, *The Art of Transcribing for the Organ,* (New York: H. W. Gray & Co., 1922): 38.
[78] Sir Hubert Parry, quoted in Herbert Ellingford, *The Art of Transcribing for the Organ,* vi.
[79] Philip Glass and Michael Reisman, *Glassworks,* New York: CBS Masterworks, 1982, Compact Disc.

transcription recalls Edwin Lemare's organ version of Edward Elgar's *Une Idylle.* Lemare aimed to preserve as much information from the original score as possible, from the notes themselves to intricate performing details. Likewise, my transcription of "Opening" does not exclude any notes or dynamic markings found in the original.

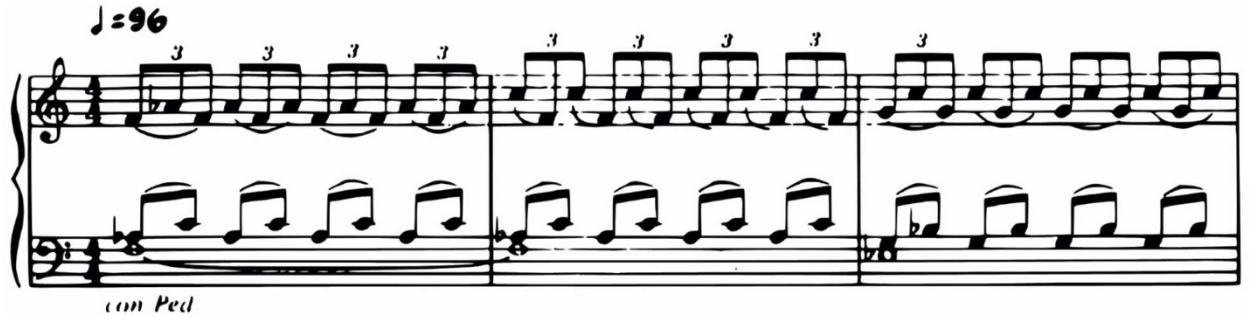


Fig. 3.1, opening measures in *"*Opening*"* from *Glassworks* by Philip Glass.
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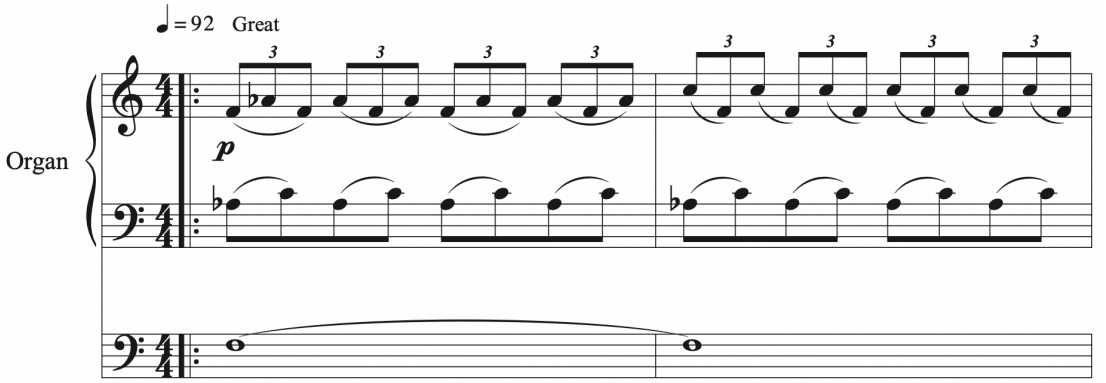

Fig. 3.2, "Opening," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass. © 1981 Dunvagen Music Publishers Inc. Used by Permission.

Some notational indications, however, may not be applicable in another medium. As we saw in Chapter 1, Lemare added his own dynamic markings to his transcription of *Une Idylle* to account for the organ's playing characteristics. In transcribing the beginning passage of "Opening," I omitted the indication "con Pedal" because the term is specific to the piano to perform notes of unlimited length. Since the organ can produce notes of infinite length, the term would be considered redundant since Glass's texture is automatically captured by notation alone

(see pedal line in Fig. 3.2). Glass's slurs in this movement bear importance as these phrasings bring forth a swaying two-note melody in the right hand: F and Ab in the first measure, C and F in the second, G and C in the third, and Ab and C in the fourth. Eliminating these phrase markings may smooth out this embellished melody more than is best. These subdued melodic configurations can be distinguished in the recording of the composer's performance of "Opening" on his 84th birthday.[80] To reproduce the piano's meditative characteristic, I added a *piano* dynamic marking in the first measure; leaving the swell shades open on the organ risks performing the movement with too much sonic force. Keeping swell shades closed also foreshadows the excitement that comes in the following movement, "Floe." To replicate Glass's subtle dynamic contrasts on the organ, I prescribed manual changes from the Great to Choir divisions. Performing on different manuals allows sounds to be delivered from multiple areas in the performing space, depending on the instrument, enhancing the depth of the listening experience. In transcribing any work for the organ, dynamic markings should be carefully taken into account to ensure that the composer's expressive intentions match the instrument.

"2: Floe" (flutes, soprano and tenor saxophones, horns, synthesizer)

The original version of "Floe" is scored for nine instruments, each of which contributes distinct material to the hyperactive textures, making reduction a complicated process. In *The Art of Transcribing for the Organ*, Herbert Ellingford recommends simplifying and reducing complex orchestrations to make them more manageable. He writes, "[i]t is better to simplify and cut down the orchestral score than to crowd as many notes into the three-stave organ score as the

[80] Smalin, "Glass, Glassworks 01. Opening ©," YouTube video, 2:23, February 26, 2021, https://www.youtube.com/watch?v=KcM1ZHNz3ww.

hands and feet can actually grasp."[81] To that end, I extracted only the most pertinent musical material in "Floe" for the transcription.

Manual and pedal voices for "Floe" were easily determined at the beginning of the movement. The movement begins with the two French horns performing a simple motif in F major. Twelve measures later, the flutes, soprano saxophones, and tenor saxophones enter with arpeggios in contrary motion. With a tempo of 100 BPM, these arpeggios do not lend themselves well to be played on the pedal division. Therefore, this leaves these melodic patterns to be played on the manuals. Because the French horns consistently contribute simple material throughout the movement, performing these lines on the pedals was the only logical and feasible choice.

Two particularly problematic areas in "Floe" called for identifying the most important elements of a dense wall of sound. At rehearsal 5 (Fig. 3.3), the flutes, soprano saxophones, tenor saxophones, and synthesizer perform arpeggios individually. The left hand of the synthesizer serves as the harmonic foundation, establishing the tonic of F major. I thus extracted this crucial line and allocated it to the left hand of the manuals. After establishing the pedal (French horn) and left-hand lines (left hand of the synthesizer), my remaining task was to determine the right hand's voice. One possibility was to alternate between the flute and soprano saxophone voices throughout the repeats, but this alternation would deviate from Glass's consistent texture. Another possibility was to extract only the synthesizer part in its entirety, but doing so did not adequately convey the notable "wall of texture." Turning to the original recording of "Floe" by the Philip Glass Ensemble, I could distinguish the foundation of the synthesizer and the high timbres of the flutes, which dominated the texture at every point in the recording. Thus, I allocated the flute's voices to the right hand in the transcription, as shown in Figure 3.4. Like

[81] Herbert Ellingford, *The Art of Transcribing for the Organ,* 38.

Calvin Hampton's transcription of *Symphony in D Minor*, my rendition of "Floe" uses a reductive technique to capture Glass's characteristic sound while adhering to the physical limitations of organ playing.

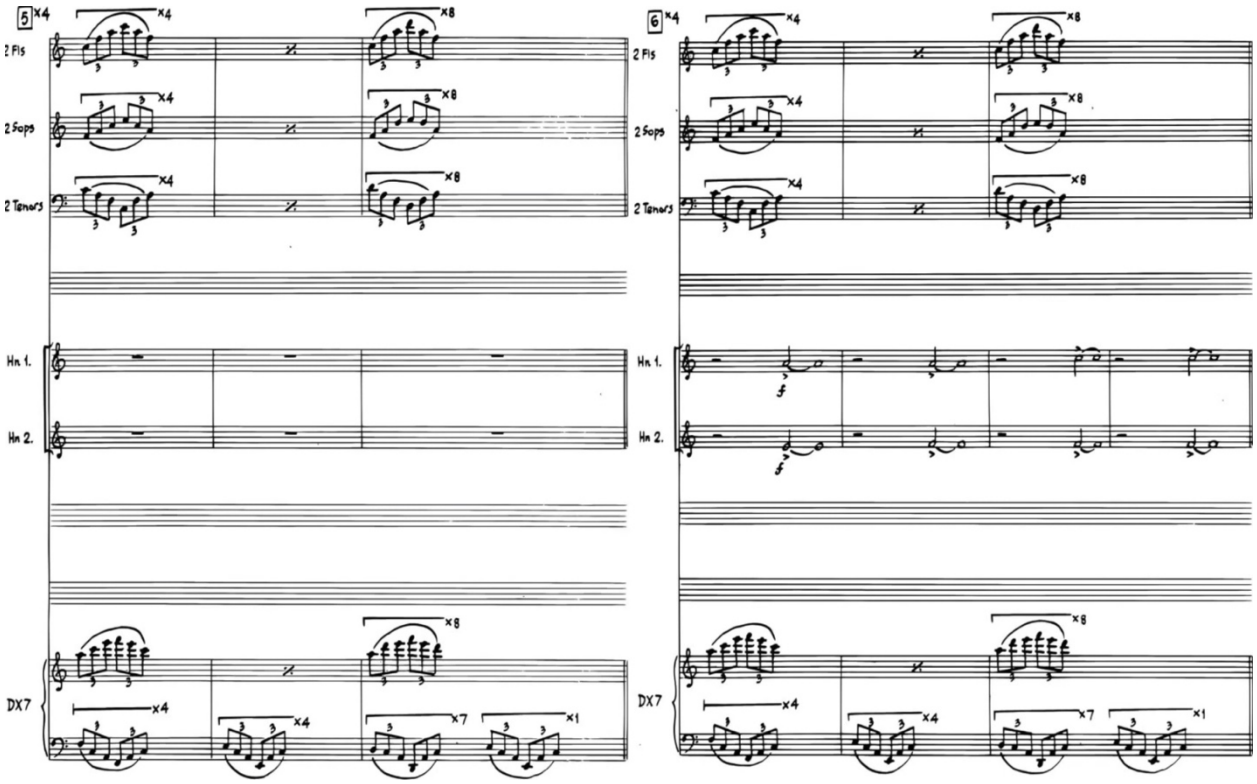

Fig. 3.3, rehearsal 5 in "Floe" from *Glassworks* by Philip Glass.

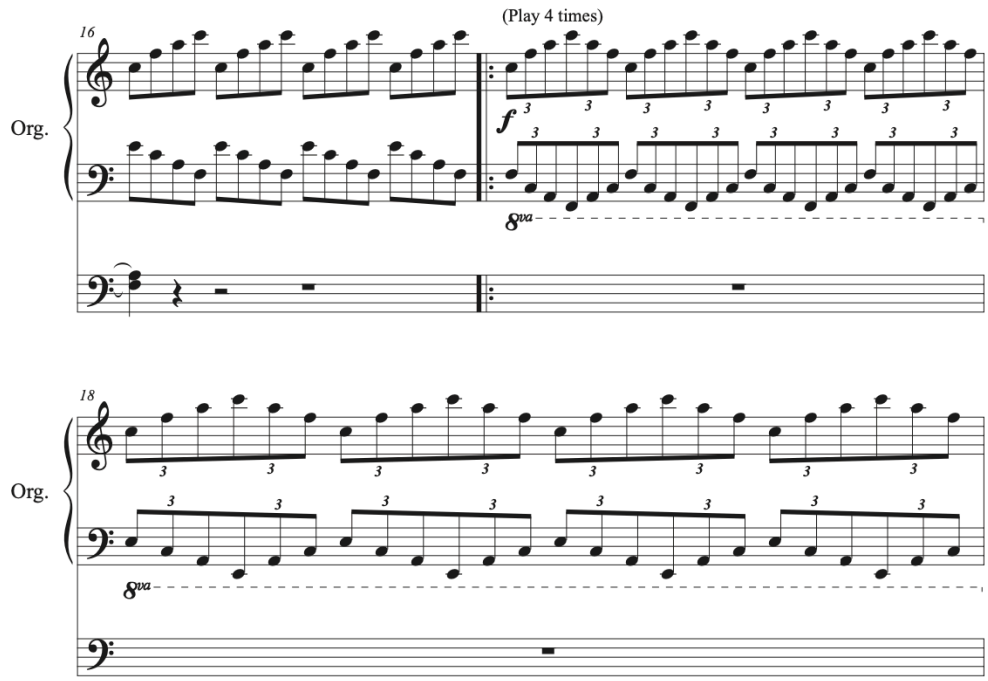

Fig. 3.4, measures 16-18 in "Floe," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass

The second problematic area begins at rehearsal 19 where the second flute, soprano saxophone, and tenor saxophone perform quarter-note triplet figures that contrast with the faster, flowing patterns in contrary motion (Fig. 3.5). Because the left hand was occupied with foundational melodic material at that point, the right hand was the only viable option for these rhythmical sequences. The original score shows Glass uses the flute II, soprano II, and tenor II saxophones to perform chords constructed of C, F, and A, respectively. The tenor saxophone II and flute II perform repeated As and Cs respectively while the soprano saxophone II performs a repeated sequence of F – E – D – E. Unless the organist has the ability to perform large intervals repeatedly and with ease, these figures in their original notation are not optimal for organ playing. Inverting the chords on the right hand proved to be the best solution. My transcription reflects a similar chord structure at measure 73 (Fig. 3.6) consisting of A – C – F – A' with the middle voice preserving the soprano saxophone II's sequence F – E – D – E. In Chapter 1 we

saw that Edwin Lemare revoiced chords in his organ version of *Une Idylle*. Lemare's modification captured the identity of the expanded version of each chord while ensuring that organists could perform them with ease.

In the same passage, Glass layers three different rhythms to create a polyrhythmic texture. Beginning at rehearsal 19, three distinct layers of rhythm is dispersed across the ensemble (Fig. 3.5). The first rhythmic pattern is the flowing eighth-note triplet figures performed by the synthesizer, flute I, soprano saxophone I, and tenor saxophone I. The second consists of the aforementioned quarter-note triplets in flute II, soprano saxophone II, and tenor saxophone II. The third is a half-note sequence in unison in the French horns. Because these three layers create a powerful rhythmic conversation, I wanted to preserve this configuration on the organ as much as possible. The first pattern was allocated to the left hand and the second to the right (Fig. 3.6). The third pattern was transferred to the pedal division. My transcription of "Floe" ultimately conserves the interactive polyrhythms in a busy texture by preserving each of these three distinct voices on the organ.

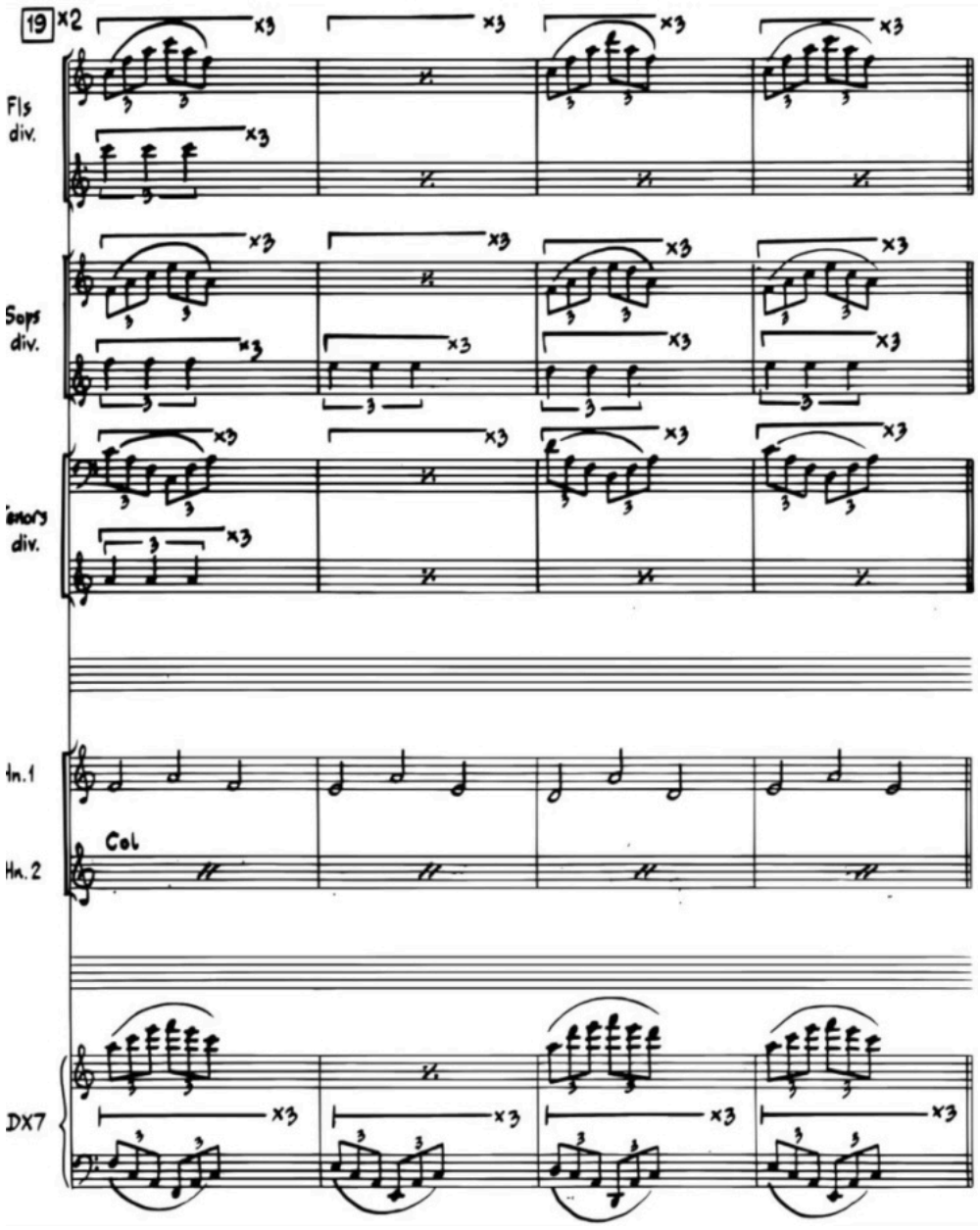

Fig. 3.5, rehearsal 19 in *"Floe"* from *Glassworks* by Philip Glass.
 Note the Flute II, Soprano II, and Tenor II saxophone voices.

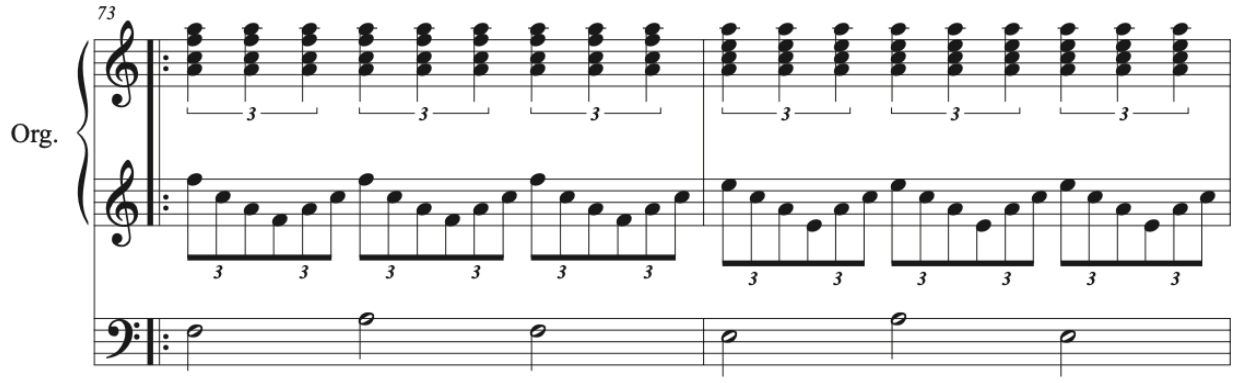

Fig. 3.6, measures 73 and 74 in "Floe," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.

"3: Islands" (flutes, saxophones, French horns, bass clarinet, synthesizer, viola, cello)

Like the first movement, "Islands" offered an uncomplicated and straightforward transcribing experience. Most of the movement unfolds as a solo with accompaniment. It opens with an undulating accompaniment figure in A minor that is first stated by the viola and cello. This motif goes on for a total of four measures (including the repeats) until a solo soprano saxophone enters at rehearsal 2 (Fig. 3.7).

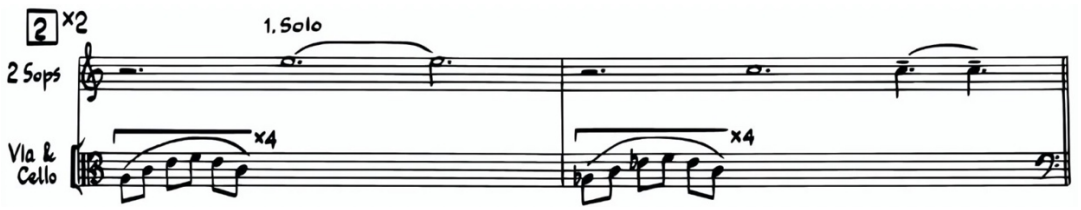

Fig. 3.7, rehearsal 2 in "Islands" from *Glassworks* by Philip Glass.

Shortly thereafter, the soprano saxophone II joins the soprano saxophone I at rehearsal 4 to create a duet in the texture (Fig. 3.8). In the transcription, I directly allocated these instrument groupings to the organ by using two manuals: the left hand takes the strings' part while the right hand plays the solo line on another division. When a second solo voice enters at rehearsal 4, the saxophone duet is integrated in the right hand at measure 13 (Fig. 3.9).

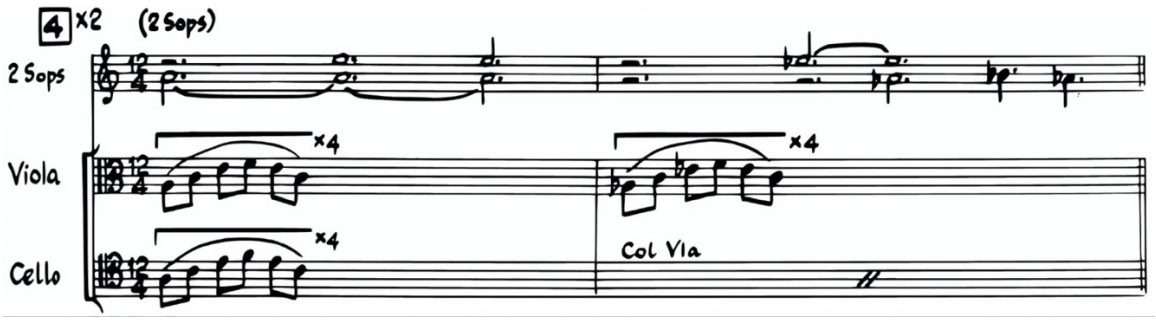

Fig. 3.8, rehearsal 4 in "Islands" from *Glassworks* by Philip Glass.

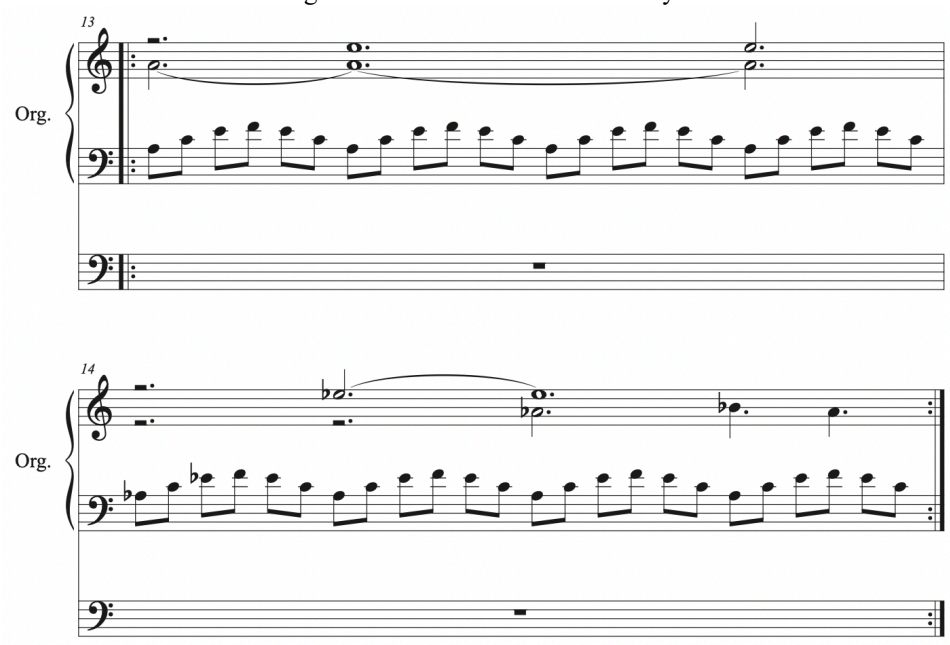

Fig. 3.9, measures 13-14 in "Islands," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.

Busy figuration required condensing in two areas in the transcription. At rehearsal 7, Glass thickens the texture while using the same modal mixture progression between F major to F minor. Here, the flutes and saxophones perform alternating melodic patterns (Fig. 3.10). Since the left hand is occupied with the strings, my goal was to condense the two flute and soprano saxophone voices into one coherent line for the right hand. Because Glass voices the figuration compactly, I was able to effectively condense these two voices into one hand on the organ (Fig. 3.11).

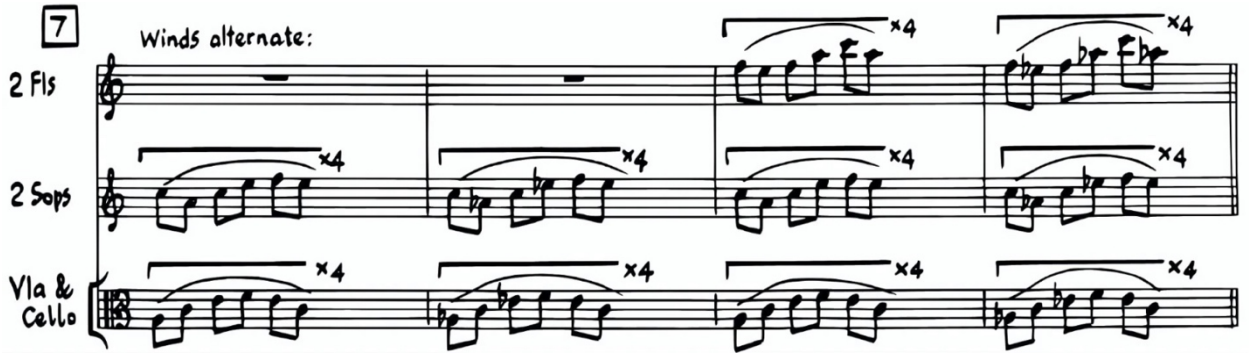

Fig. 3.10, rehearsal 7 in "Islands" from *Glassworks* by Philip Glass.

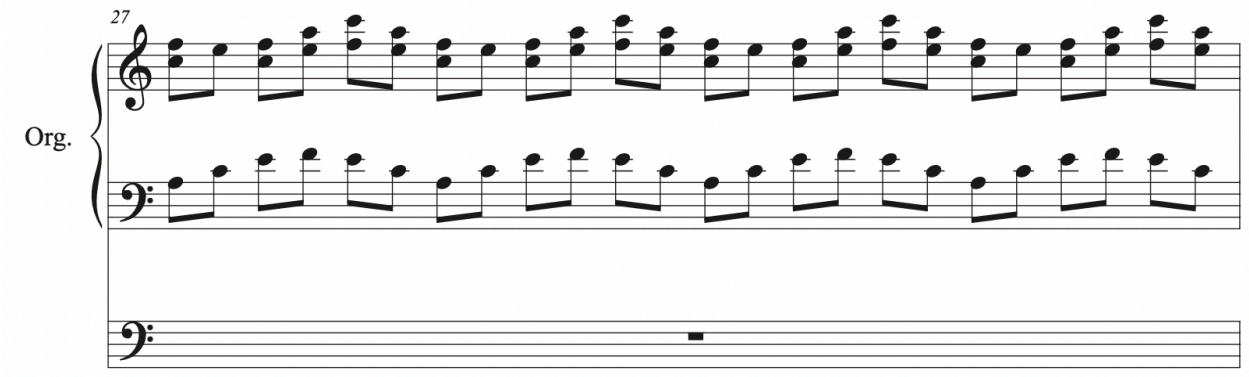

Fig. 3.11, measure 27 in "Islands," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.

The same musical material recurs at rehearsal 10 (Fig. 3.12) with the entire ensemble involved. Glass thickens the texture by using more voices while preserving the same modal mixture progression introduced at rehearsal 7. My goal was to retain as much material as possible on the organ, but performing each line as originally notated was not physically possible. With the pedals occupied with the French horn parts, the manuals were the only available division. Since the flute and soprano saxophone parts are identical to those seen in Figure 3.10, the same transcription will suffice. That leaves tenor saxophone I and the strings doubling the opening A minor motif, while the bass clarinet, second cello, and keyboard perform a descending F major arpeggiated sequence. Condensing these two lines for the organ seemed impossible, given the wide voicing and contrary motion. One viable option would be to retain only one line

in the left hand of the transcription and leave out the other. Through trial and error, I selected the descending F major arpeggiated sequence, removing the opening motif altogether (Fig. 3.13). The F major sequence is more prominent in the original recording. This option also retains the simplicity and the tonal space between the upper and lower voices found in the original score.

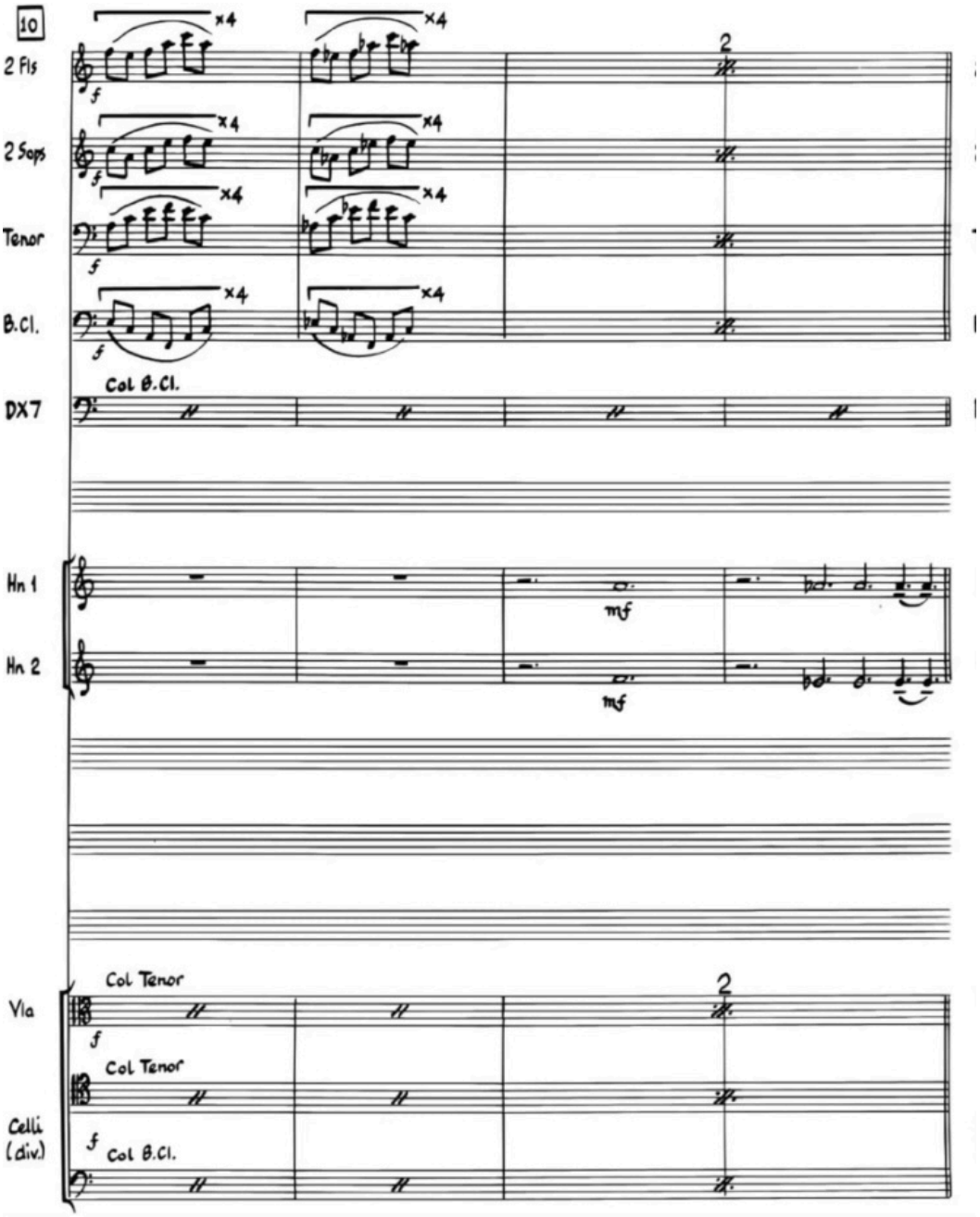

Fig. 3.12, rehearsal 10 in "Islands" from *Glassworks* by Philip Glass.

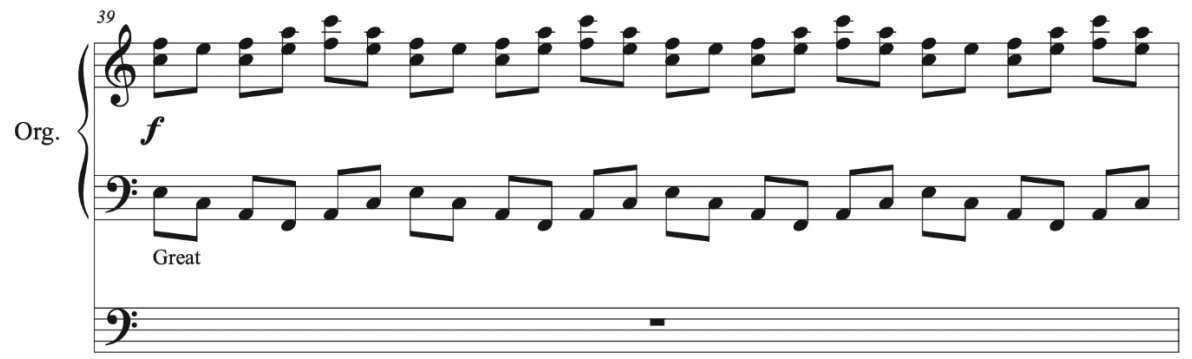

Fig. 3.13, measure 39 in "Islands," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass. © 1981 Dunvagen Music Publishers Inc. Used by Permission.

"4: Rubric" (flute, saxophones, French horns, synthesizer)

Like "Floe," "Rubric" comprises multiple independent voices with fast arpeggiated sequences. Thus, I applied a similar, reductive approach, calling again on Ellingford's recommendation to "[e]liminate the unessential, and lay out the essential to the best advantage on the organ"[82] and followed the example of Calvin Hampton's rendition of Franck's *Symphony in D Minor*.

I encountered two areas of concern while transcribing "Rubric," with the first occurring at rehearsal 3. After an opening statement consisting of an ascending G minor eighth-note motive played in unison by the saxophones, flutes, and synthesizer, the texture dramatically changes to energetic triplet flourishes in contrary motion (Fig. 3.14). Because each voice contributes distinct music material, selecting which voices to be allocated to the organ was a challenging task. As in previous movements, my goal was to keep the pedals free for the French horn motif (see Fig. 3.14), restricting the manuals to two voices in the transcription. Following a process similar to the one used in "Floe," I assigned the bass line of the DX7 to the left hand and the flutes to the right hand in the manuals (Fig. 3.15).

[82] Ellingford, *The Art of Transcribing for the Organ,* 3.

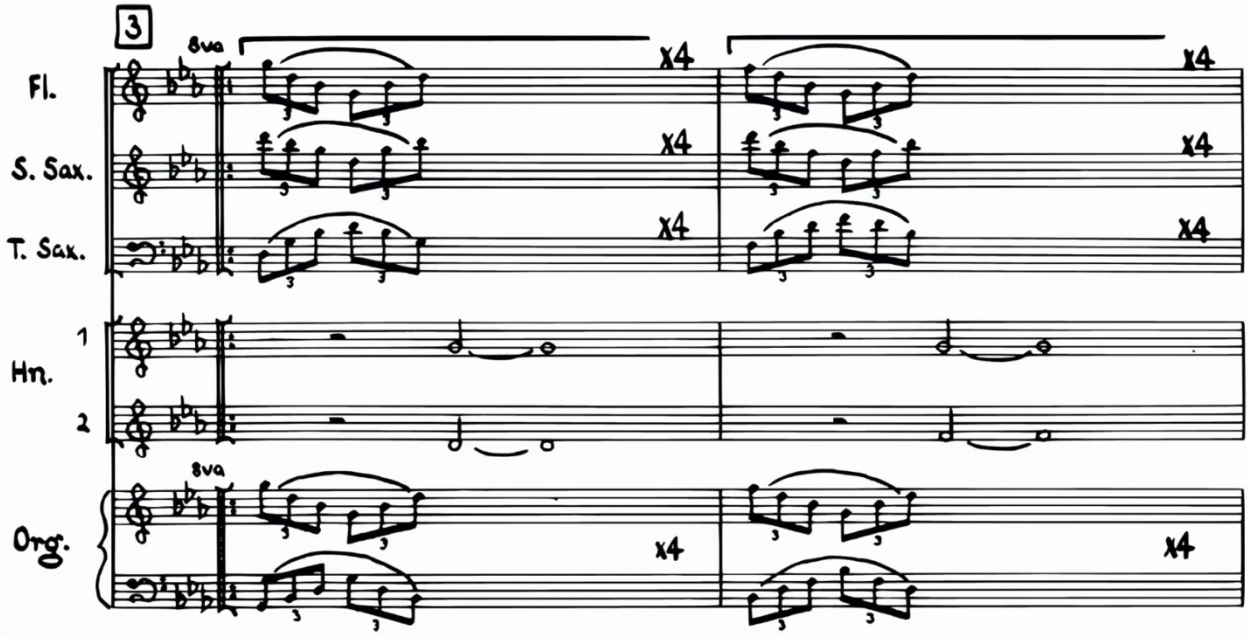

Fig. 3.14, rehearsal 3 in "Rubric" from *Glassworks* by Philip Glass.

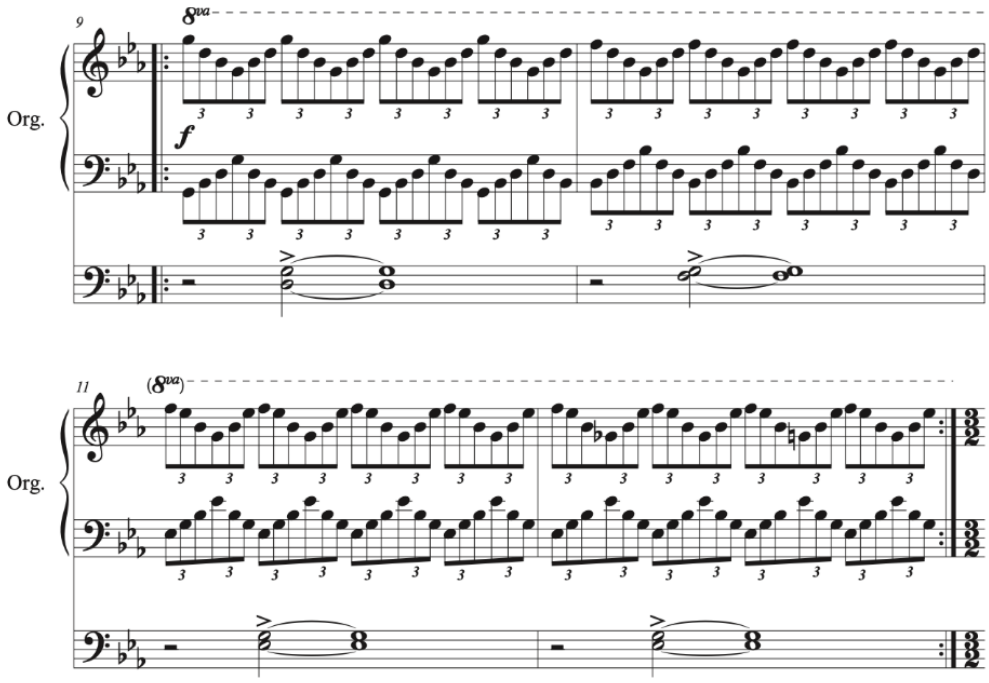

Fig. 3.15, measures 9-10 in "Rubric," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.

The second problematic area was at rehearsal 5 (Fig. 3.16) where the flute I, soprano saxophone, tenor saxophone, and keyboard perform oscillating patterns surrounding a G minor

seventh chord. Condensing all five of these lines onto the manuals—and playing them with accuracy, speed, and clarity—is all but impossible, so I continued to take a reductive approach to the transcription. The left-hand maintains its note-for-note replication of the bass line from the DX7. The right hand, however, was less straightforward. Initially, I had the right hand perform the tenor saxophone's line in conjunction with the lower voices of the DX7, but this combination sounded too dark on the organ, losing the desired energetic quality. My second option was to perform the soprano saxophone's part in the right hand. Though brighter, this configuration bore little resemblance to the original ensemble timbre. In the Philip Glass Ensemble's recording of "Rubric," the upper and lower voices of the texture stand out most prominently. With this in mind, I assigned the flute part to the right hand (see measure 19 in Fig. 3.17). The tonal space between the synthesizer and the flute is effectively conveyed on the organ, helping to lend an energetic quality that is ever-present in the original recording.

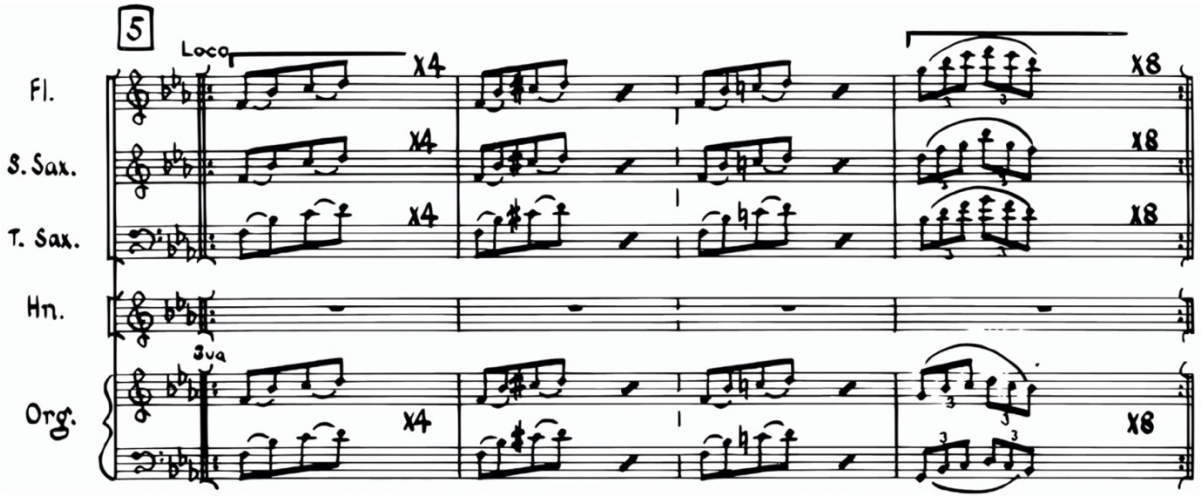

Fig. 3.16, rehearsal 5 in "Rubric" from *Glassworks* by Philip Glass.

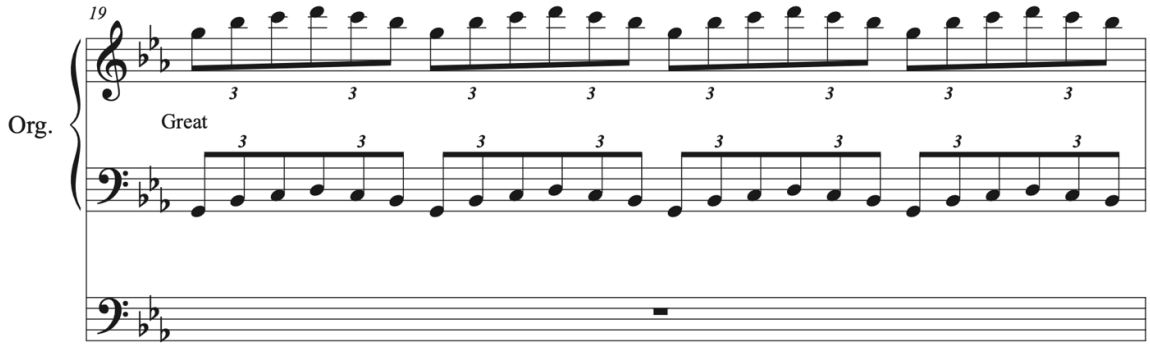

Fig. 3.17, measure 19 in "Rubric," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.

"5: Facades" (solo saxophone, cellos, violas, flutes)

Transcribing the fifth movement, "Facades," was straightforward thanks to the simple orchestration. The only complication was when the serene solo saxophone melody performed at the beginning develops into a duet at rehearsal 10 (Fig. 3.18). If every note of the two saxophones were carried over to the organ, the organist would have to use an awkward hand position, making it difficult to play with the necessary *legato*. In the transcription, the left hand and pedal replicate the violin and cello parts, respectively. To accommodate the saxophone duet on the manuals, I condensed them into one line for the right hand (Fig. 3.19). This process required eliminating the lower voice's middle C in beats one and three (cf. rehearsal 10 in Fig. 3.18).

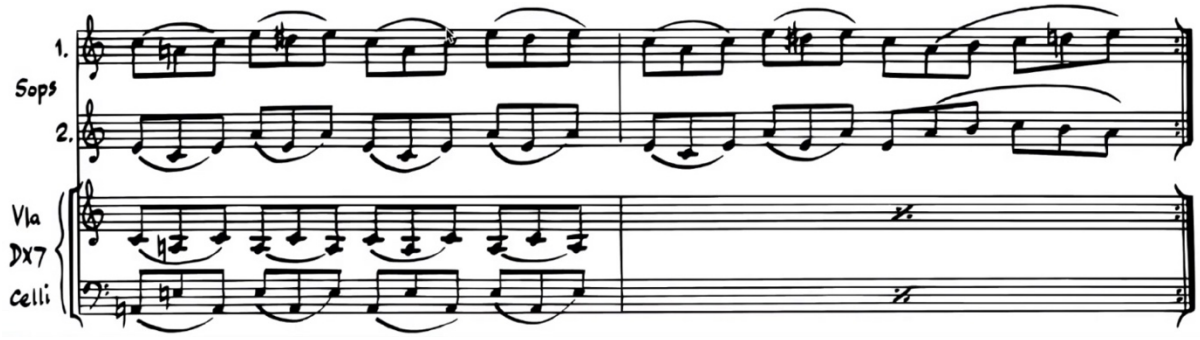

Fig. 3.18, rehearsal 10 in "Facades" from *Glassworks* by Philip Glass.

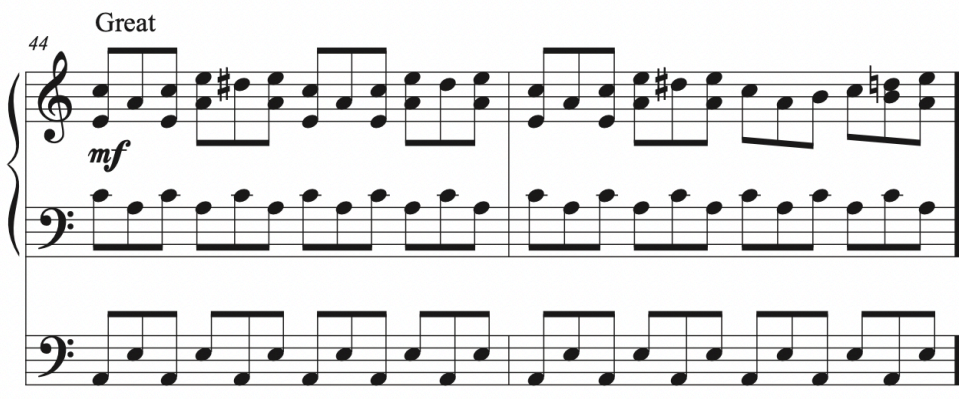

Fig. 3.19, measures 44-45 in "Facades," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.

"6: Closing" (full ensemble [synthesizer, flutes, clarinets, saxophones, French horns, viola, and cello])

"Closing" is strikingly similar to its counterpart, "Opening," and my transcription reflects this resemblance. When paired with "Opening," "Closing" is designed to serve as a framing device to contain the inner movements of *Glassworks.* Glass employs the entire ensemble in this final movement: flute, clarinet, French horn, viola, and cello, plus the piano (synthesizer) used in the first movement. Because most of the voices are primarily doubling each other, the transcription process was largely uncomplicated, but there were two challenging passages. In the opening measures, Glass introduces a countermelody played by the French horns (Fig. 3.20). Preserving this essential line on the organ proved to be a challenge, since the manuals were already occupied with the F minor hemiolas. The only option was to perform both the cello and French horn lines on the pedals simultaneously (Fig. 3.21). In its original octave the cello line proved to be crowded on the pedals, so I lowered it one octave to free up space between the cello the French horn parts (Fig. 3.21).

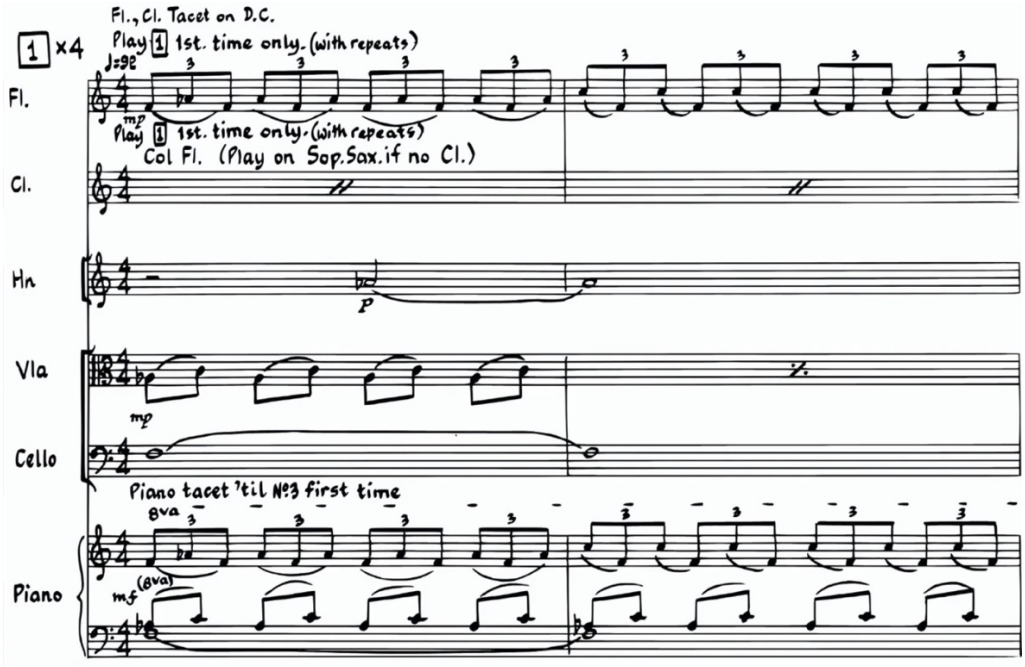

Fig. 3.20, opening measures of "Closing" from *Glassworks* by Philip Glass.
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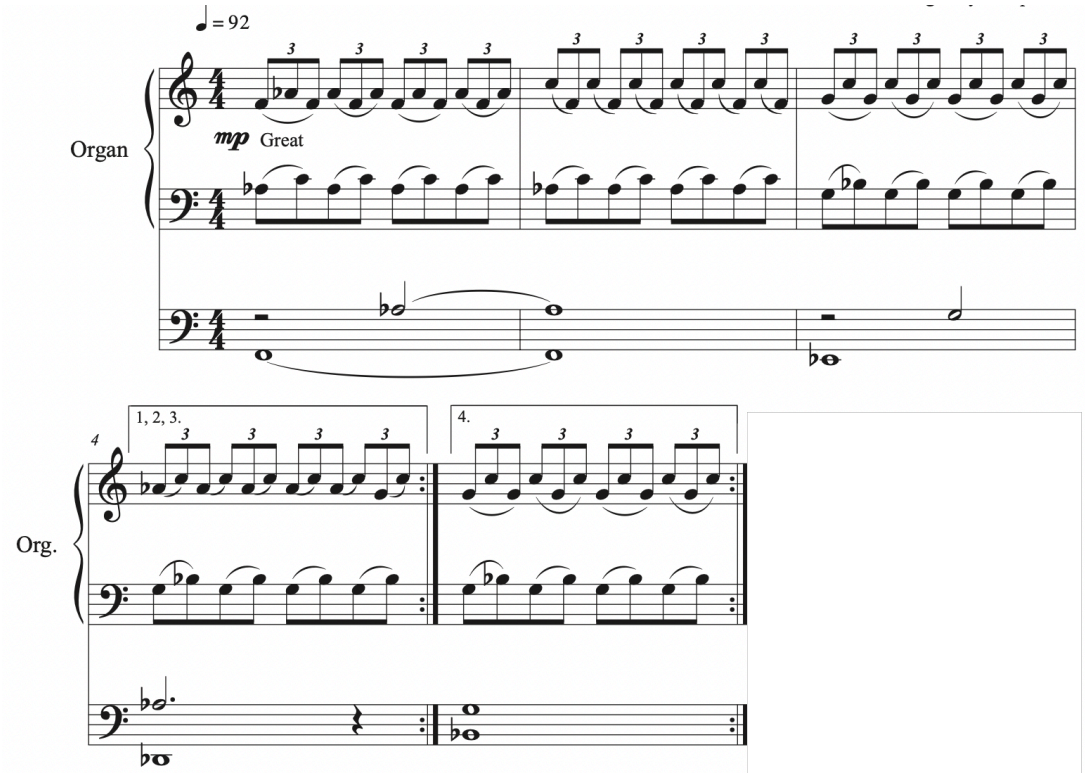

Fig. 3.21, measures 1-5 in "Closing," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass.
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Another countermelody proved to be problematic. At rehearsal 2, the hemiolas shift to the strings while the bass clarinet and French horns perform a duet-like countermelody not found in "Opening" (see Fig. 3.22). In order to maintain consistency in the texture, the logical choice was to ensure the manuals perform the hemiola sequences, leaving the Pedal division as the only option for the countermelody. Since the bass clarinet shifted from presenting melodic flourishes to providing elongated bass notes, I allocated this voice to the left foot, and the French horn was allocated to the right foot (Fig. 3.23).

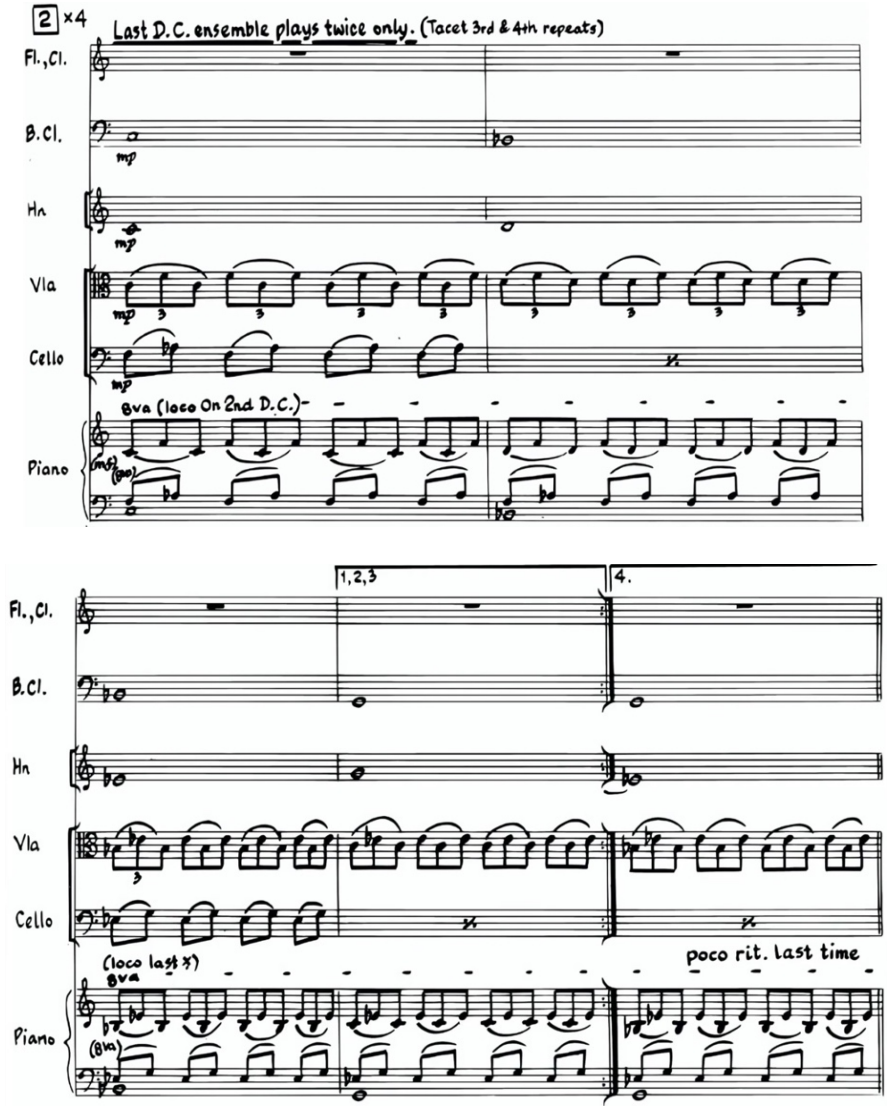


Fig. 3.22, rehearsal 2 in "Closing" from *Glassworks* by Philip Glass.

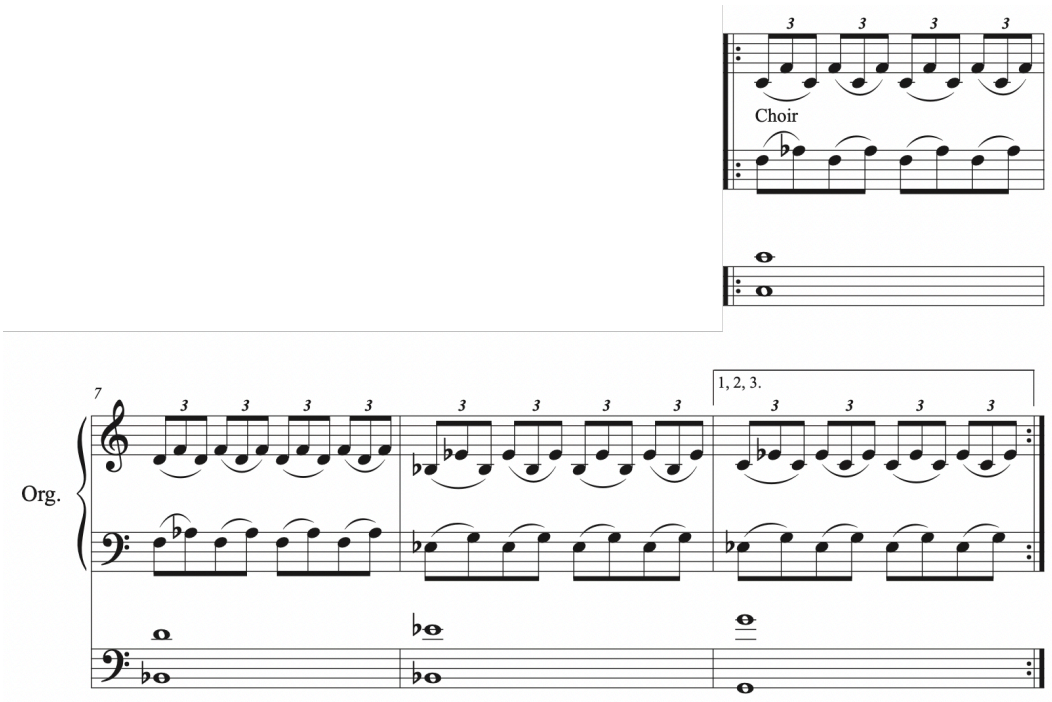


Fig. 3.23, measures 6-9 in "Closing," transcribed for solo organ by Philip Hoch from *Glassworks* by Philip Glass. © 1981 Dunvagen Music Publishers Inc. Used by Permission.

Performing multiple voices on the Pedal division is commonly seen in organ literature, especially in French works from the Romantic period. A notable example can be found toward the end of the third movement of the *Organ Sonata no. 1 in D Minor, Op. 42* (1874) by Alexandre Guilmant.

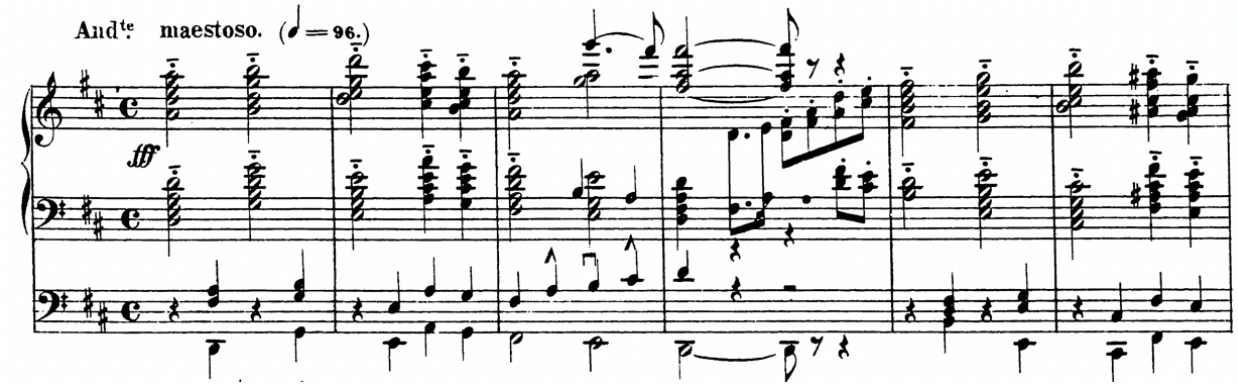


Fig. 3.24, Alexandre Guilmant, "Final" from *Sonata in D Minor,* page 30, Score, (New York: G. Schirmer, 1876).

In Fig. 3.24, especially in the third measure, we see the composer's use of multiple voices in the pedal division, including the occasional triad. Though rather difficult to execute,

Guilmant's pedalboard treatment brings forth an intricate use of counterpoint. My transcribed version of "Closing" accomplishes something similar, using the Pedal division to highlight Glass's counterpoint while the manuals provide the hemiola flourishes.

* * *

Transcribing *Glassworks* seemed impossible at first, especially in fast-paced movements like "Floe" and "Rubric." However, by observing others' transcription process, consulting Ellingford's *Art of Transcribing for the Organ*, analyzing the score's polymetric effects, and studying the listener's perception of the original instrumentation, I found it possible to craft an effective version of *Glassworks* for the organ. In some passages, the organ rendition highlights characteristics not easily distinguished in the original medium, such as the bright and charming qualities of mixtures and harmonic-corroborating stops that, when combined, produce a wide array of high frequencies. Those additional benefits are largely a matter of registration, which I shall consider in Chapter 4.

CHAPTER 4: PROGRAMMING CONSIDERATIONS AND THE TRANSCRIPTION

The attractiveness of Philip Glass's *Glassworks* both as an original composition and as a subject for organ transcription has been addressed in the foregoing chapters. Before presenting the transcription, this chapter addresses issues of performance. Registration and approaches to touch and technique on different consoles are considered first, followed by my rationale for programming this compelling and popular work in my final doctoral recital.

Selection of Instrument

The *Glassworks* transcription can be performed on virtually any organ, both electronic and pipe-based consoles. Since no two organs are constructed the same, however, the performer would do well to remember Soo Jin Kim's caution regarding touch and technique: "[t]o varying degrees, … today's organist must be aware that different organs and different music call for different styles of performance."[83] *Glassworks*' fast-paced movements, like "Floe" and "Rubric," are best suited to consoles with a light touch. The highly sensitive manuals of electronic organ consoles make it possible to play faster tempos with greater accuracy, making instruments that offer a light keyboard touch an excellent choice.[84]

Instruments whose manuals require an extensive amount of key force may be less well-suited to the technical needs of *Glassworks*. For example, on some tracker organs that offer a significant number of stops and couplers, considerable "manual strength is needed to operate the system and overcome wind pressure against the valve."[85] Performing the fast, repetitive, and lengthy melodic sequences of *Glassworks* on an organ whose manuals demands a vast amount of

[83] Soo Jin Kim, "Touch and Articulation on the Organ: Historical and Pedagogical Perspectives," DMA diss., University of Georgia, 2002, 47.
[84] Giulio Moro, et. al., "Dynamic Temporal Behaviour of the Keyboard Action on the Hammond Organ and its Perceptual Significance," *Journal of the Acoustical Society of America,* Vol. 142, no. 5 (2017): 2808.
[85] Britannica, T. Editors of Encyclopedia, "Tracker Action," *Encyclopedia Britannica,* (July, 1998).

force may lead to playing-related injuries such as tendinitis. The organist must therefore adapt their playing to the console's touch on the manuals, using minimal force to maintain optimal physical health. These instruments should be carefully vetted before committing to the performance of *Glassworks*.

Registration

The creative challenge of establishing registrations is that that no two organs are built alike. While one may have many manuals and stops on the console—increasing the potential for creativity—another may have only a handful of fundamental stops across two manuals. To accommodate these differences, my registrations use generalized nomenclature for stop classes to guide organists in selecting appropriate sounds on their instruments. This flexible approach also allows organists to be creative in their own right. In this section, I explain the reasoning behind the registrations included in the transcription. Organists are encouraged to experiment on their instruments to achieve the best results.

For "Opening," a light and tranquil registration is preferred. My recommendation would be to register soft 8' flutes in the Great, Choir, and Swell divisions (if three manuals are available.) For the Pedal division, soft 16' and 8' flutes may be used to provide a round and supportive tonal foundation to the stop's ensemble. A bright Harmonic Flute 8' in the manuals will help recreate the crisp attack of the piano heard prominently in the original recording of "Opening."[86] George Ashdown Audsley describes of the voices associated with the Harmonic Flute 8' as "clearer, more penetrating, and to some extent more valuable in combinations and registration of an assertive character."[87] Other 8' flutes might include Flute 8', Gedackt 8', Rohrflute 8', for example. The registration will be used for the rest of the movement.

[86] Philip Glass Ensemble, Glassworks, CBS Masterworks MK 37265 1982, compact disc.
[87] George Ashdown Audsley, *Organ-Stops and Their Artistic Registration,* 136.

Organists can guide themselves in registering the second movement, "Floe," by simply observing the dynamic markings. For the opening statement I recommend using a controlled 4' reed stop in the Pedal division to resemble the French horns' timbral qualities. When the manuals enter at measure 13, prominent 8' and 4' foundations should be used—namely principals, flutes, and soft mixtures—to replicate the bright registers heard across the ensemble in the recording. I encourage organists to further experiment with registration by performing each melodic entrance on other manuals if available. For example, the entrance at measure 13 may be performed on the Choir division while the other voices be performed on the Swell or Solo, if available. Where the lively texture comes together at measure 17 (Chapter 3, Fig. 3.4), I added a *forte* dynamic marking to ensure the organist plays this entrance with a prominent and full registration. I recommend organists perform with both hands on the Great because this manual is most prominent. When the pedals reenter at measure 21, I advise the use of a stronger pedal registration (e.g., several 16', 8', and 4' flutes, diapasons, and mixtures) to counteract the potentially dominating stop combinations in the manuals. Reeds of 8' and 4' should also be used in conjunction with the foundational stops to enhance the French horn's texture. Sixteen-foot reeds may need to be avoided as these stops can overpower the entire texture.

To adequately portray the gentle and meditative string voices of "Islands" on the organ, the left hand should register 8' stringed stops and 8' flutes on the Swell division. Combining Viola di Gamba 8', Voix Celeste 8', and Flute 8' (or Gedackt 8'), for example, can produce a warm and colorful timbre similar to the original recording. Saxophone stops are rare on organ consoles. Organ manufacturers have experimented in devising such a stop, with mixed results:

> All attempts hitherto made in the direction of lingual stops have fallen short of being satisfactory, for it has been found difficult, by the employment of either striking—or free-reeds to produce the rich compound tones of the brass Saxophones. While the Saxophone

> strictly belongs to the Clarinet family, and is fitted with the single reed of the Clarinet, its tone is decidedly *sui generis* [unique].[88]

As an alternative, I propose using a soft 8' reed on the Choir division accompanied by a foundational 8' flute and tremulant for the solo voices. Reed stops of this caliber should be similar in quality to a Clarinet 8', Oboe 8', or Corno di Bassetto 8'. Though these reeds may speak well by themselves, they typically fail to project when performed with the accompanying Swell stops. To accommodate this lack of tonal body, I strongly encourage an 8' flute stop be registered to provide a much rounder and thicker timbre to the solo voice. Adding a Tremulant will produce a singing quality similar to Glass's solo saxophones.

At the texture change in measure 25, I assign the right hand to switch to the Great division to represent the conversation between the upper wind voices (Chapter 3, Fig. 3.9). The Great should use mellow principals (Diapason 8', Gemshorn 8', or Gamba 8') for this polyphonic passage. To represent the "growliness" of the bass clarinet, keyboard, and cello voices, a 16' flute chorus with 8' reeds (Posaune 8') should be registered in the pedals. At the *forte* in measure 39, organists should change registrations to a fuller and rounder ensemble (Chapter 3, Fig. 3.12). I recommend strong 16', 8', and 4' foundations on all divisions, with the outer manuals coupled to the Great. The Pedal could be registered with a Principal 16', Subbass 16', Principal 8', Gedackt 8', and a Trompette 8'. A much more palatable option for the 8' reed would be to couple a Bass Clarinet 8' from the Solo division, if available.

Registration for "Rubric" should include bright stops that can replicate the timbre of the upper voices in the synthesizer and winds. I suggest registering 8', 4', and 2' foundations (Diapasons, Flutes, Principals) along with mixtures and harmonic-corroborating stops (Flute

[88] George Ashdown Audsley, *Organ-Stops and Their Artistic Registration,* 233.

Twelfth 2 2/3, Nazard 2 2/3, Tierce 1 1/3), much like *organum plenum*.[89] To mimic the French horn's timbral profile in the ensemble, I suggest using Pedal stops that will slightly project over the manuals. General registration for the pedals may include 8', 4', and 2' foundational stops (Diapason, Principal, Gedackt, Choralbass) and 4' reeds, if available (Clarion 4', Trompette 4', for example). Sixteen-foot foundational stops such as Leiblich Gedackt 16', Subbass 16', or Flute 16' may be used as long as they do not overwhelm the light tone of the manuals.

In "Facades," because the left hand and pedal replicate the violin and cello voices respectively, I suggest registering stringed stops across these divisions. The Swell division can perform the left hand's lines using warm and mellow stringed voices, such as the Viola di Gamba 8' and Viole Céleste 8'. The latter, according to George Ashdown Audsley:

> [t]he name given to a stop of the Viol class, of 8 ft. pitch, the pipes of which are tuned sharp so as to produce a bright undulatory effect in combination with another unison stop (preferably of string tone) correctly tuned. As a dual stop, it is properly formed of two softly-voiced Viols, of 8 ft. pitch, one of which is tuned a few beats sharp, sufficient to create an agreeable *tremolo,* but not sufficient to produce an objectionable out-of-tune effect.[90]

Audsley describes the effect similar in character to a string ensemble performing in unison and, in Glass's piece, would be a perfect stop combination for replicating the accompanying figures of "Facades" on the organ. The Pedal division can use couplers to combine the Swell voices and perform this division on the pedals. To provide a supportive foundation, the Pedal division should also be registered with 16' flutes (Subbass 16', Leiblich Gedackt 16', for example).

The solo voices present a multitude of sound possibilities. As in "Floe," the lack of a saxophone stop makes an alternative necessary in most cases. Here again I recommend an 8' reed in combination with a flute foundation, such as a Corno di Bassetto 8' with a Flute 8' and

[89] *Organum Plenum* is a conventional registration term in which organists register every stop on the console except reeds. The result typically yields a profound soundscape of bright registers.
[90] George Ashdown Audsley, *Organ-Stops and Their Artistic Registration,* 275.

Tremulant. Another possibility would be to register a Cornet with supporting 4' and 8' flute-based stops. Both combinations create a bright and shimmering solo voice that blends well with the accompaniment. I strongly recommend that whatever is registered in the right hand must be able to replicate the two solo voices coherently to keep the counterpoint clear.[91]

The original orchestration of "Closing" uses the full ensemble to create a collective sound. I suggest an ensemble of 8' and 4' flutes and principals. Stops in this category could include Flute 8', Principal 8', Gamba 8', Flute 4' on the Great, with similar registrations on the Swell and Choir. An ensemble of 8' stringed stops would be another possibility. Couplers between the Choir and Swell voices may also be used to add more depth to the sound in the Great division. For the Pedal, organists may use 16', 8', and 4' foundational stops, but these must be selected with utmost caution. If too many prominent Pedal stops are registered, the harmonics, particularly the low-pitched overtone profiles, may conflict with the gentle character emoted by the hemiolas in the manuals. I suggest using a Lieblich Gedackt 16', Subbass 16', Gedackt 8', Subbass 8', and Choralbass 4' in the Pedal division. The use of the 4' Choralbass will provide a gentle and supportive upper register that will replicate the characteristics of Glass's countermelody well. For this and all other movements, I urge organists to experiment with registrations on their instruments in an artistic manner, using their ears to discern which stops work well with each other.

[91] Some solo stops on the organ are instinctively designed to be performed as one solo voice. One such stop is the Sesquialtera – a strong and dramatic-sounding stop that is primarily used as a solo voice. If played with multiple voices, its powerful characteristic may distort the overall texture.

Premiering The *Glassworks* Transcription

Glassworks can flexibly be programmed with many organ works—both solo pieces and other transcriptions. However, the work fits very well in an all-transcription based recital. My final doctoral organ recital, "The Organ and Transcription," premiered the *Glassworks* transcription alongside J. S. Bach's organ transcription of Antonio Vivaldi's *Violin Concerto in D Minor (BWV 596)* and Calvin Hampton's transcription of "III" from César Franck's *Symphony in D Minor.*[92] This program presented each transcription in chronological order to demonstrate transcription practices from various musical periods. Like music itself, concert programming is an art form that often requires careful thought and intent. As Mark Gotham states, the combination of pieces "inevitably has an effect on how each [work] is received and on the pacing of the event as a whole."[93] With Gotham's assertion in mind, I selected Bach's transcription because the work reinvigorates the Italian *Concerto Grosso* style across different manuals, while Hampton's organ rendition of Franck's *Symphony* employs characteristics of French romanticism. Finishing with *Glassworks* highlights minimalism's flexibility to be programmed with other musical styles, adding rich and indulging "spice" to the program's architecture.

"The Organ and Transcription" was fabricated to show how transcriptions can recreate nuances of emotions found in the original works. Bach's transcription of Vivaldi's *Concerto* recreates the strings' vivacious and energetic rhythm profiles on the organ through crisp articulation in conjunction with bright-sounding registrations. Hampton's arrangement of Franck's *Symphony* recreates the composer's employment of various moods—from the

[92] "The Organ and Transcription" was performed on May 23, 2021 on the Great Organs at the First Congregational Church of Los Angeles. This recital was given in partial fulfilment for the Doctor of Musical Arts Degree at the UCLA Herb Alpert School of Music.
[93] Mark Gotham, "Coherence in Concert Programming: A View from the UK," *International Review of the Aesthetics and Sociology of Music* (2014): 293.

triumphant opening figures to the languishing emotions in the contrasting minor sections—by utilizing registrations across multiple divisions to their fullest extent. *Glassworks* threads between these stylistic differences by drawing upon past styles in an eclectic way. On one hand, the transcription contains similar elements to Vivaldi's (Bach's) energetic motion in movements like "Floe" and "Rubric." Franck's (Hampton's) meditatively intricate moments can be found in movements like "Island" and "Facades." The outer movements ("Opening" and "Closing") blend energy and melancholy into one cohesive form of expression. Of course, the character of "Closing" as involving a reprise of "Opening" with a new instrumental realization implies how transcription is already present in Glass's original composition. The extension into organ transcription engages with the variety of forms, styles, and genres to promote audience interest in yet another way. The transparency of *Glassworks* lends itself to multiple sounding realizations.

The recital was livestreamed on YouTube due to the COVID-19 pandemic. The YouTube video has received many positive responses from listeners around the world such as "Bravo!", "Brilliant concert!" and "Magnificent thanks a lot from Mexico City."[94] In addition, Philip Glass posted this recital on his Twitter page, which also generated positive comments: "wonderful!", "mesmerizing" and "that's ... amazing that one guy can play those polyrhythms! Great transcription of a fantastic piece."[95] Receiving such kind words from concertgoers has indeed been a humbling experience, and I am forever grateful that my transcription of *Glassworks* has enriched the lives of those appreciative of Philip Glass's music.

[94] First Congregational Church of Los Angeles, "The Organ & Transcription – Philip Hoch on the Great Organs of FCCLA – May 23, 2021," May 23, 2021, virtual doctoral recital, 1:27:15. https://www.youtube.com/watch?v=kxXVNqzBJUw.
[95] Philip Glass, Twitter Post, May 23, 2021, 3:36 PM, https://twitter.com/philipglass/status/1396595887871307780.

Conclusion

Igor Stravinsky called the organ a "monster that never breathes."[96] As the *Glassworks* transcription proves, that monster is an ideal instrument to recreate minimalism's highly repetitive musical patterns and expansive expression of time. The great number of sound combinations also contributes to the instrument's monstrous quality. Orpha Ochse, while describing the Wanamaker organ in Philadelphia, notes that console has "17,179,869,183 distinct tonal effects, a continuous performance that would last 32,600 years if a different one of these combinations were drawn every minute in those centuries of time."[97] In the case of minimalist transcriptions, the organ's design and a plentitude of sound options are features that are sure to recreate works with a high expressive caliber.

This study has demonstrated that minimalist pieces can be transcribed for the organ—revealing an underexplored genre for the field of organ transcriptions. Perhaps this study can function as a catalyst to encourage future transcribers to give attention to more minimalist works for the instrument. The transcription journey has yielded an important lesson for others to consider: as long as the transcriber executes the process with care and sensitivity, a high-quality product is likely to result. Extant transcriptions of works from various genres were analyzed to exhibit others' processes of rearrangement—a notable asset for the notation process. The importance of score comparison, ear training, and orchestration can thereby be advocated.

Several questions remain for thought: in what direction can organists continue to expand upon the tradition of transcribing works for the organ in the twenty-first century in a productive way? What other genres or styles of music remain undiscovered as a potential direction for organ

[96] Rudy Shackelford, "Dallapiccola and the Organ," *Tempo,* No. 111 (Dec., 1974): 20.
[97] Orpha Ochse, *The History of the Organ in the United States,* 356.

transcriptions? Can transcription be used as a means of showcasing the organ as a versatile instrument for reorchestration? What lies ahead for the future of organ transcriptions?

In closing, Thomas Joyce best describes the beauty associated with transcription studies: "Through transcription we will become more creative, our own musicianship will grow, we will foster enthusiasm for the instrument, we will become more skilled as educators, and we will contribute further to the means by which we are privileged to convey the divinity of music."[98] I sincerely hope that my transcription of *Glassworks* will inspire other organists to transcribe many more pieces for the organ, keeping this divine form of art alive for generations to come.

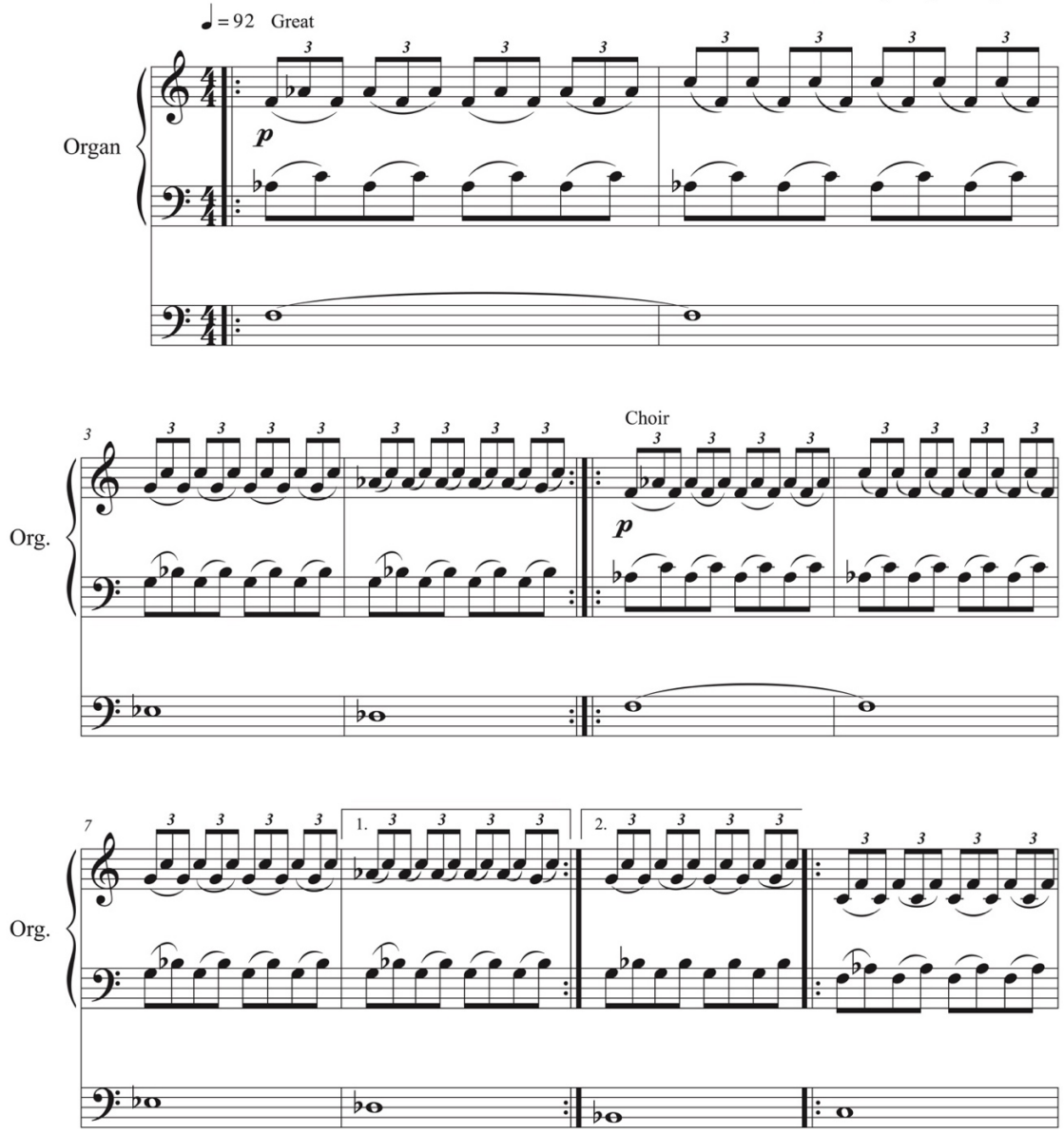
[98] Thomas Joyce, "An Original Transcription for the Organ: *Serenade for Strings, Op. 48* by Pyotr Ilyich Tchaikovsky, Including a Comprehensive History of Organ Transcription and Relevant Organ Design," DMA diss., University of Washington, 2009: 121-122.

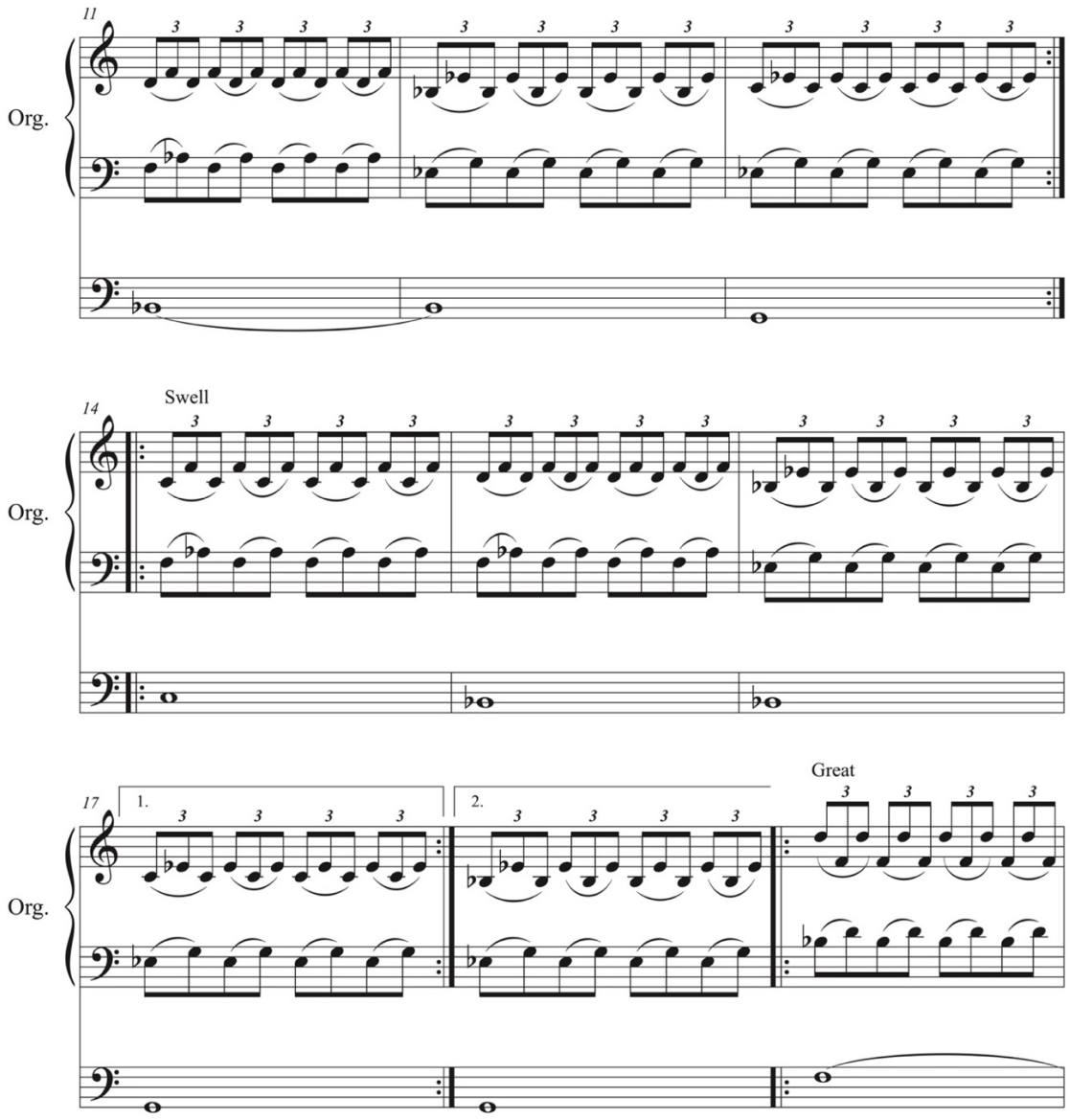
Glassworks

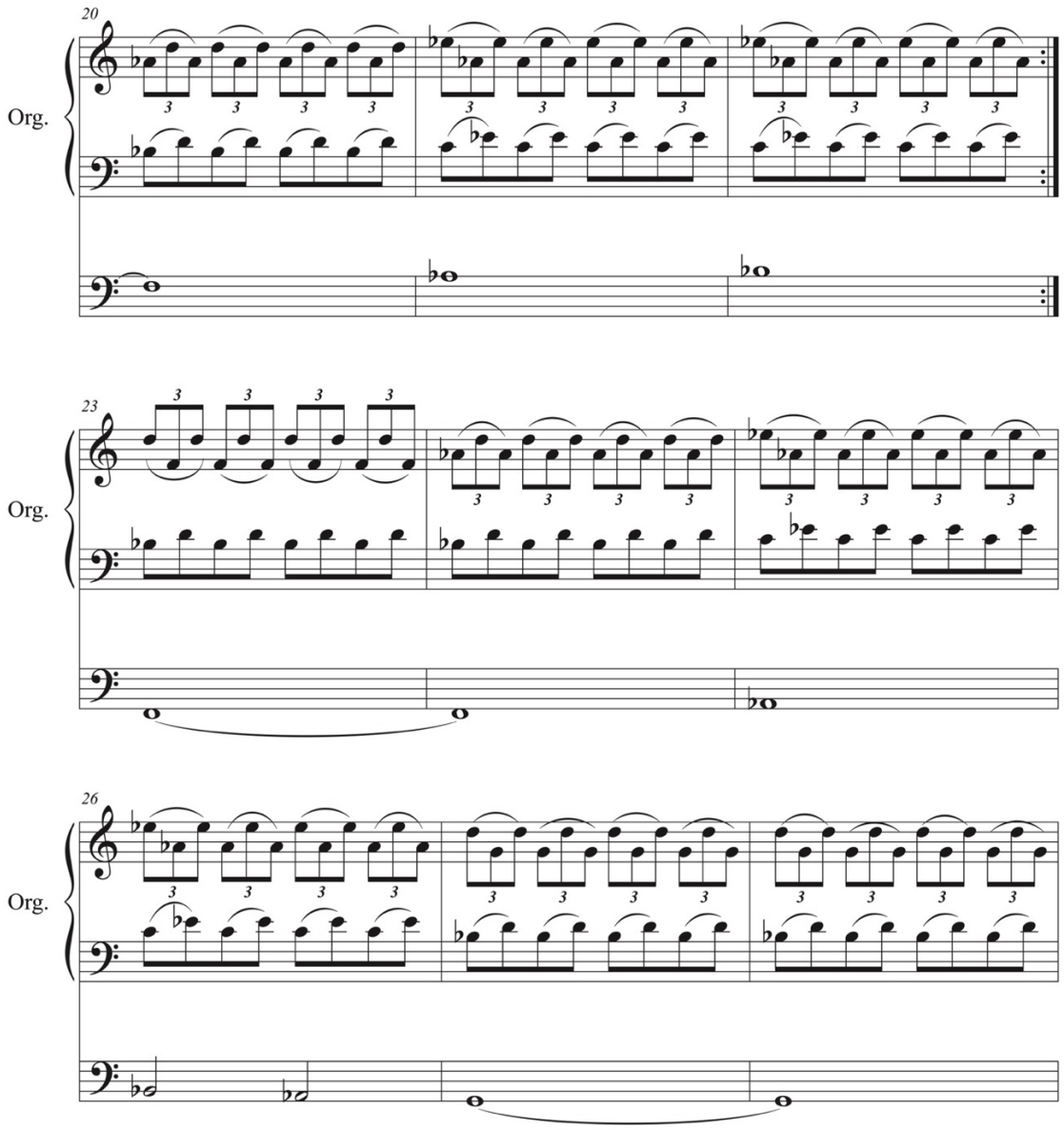
Transcribed for organ

1 - Opening

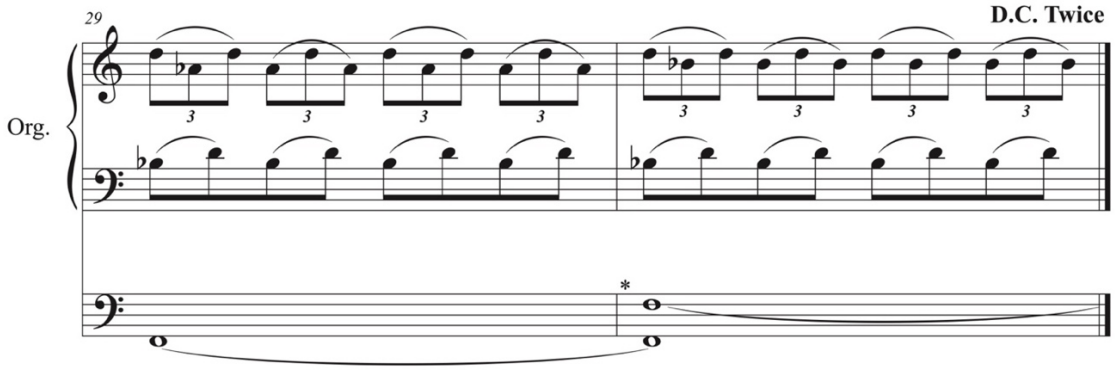
Music by Philip Glass
Transcribed for organ by Philip Hoch







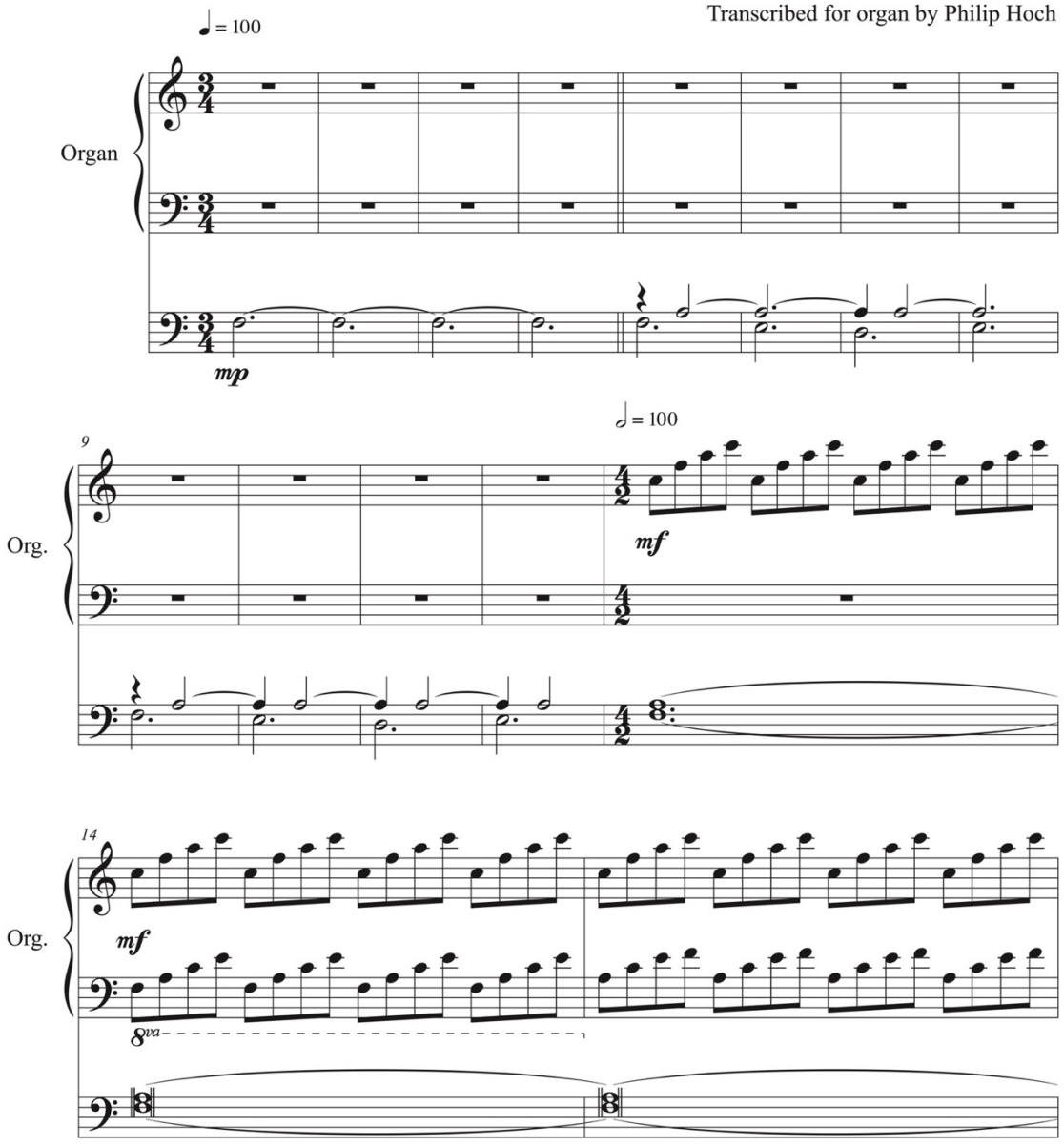
Glassworks
By Philip Glass



* Use split pedal (if so equipped) with a 4' reed in preparation for the opening of "Floe"

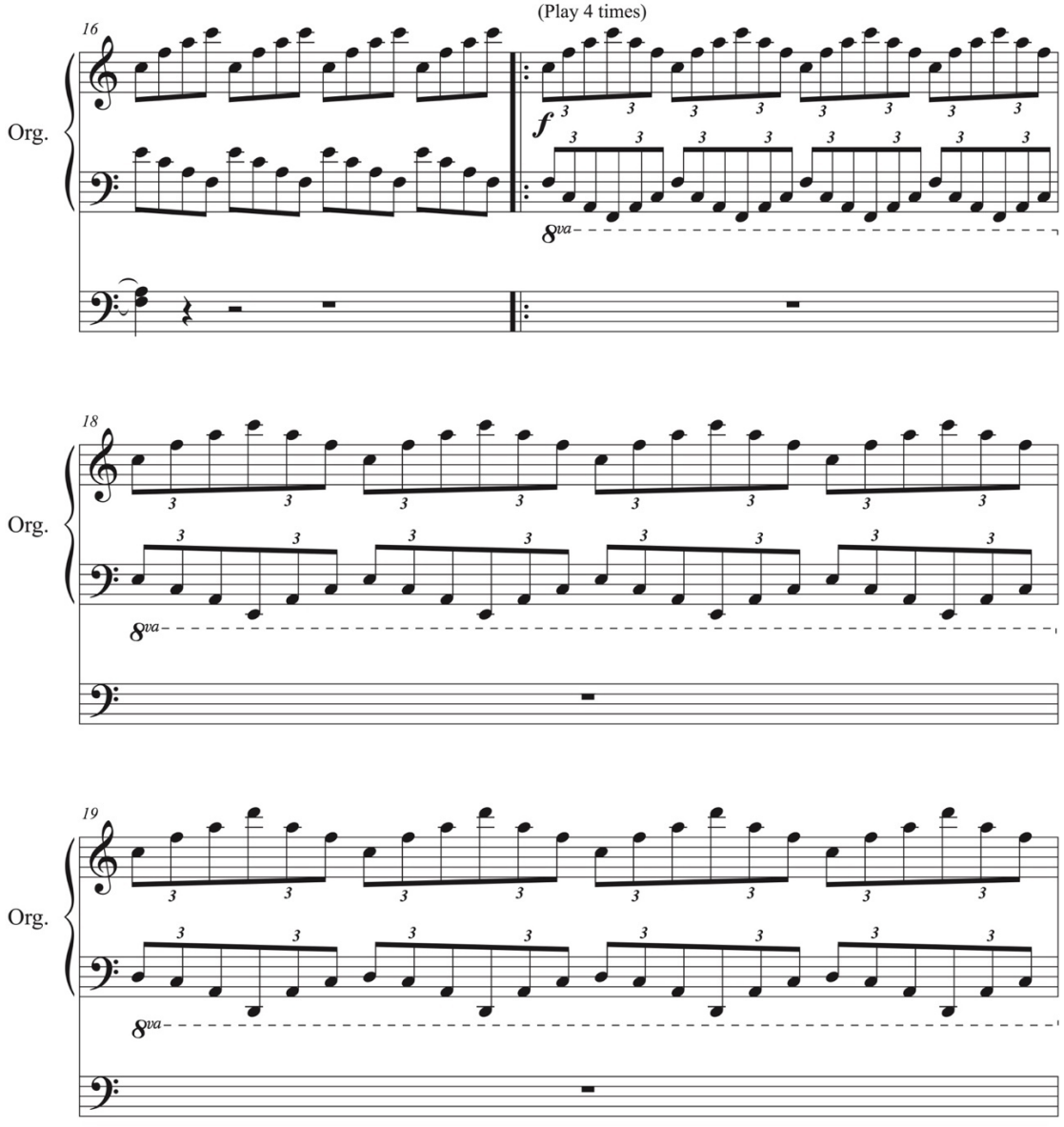
2 - Floe

Music by Philip Glass
Transcribed for organ by Philip Hoch

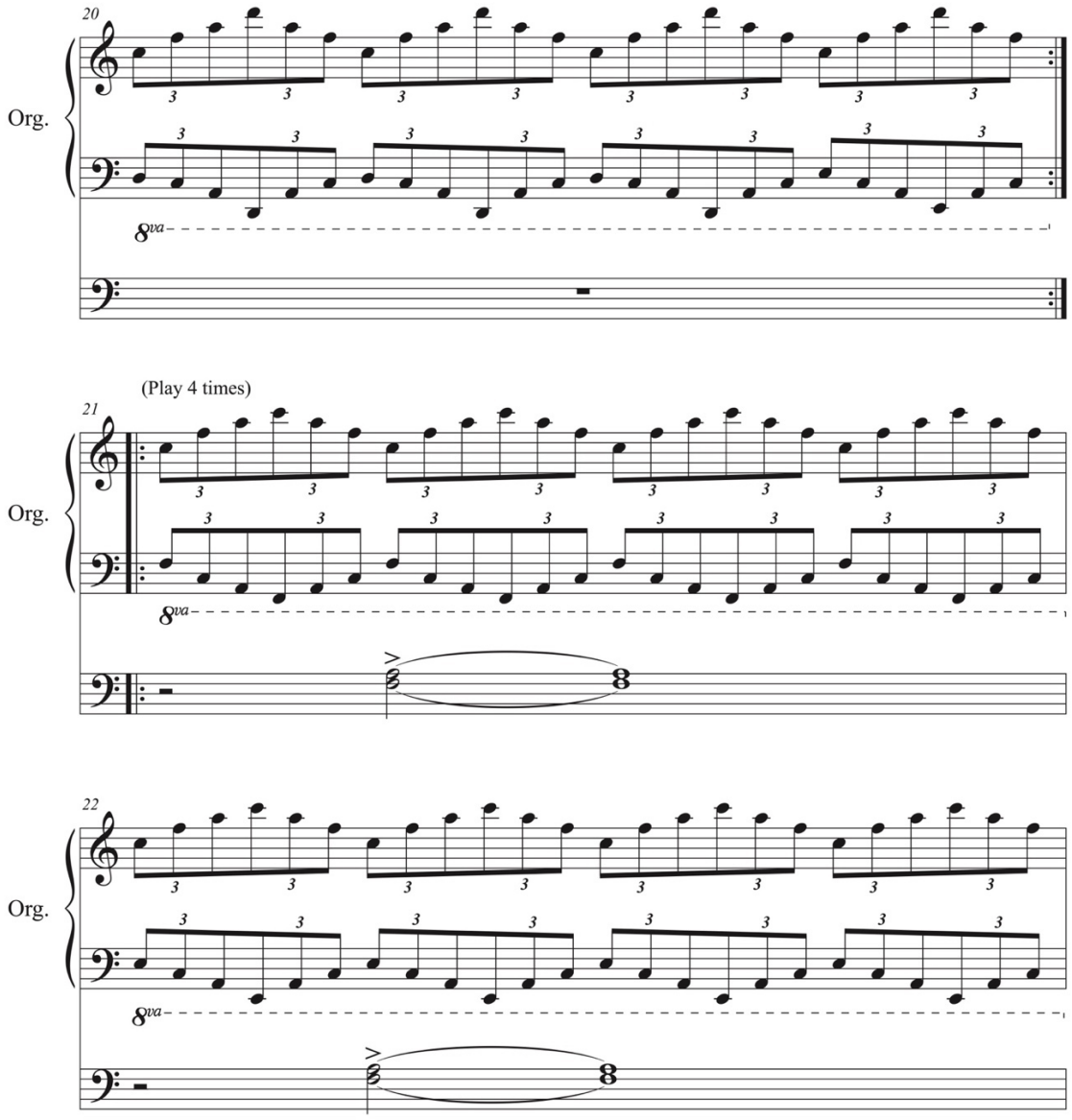


2 - Floe

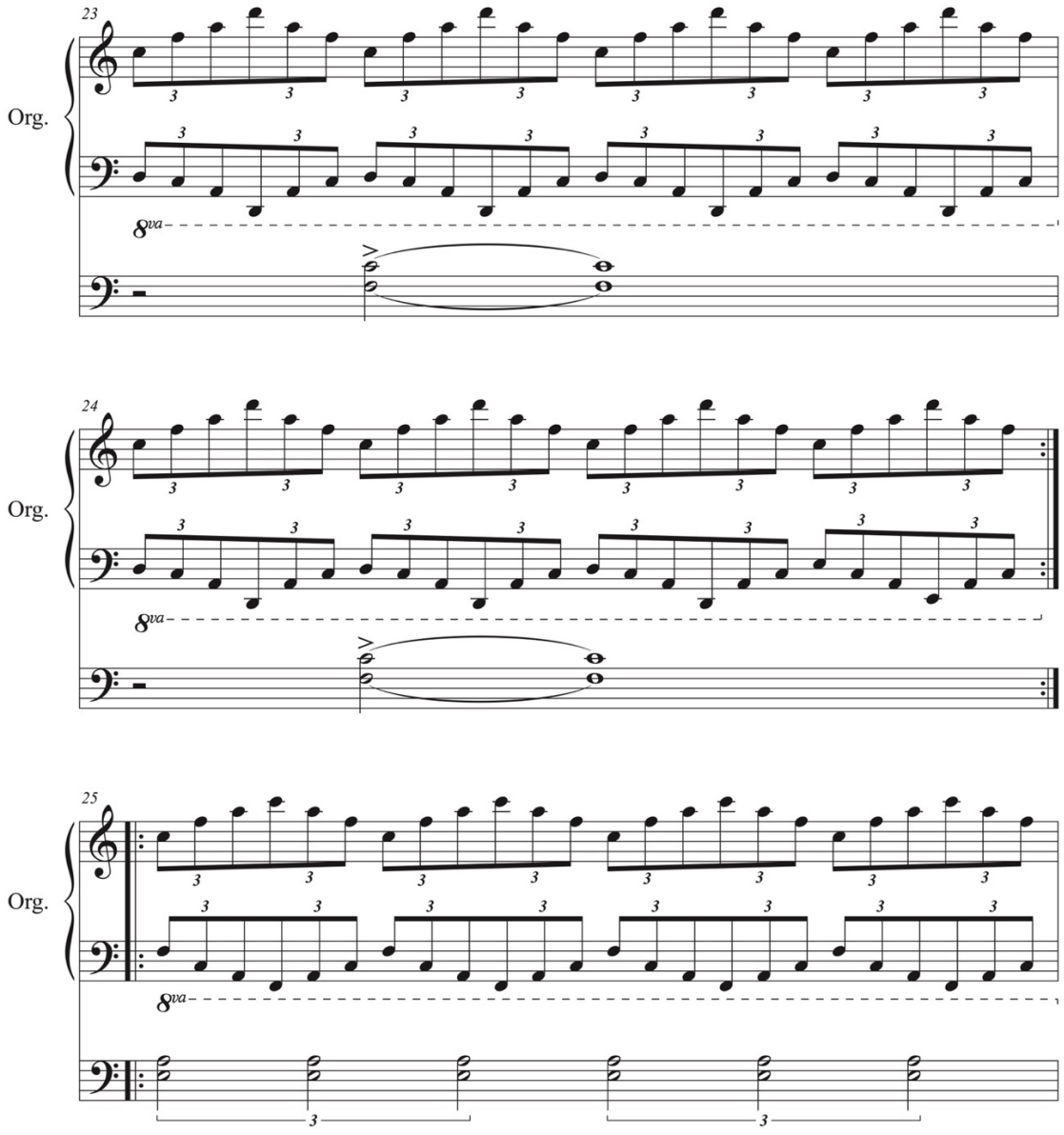
(Play 4 times)



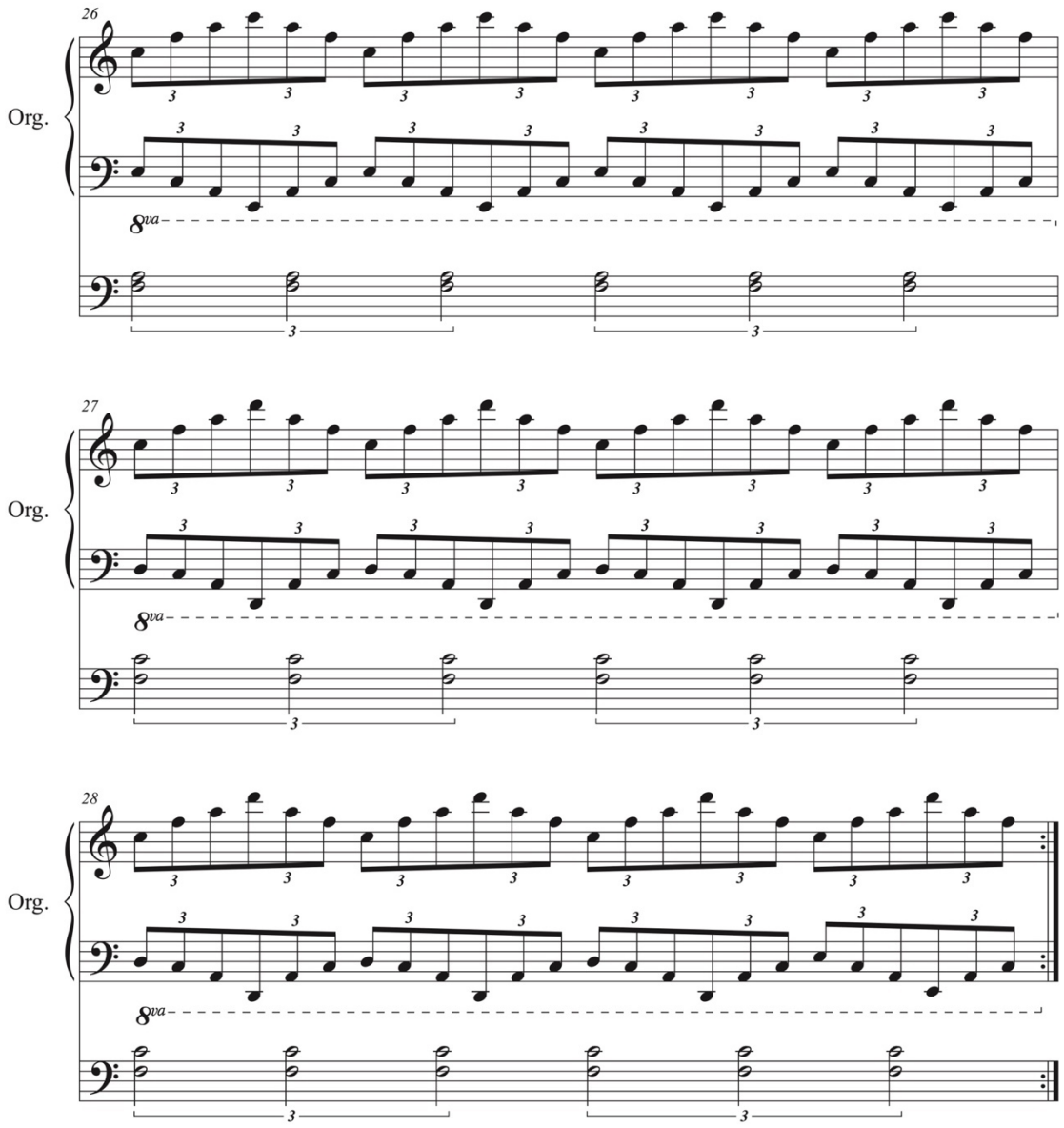
Glassworks
By Philip Glass



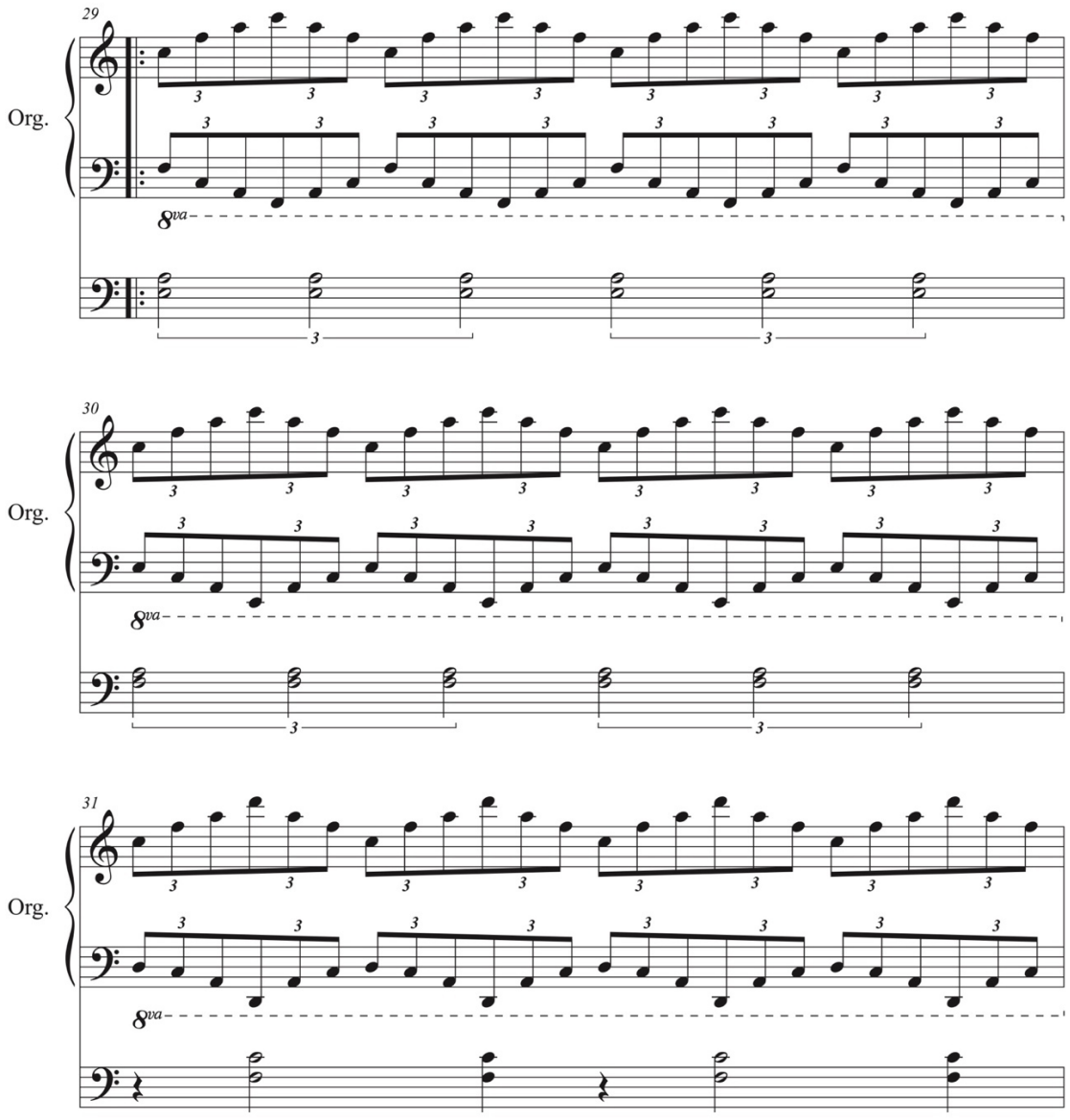
Glassworks
By Philip Glass



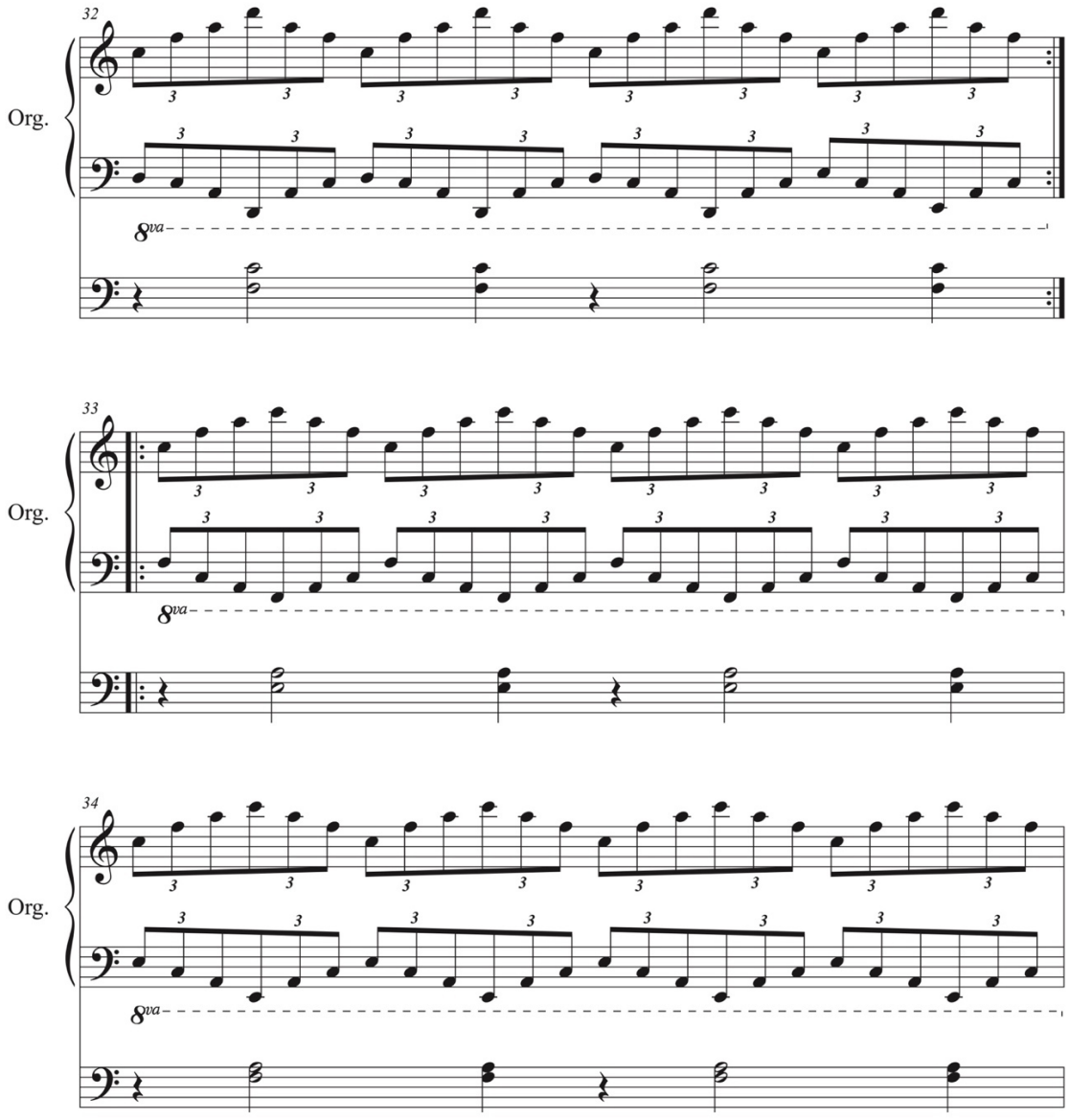
Glassworks
By Philip Glass



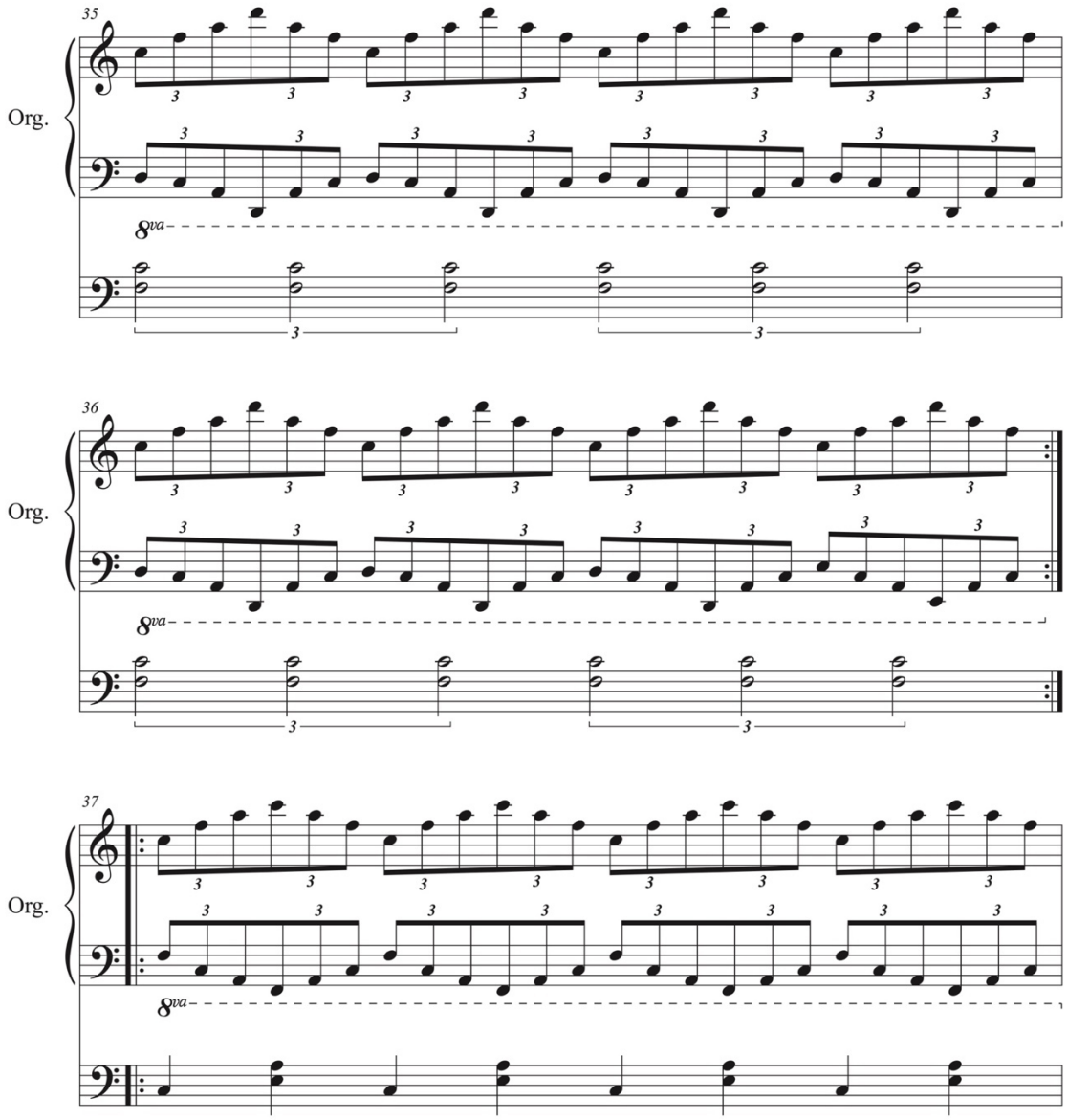
Glassworks
By Philip Glass



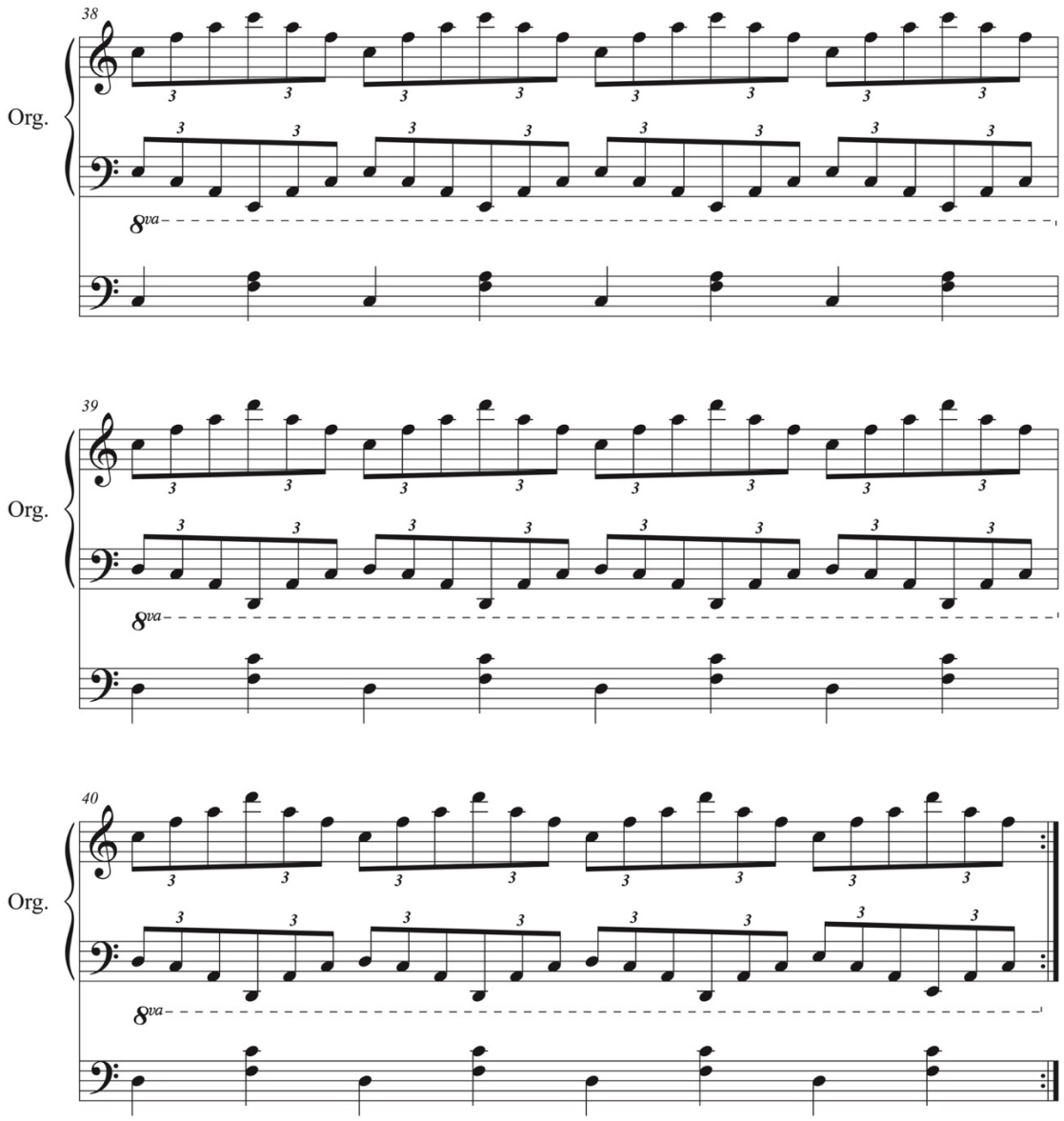
Glassworks
By Philip Glass



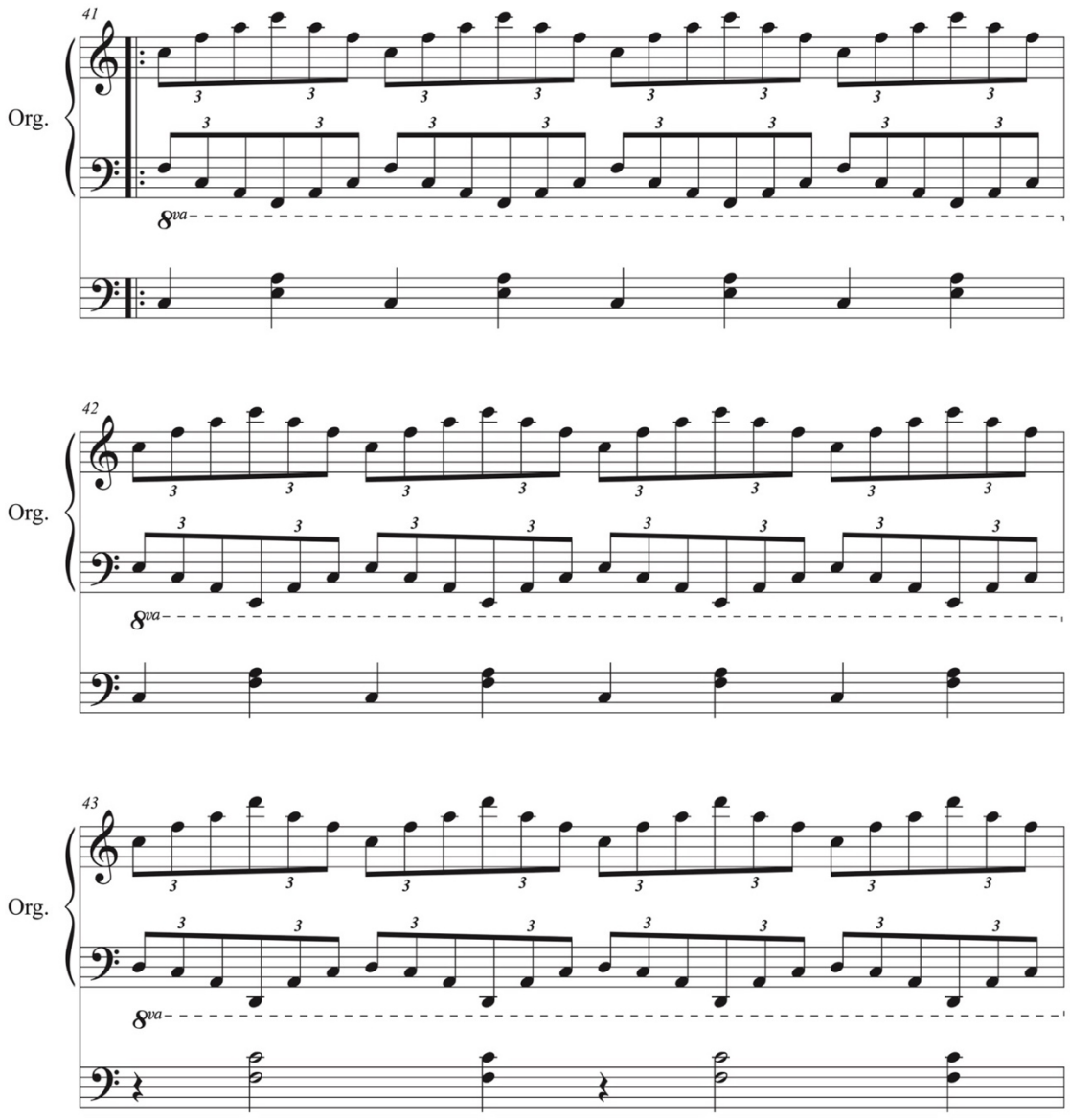
Glassworks
By Philip Glass



Glassworks
By Philip Glass



Glassworks
By Philip Glass



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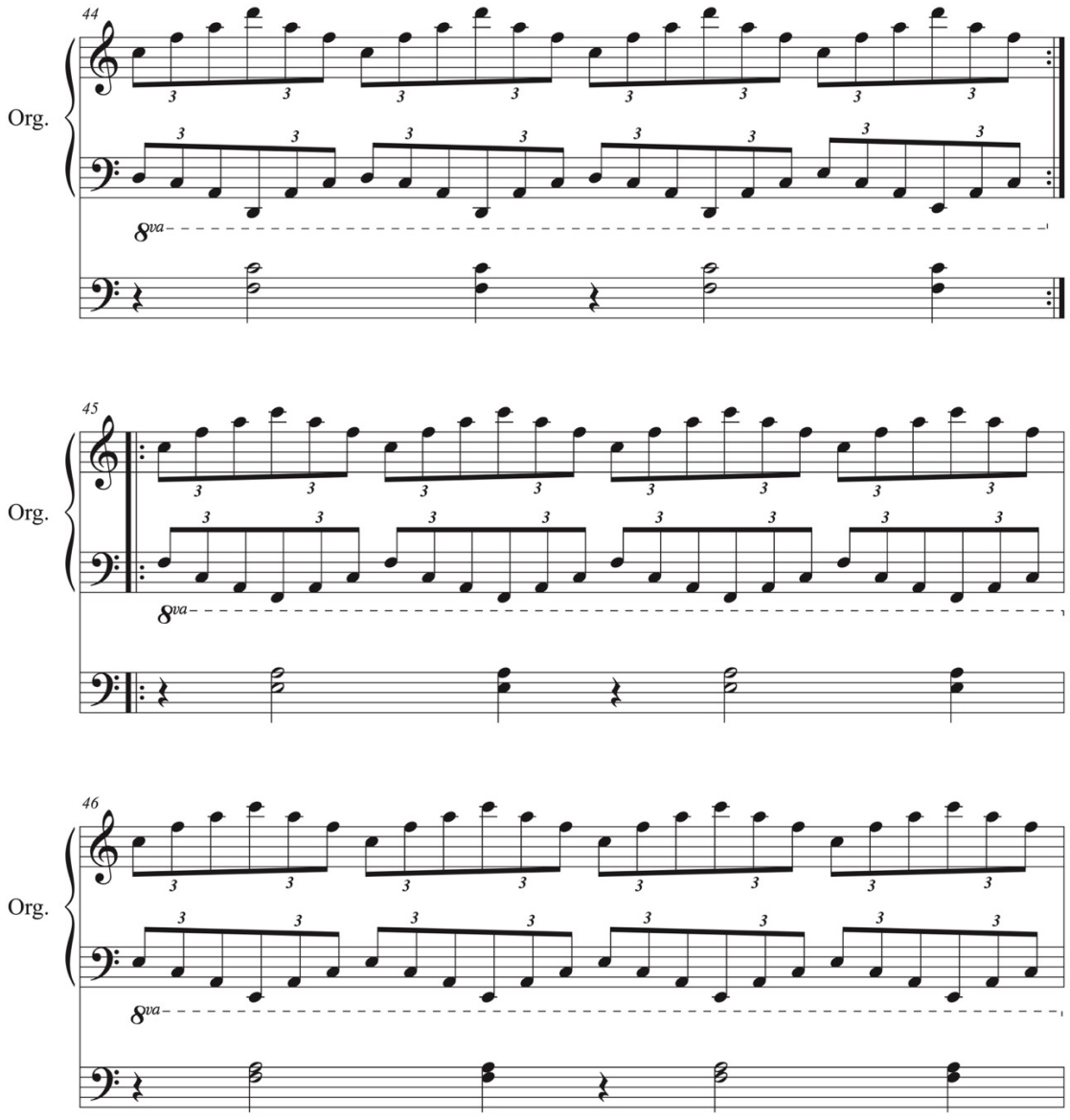
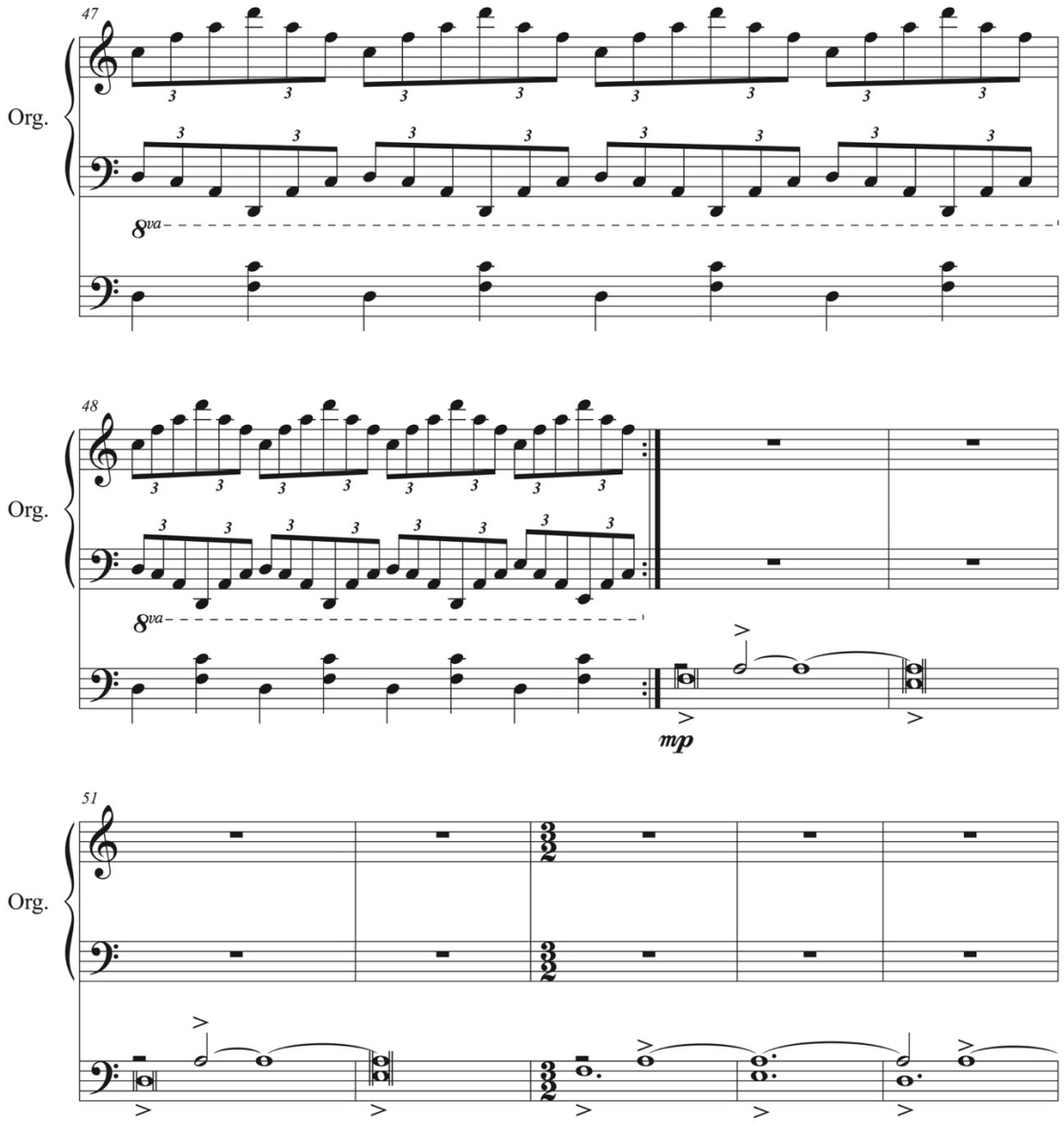
By Philip Glass



Glassworks
By Philip Glass



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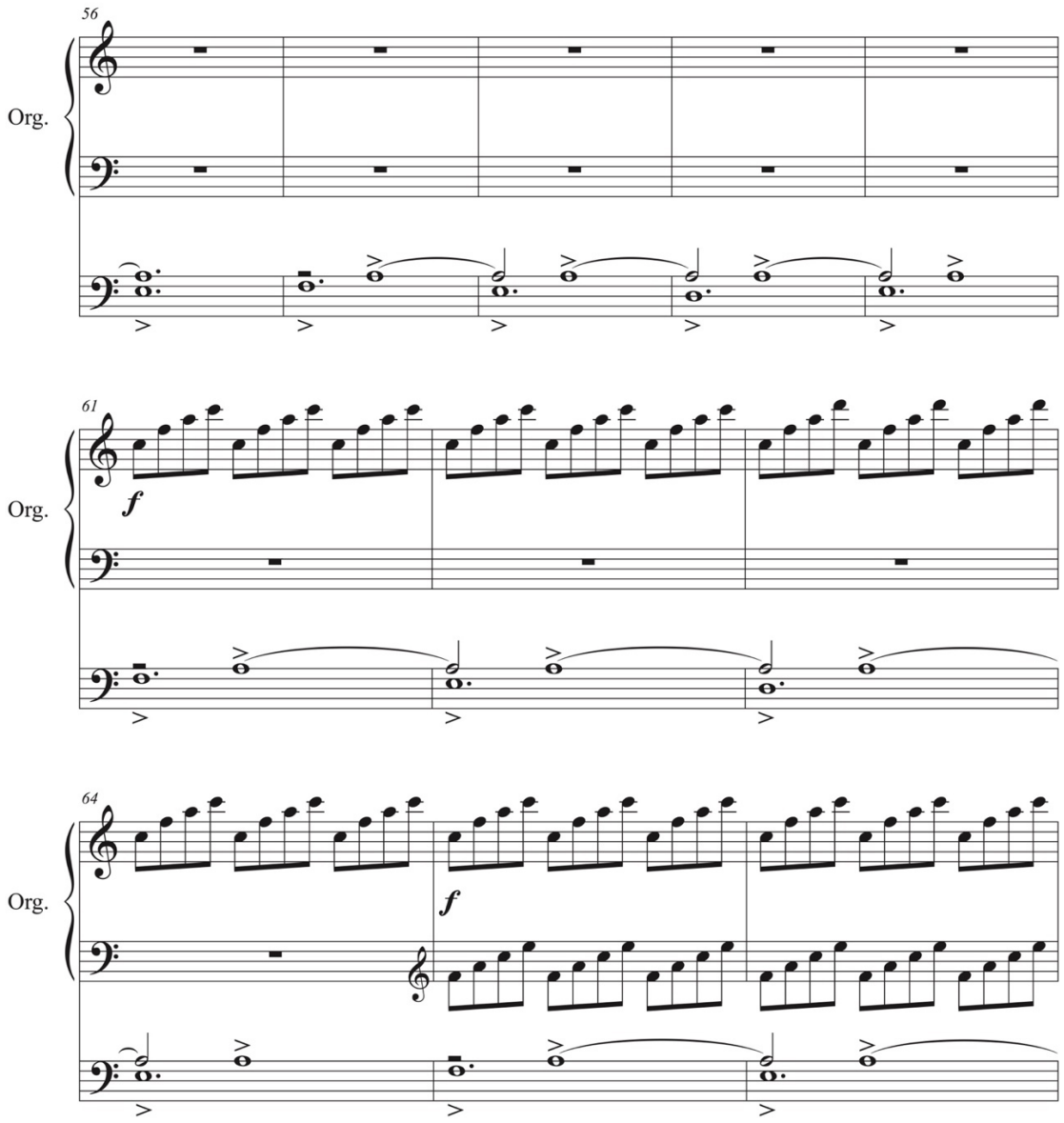
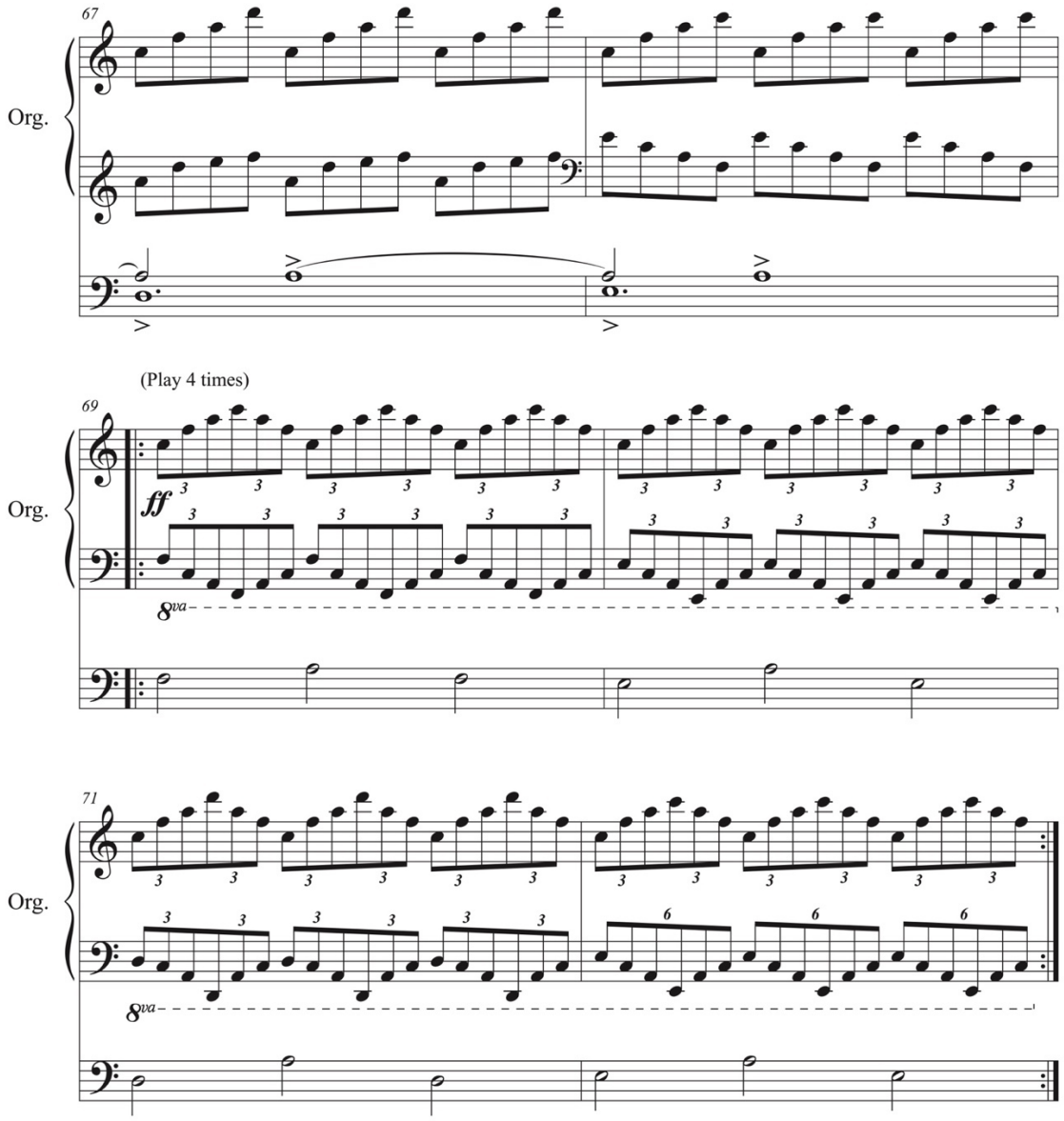
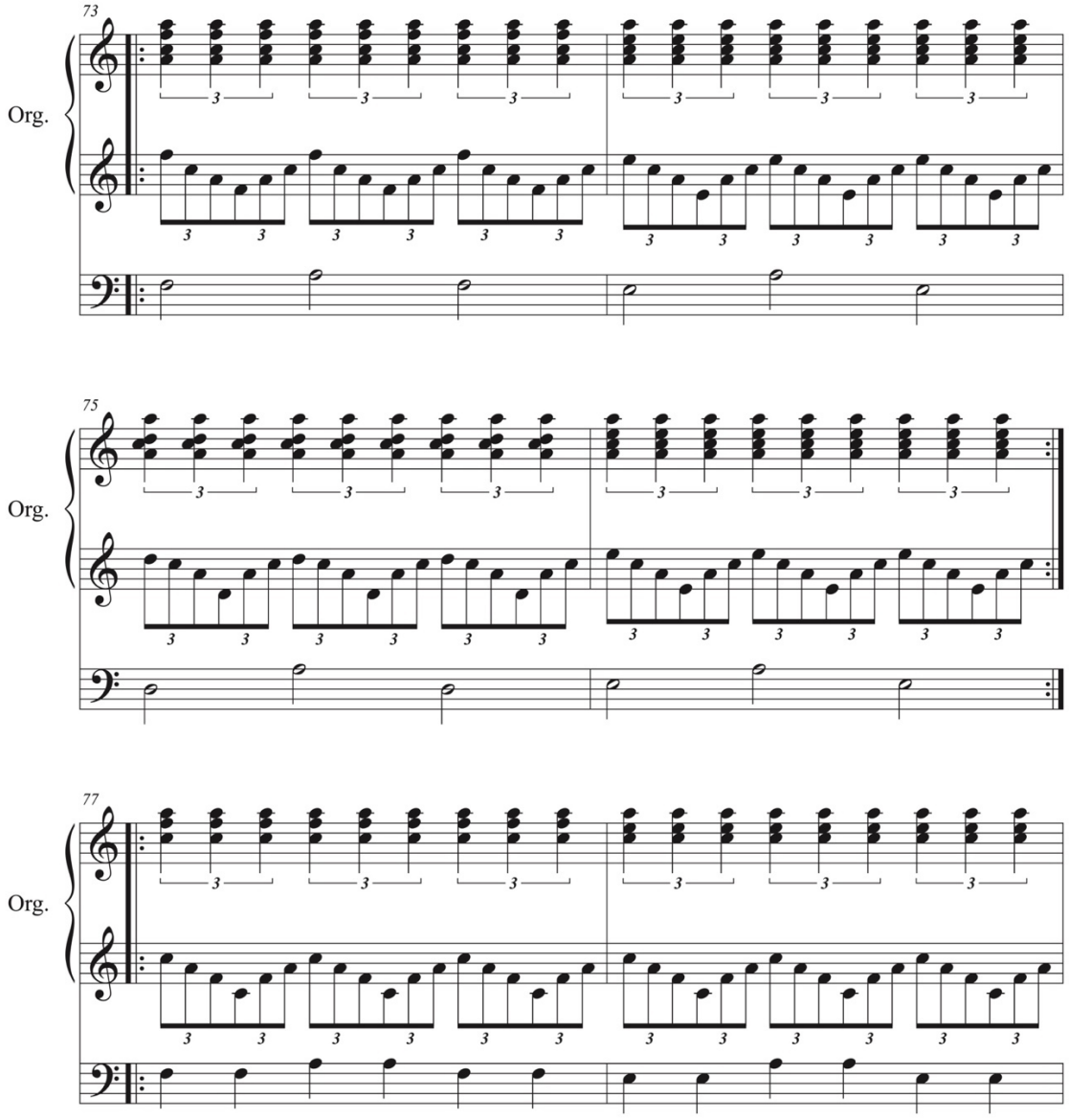


Glassworks
By Philip Glass



Glassworks
By Philip Glass



Glassworks
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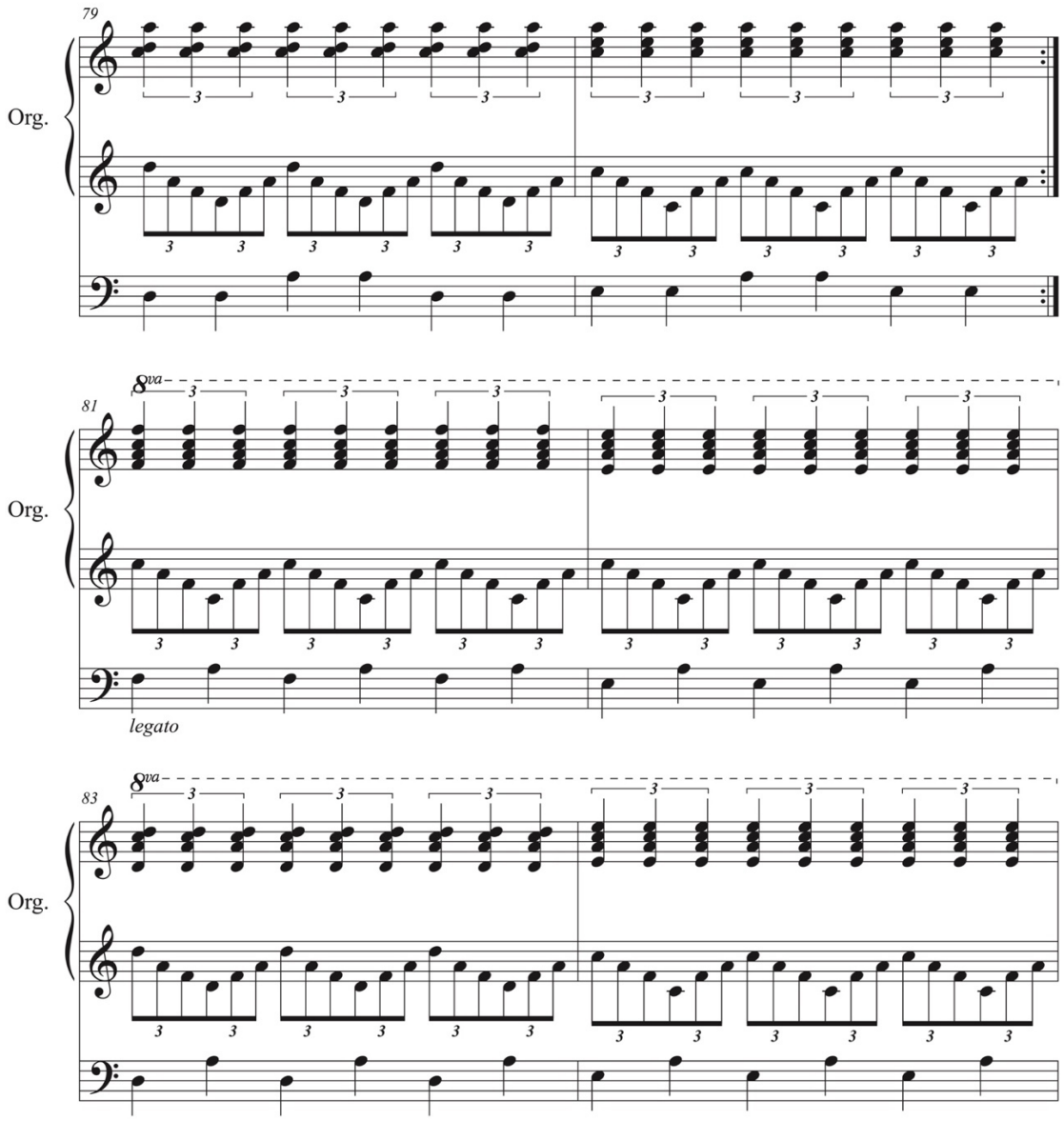
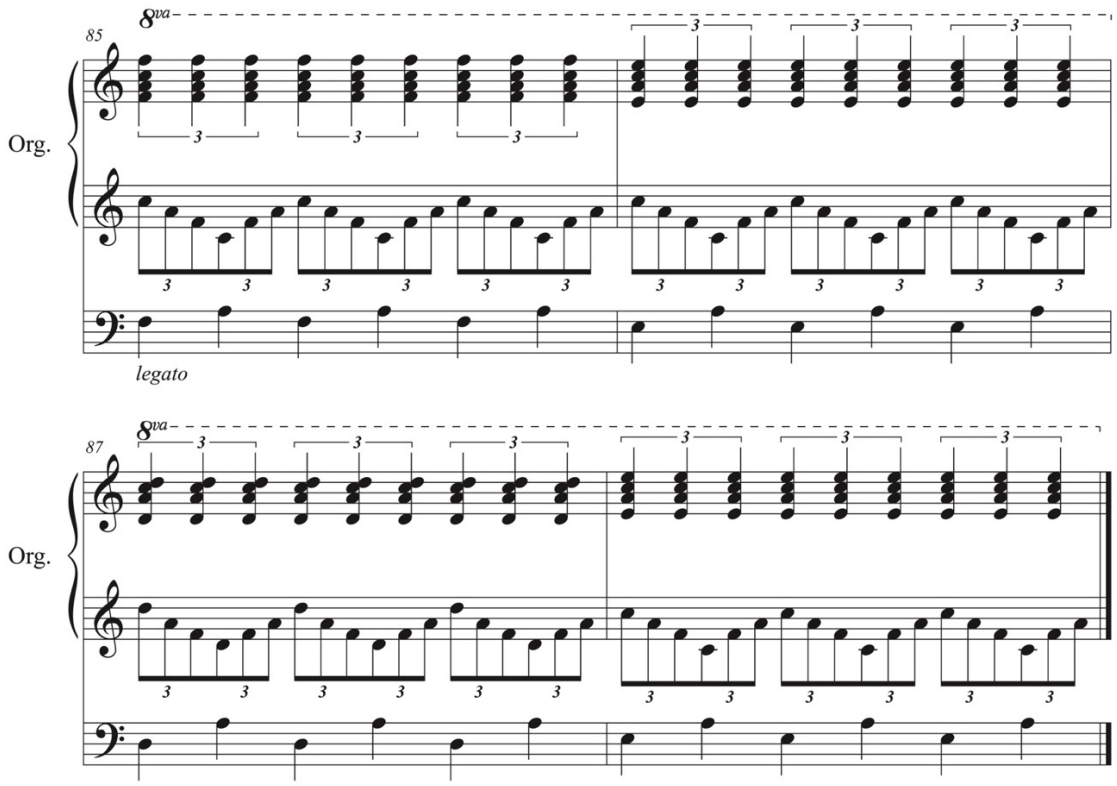


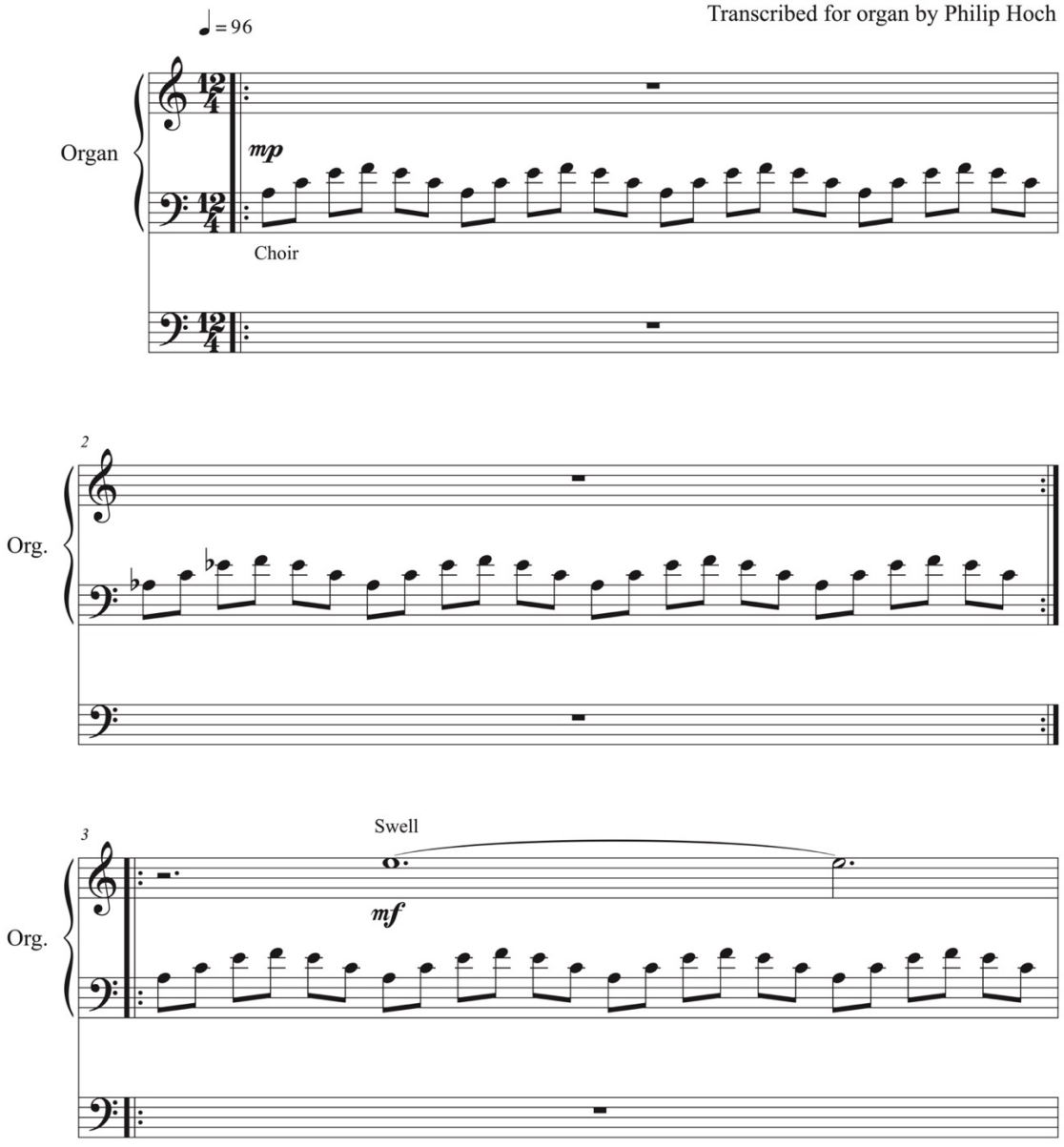
Glassworks
By Philip Glass

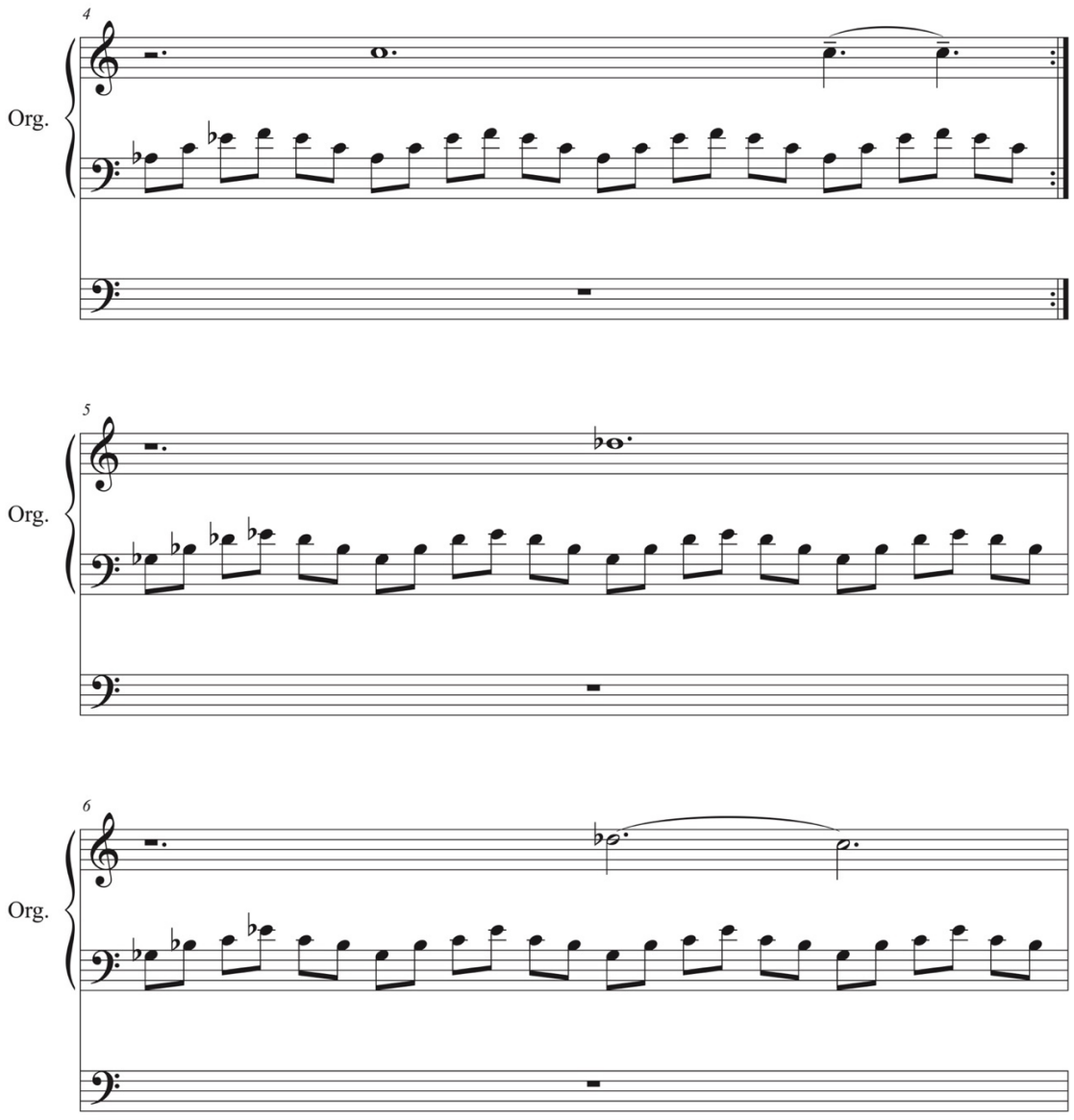


Glassworks
By Philip Glass

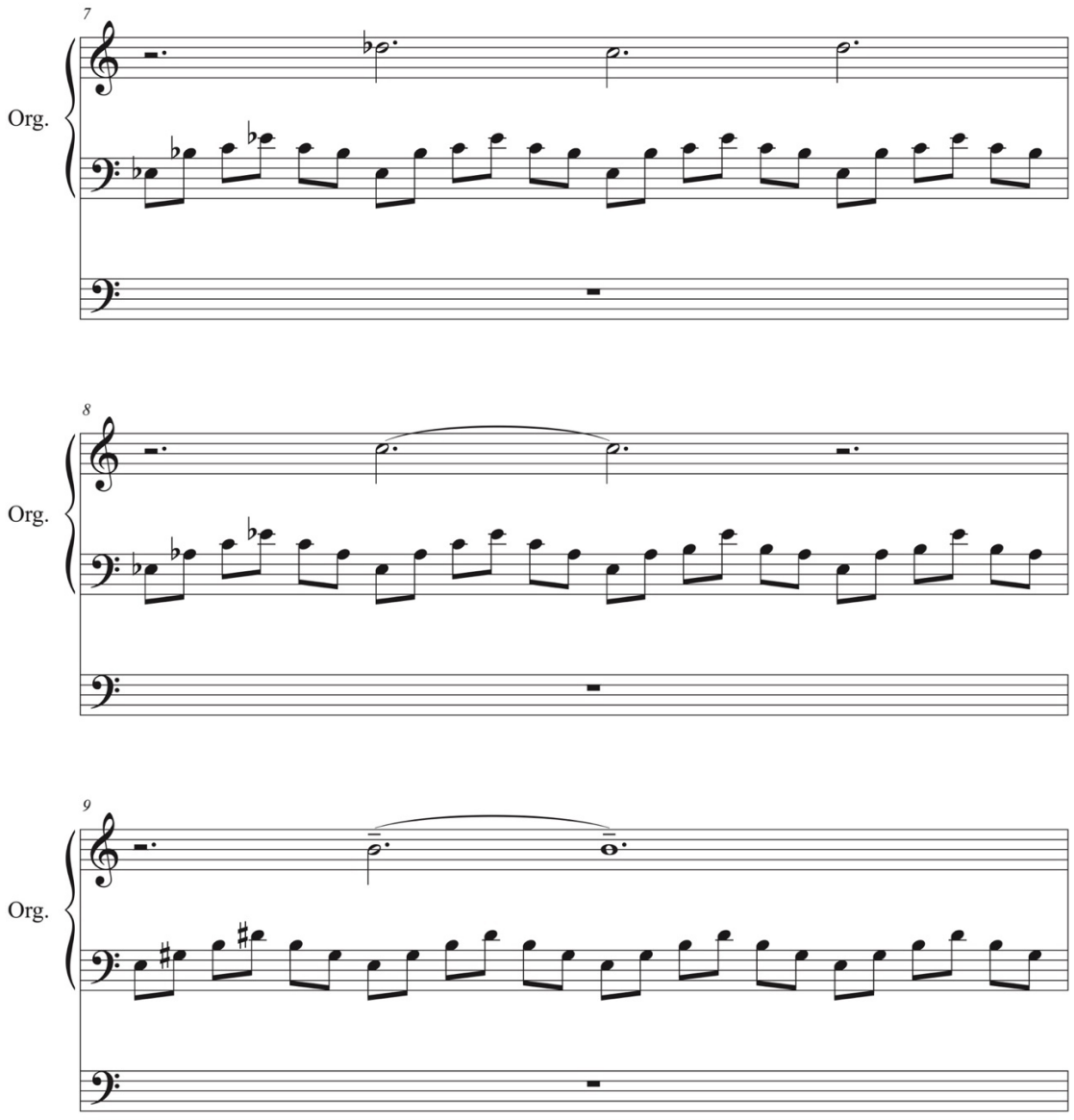
3 - Islands

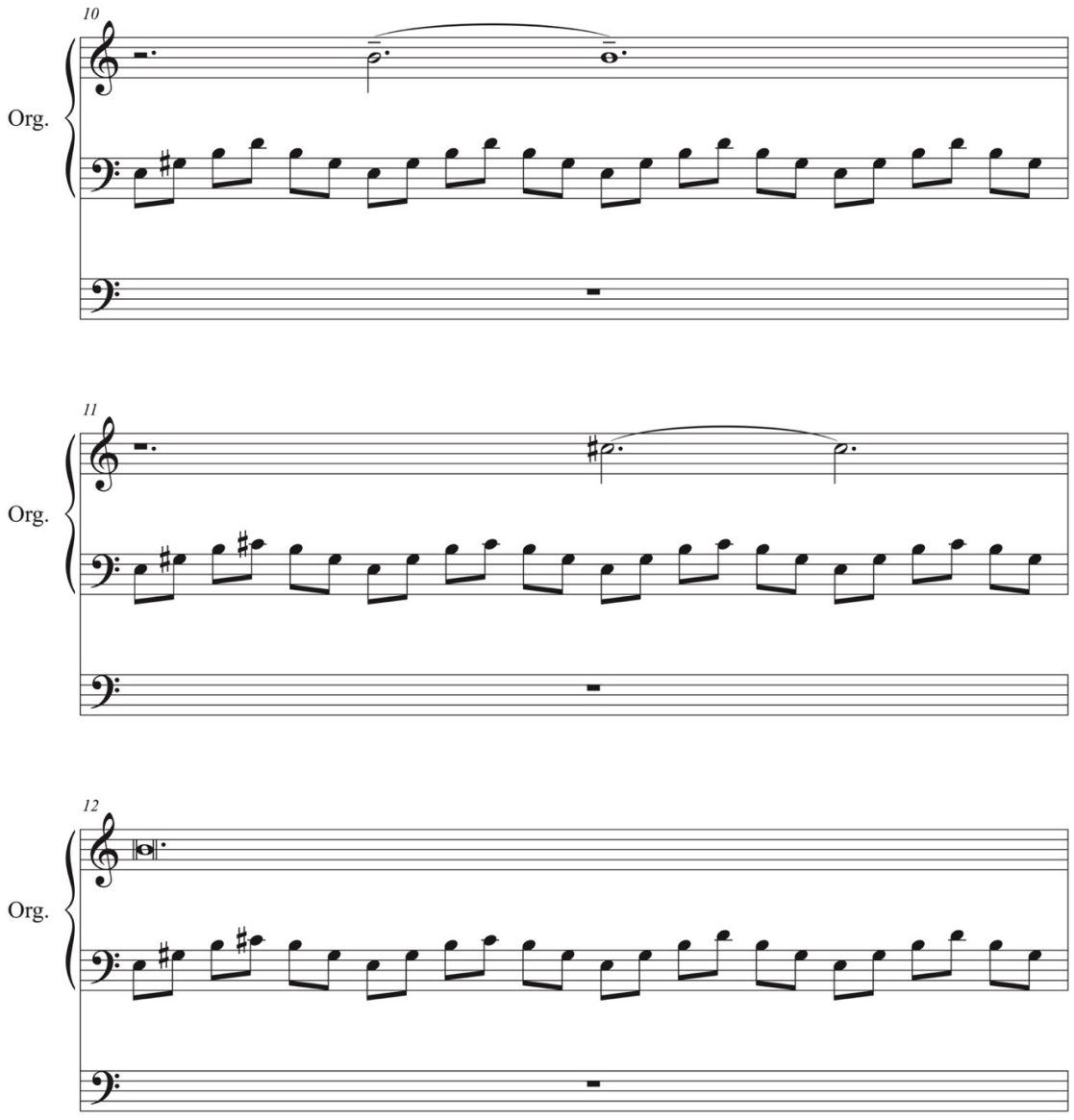
Music by Philip Glass
Transcribed for organ by Philip Hoch





Glassworks
By Philip Glass





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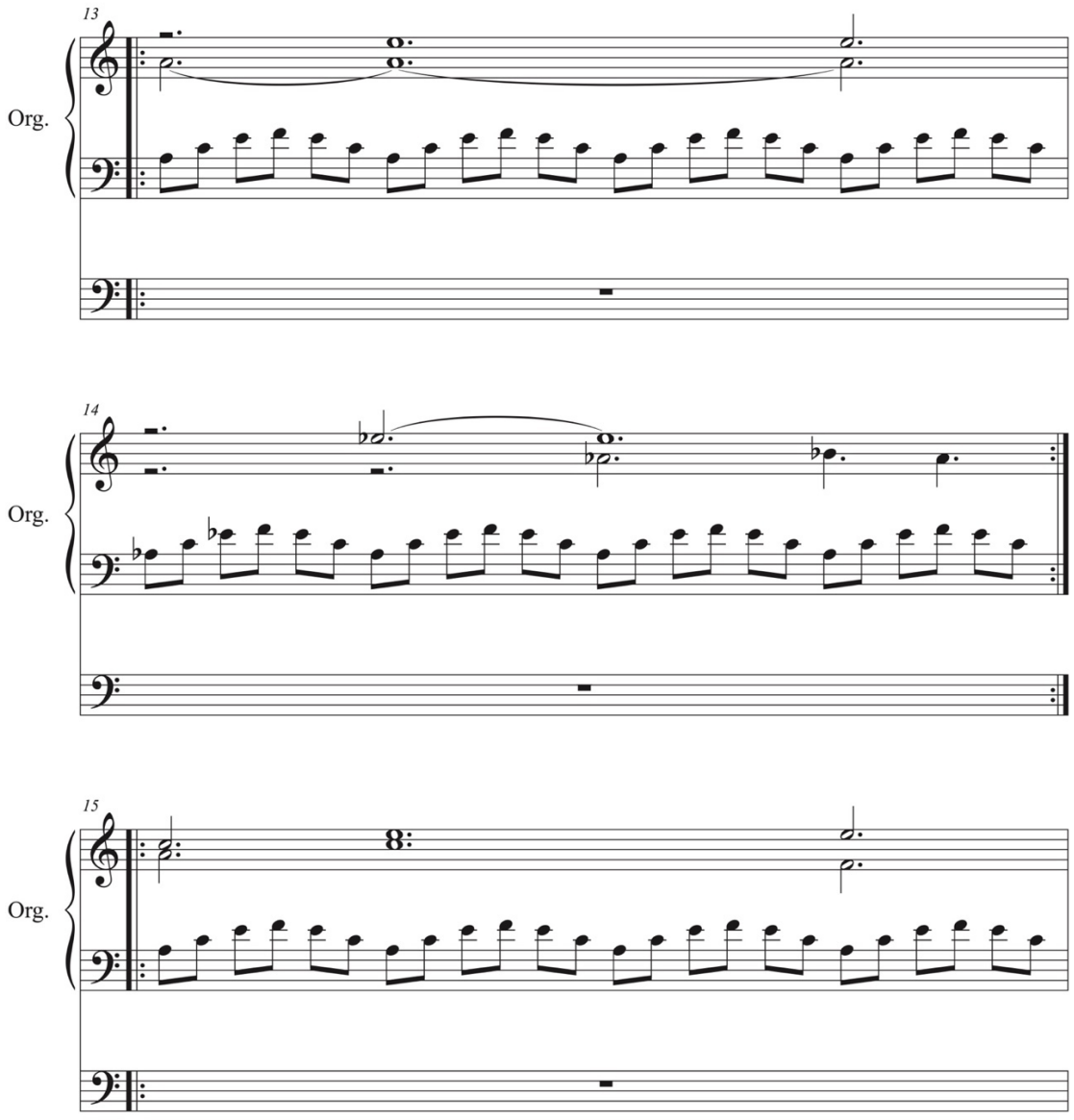

Glassworks
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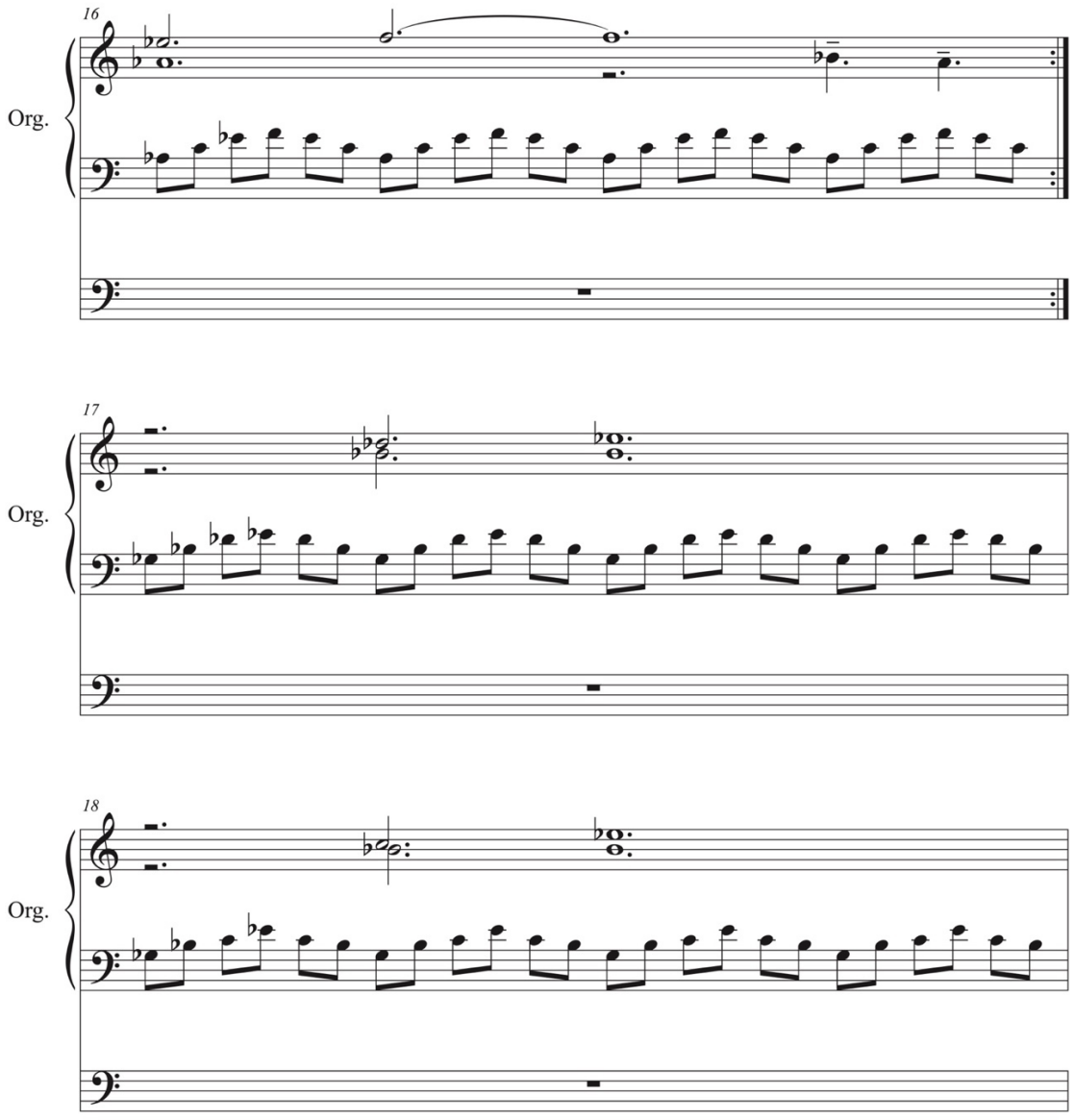

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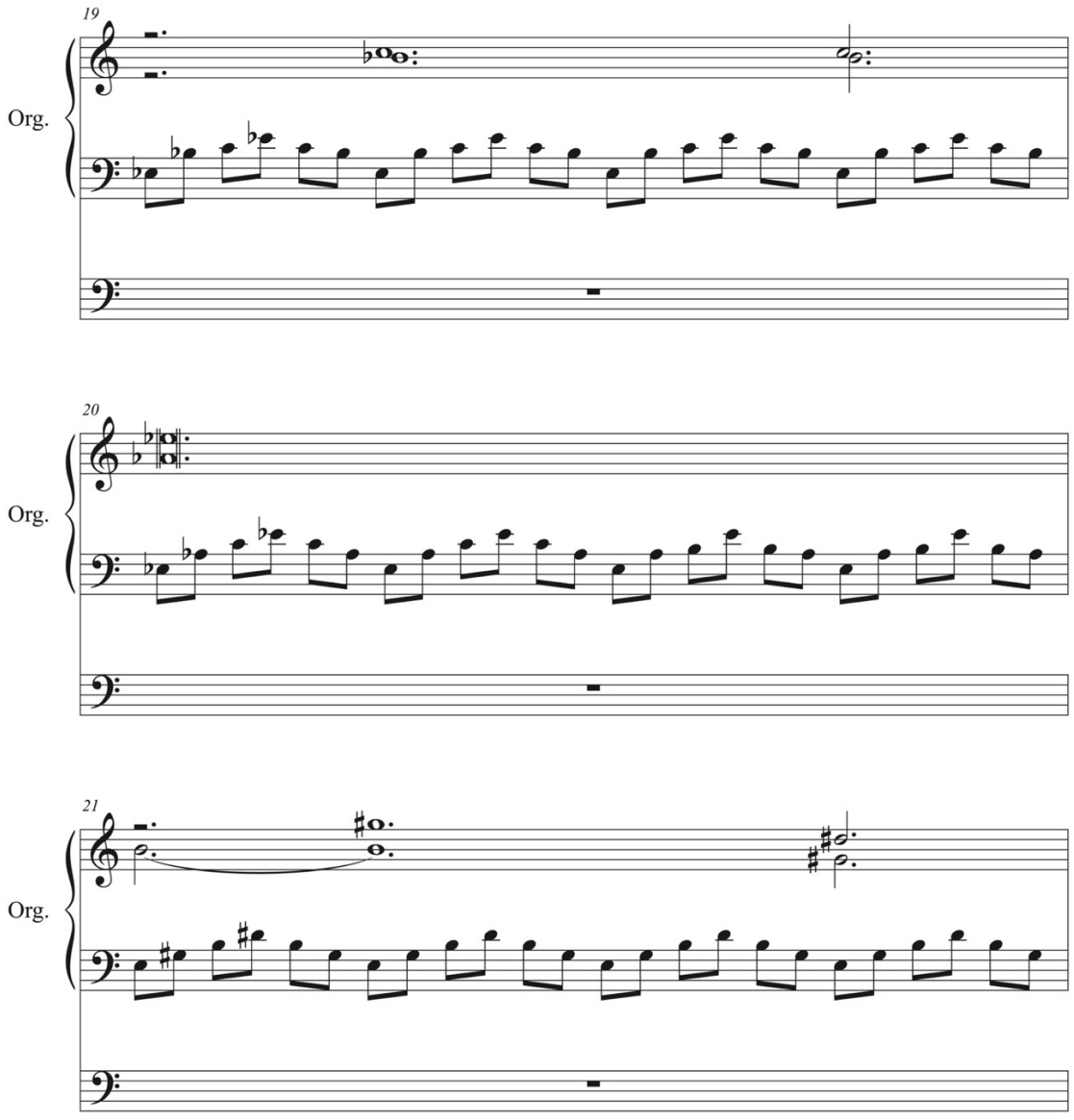

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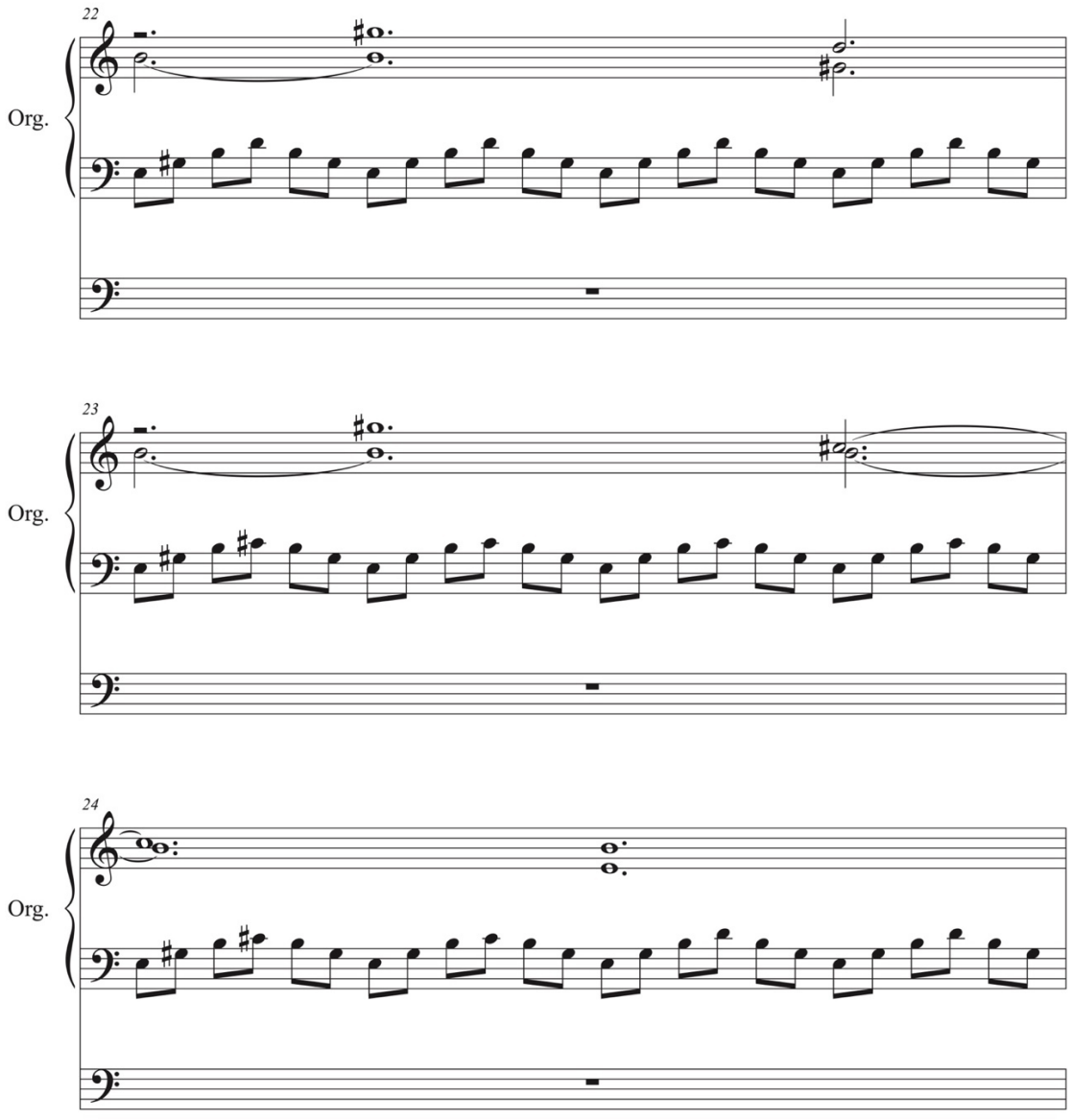

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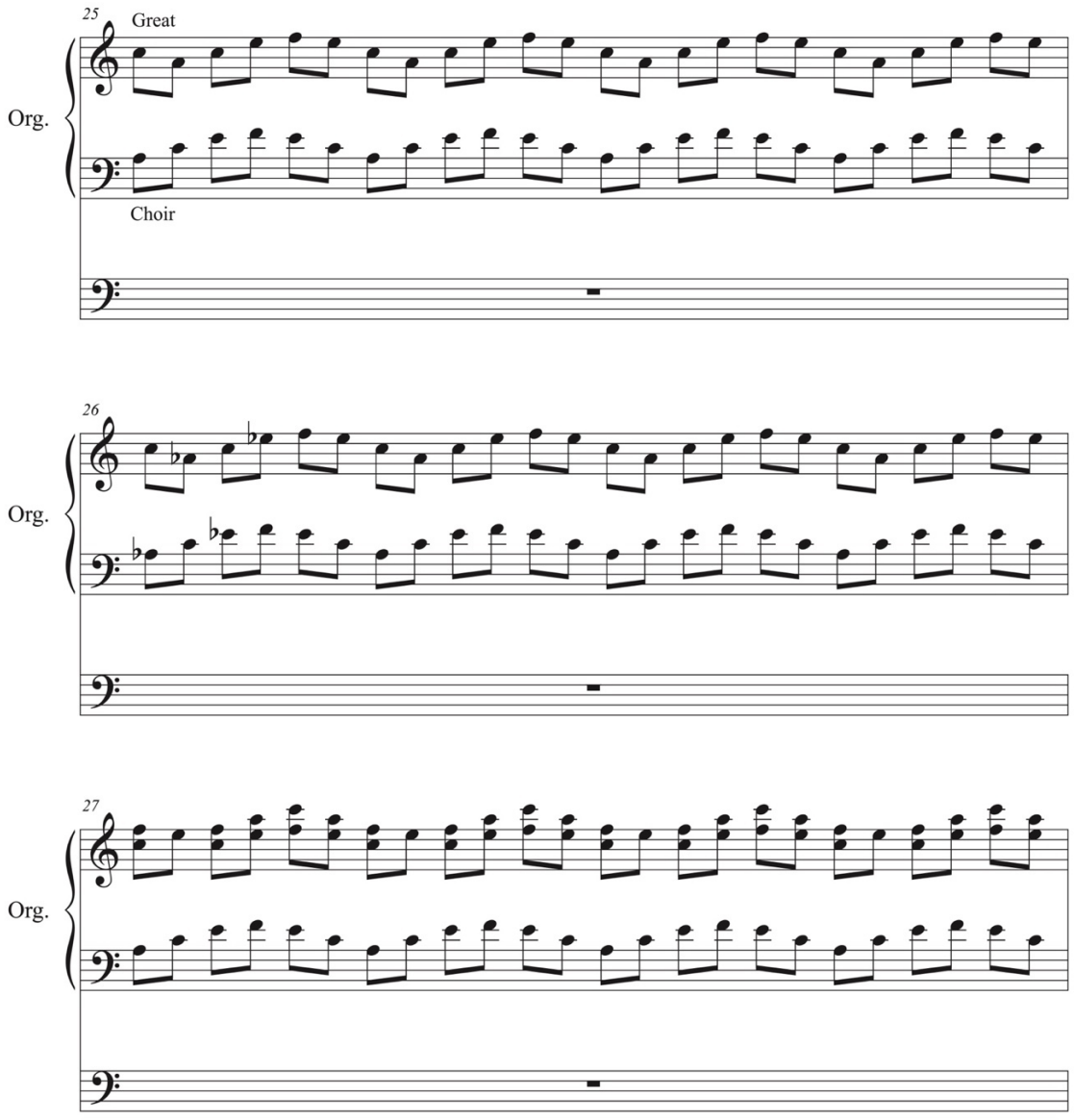
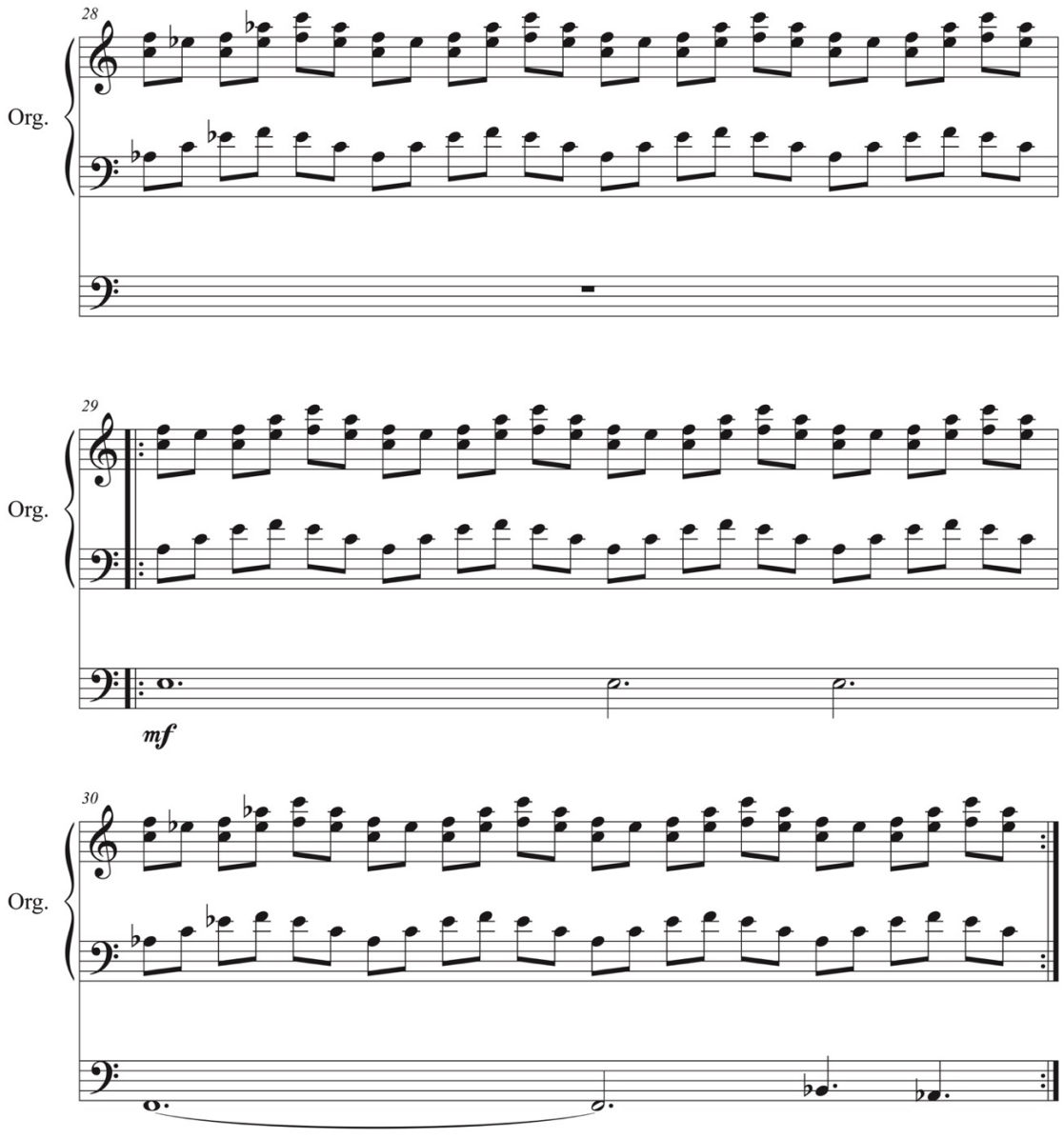
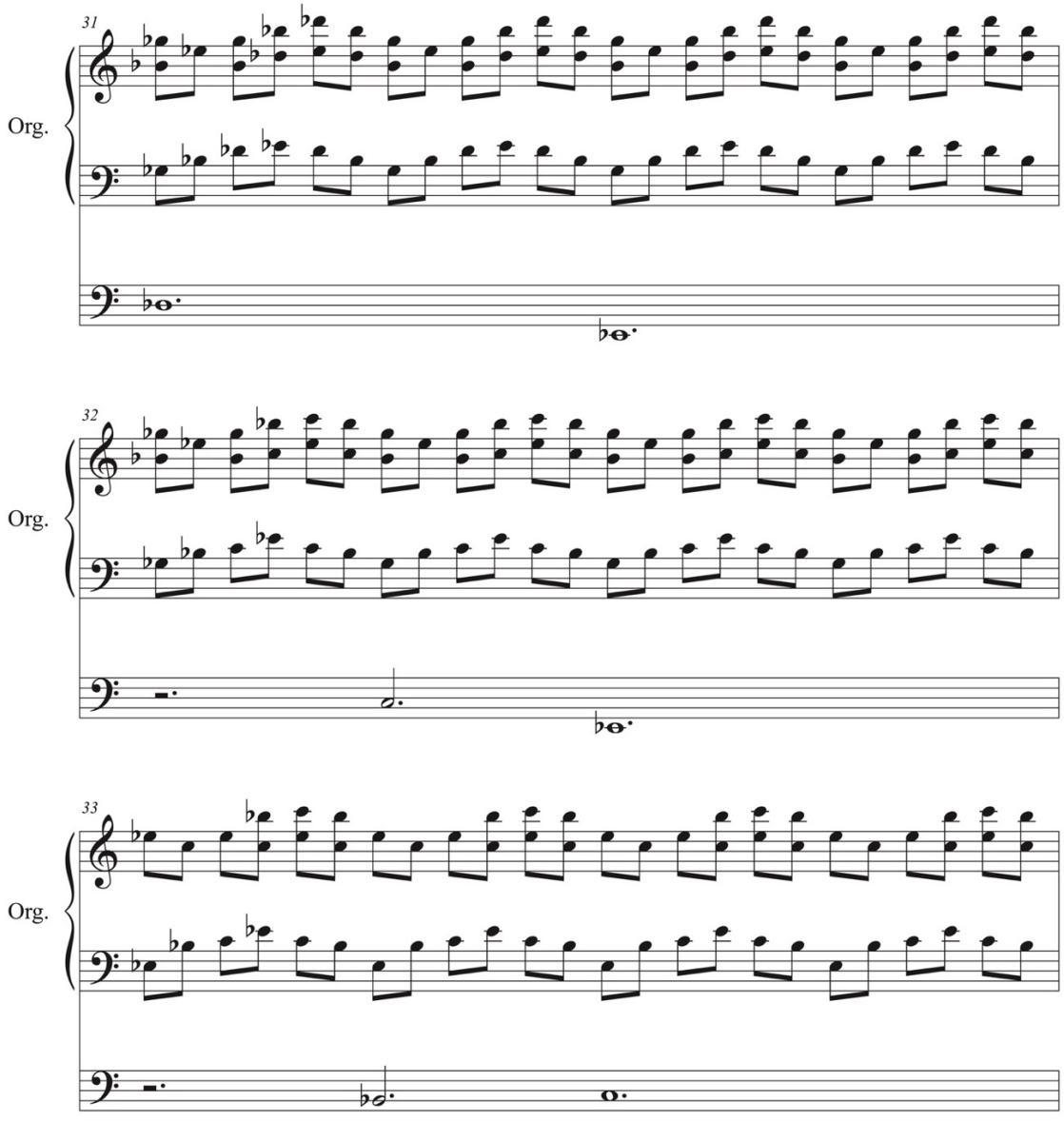
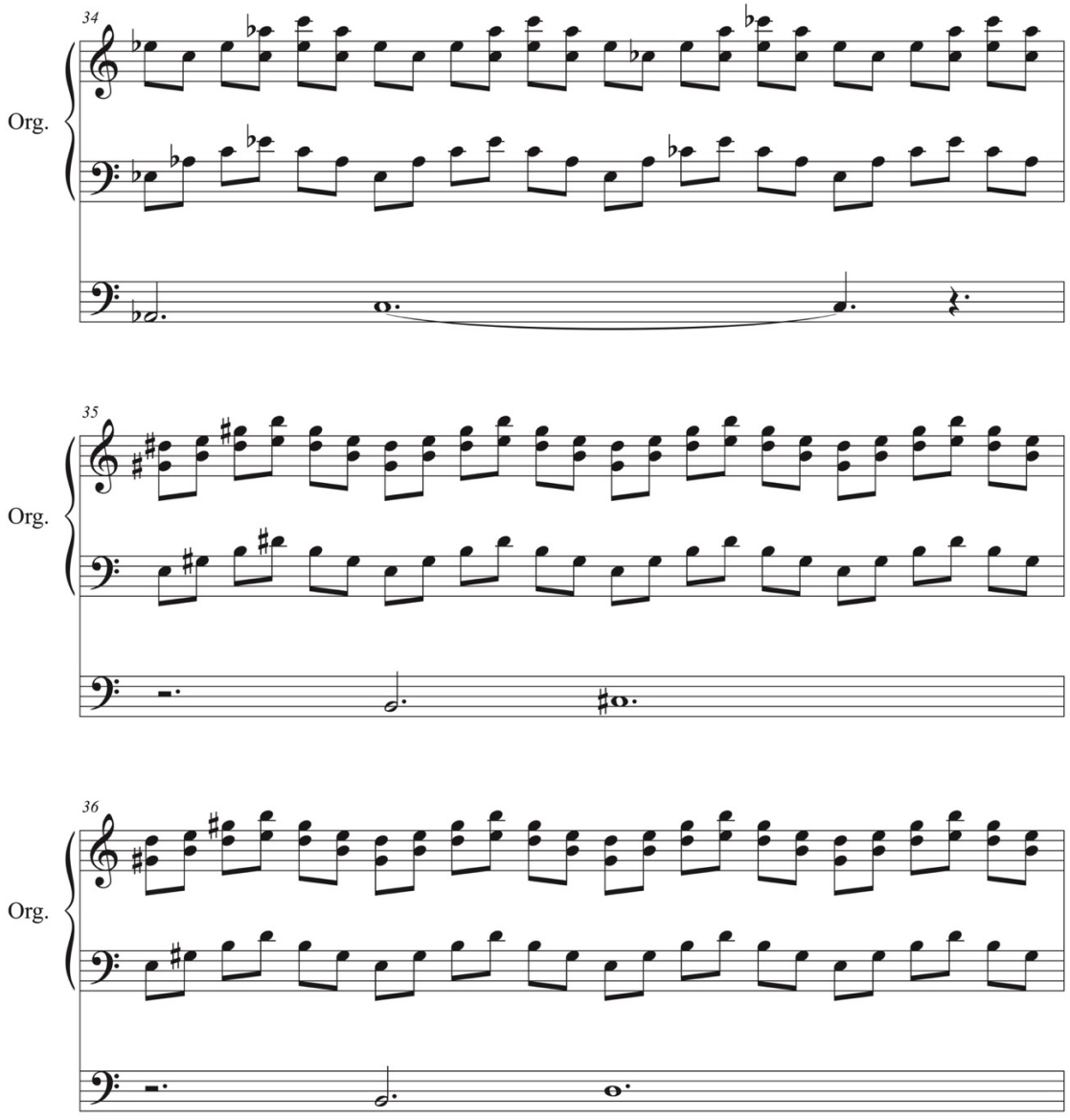


Glassworks
By Philip Glass



Glassworks
By Philip Glass





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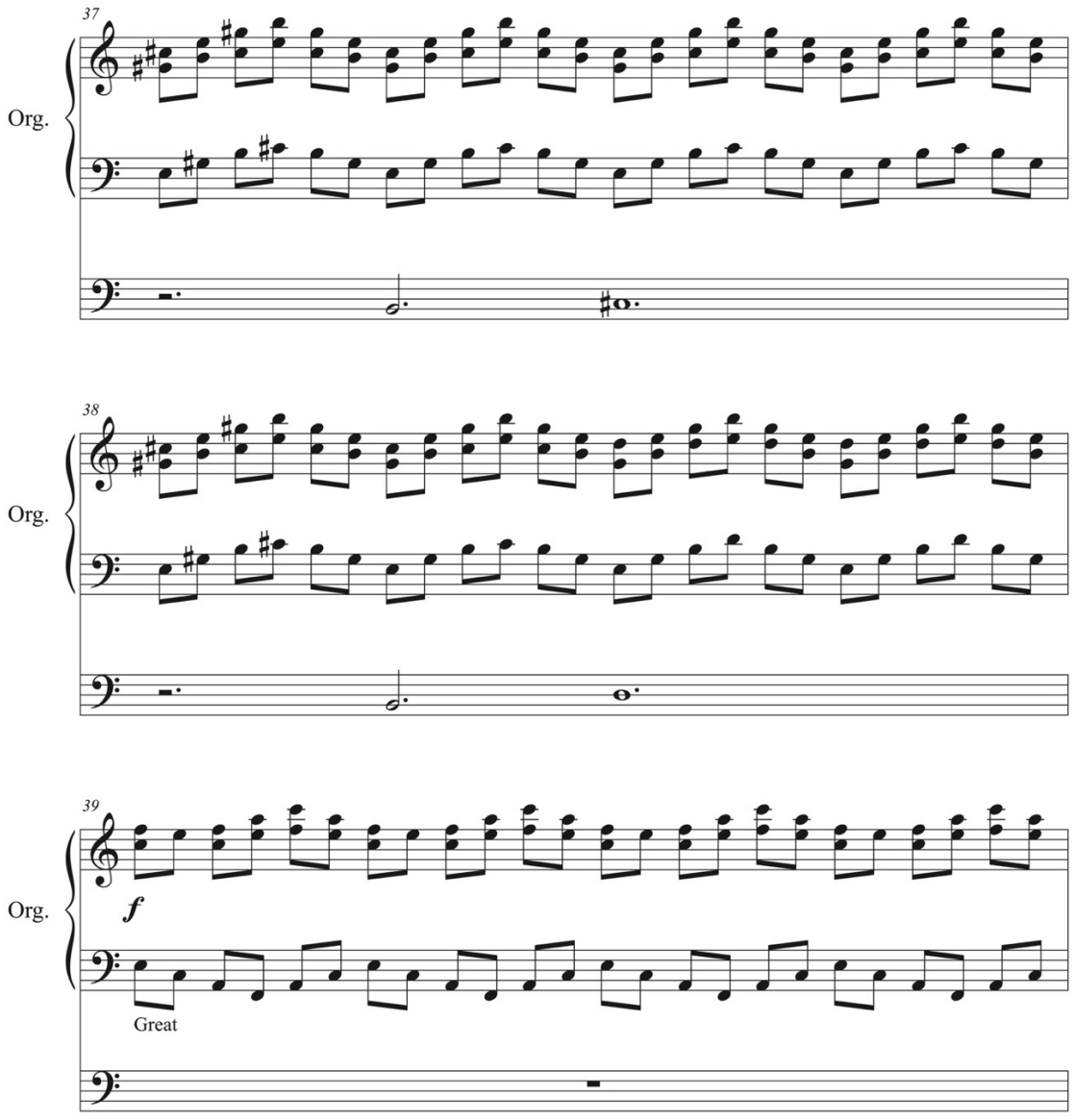

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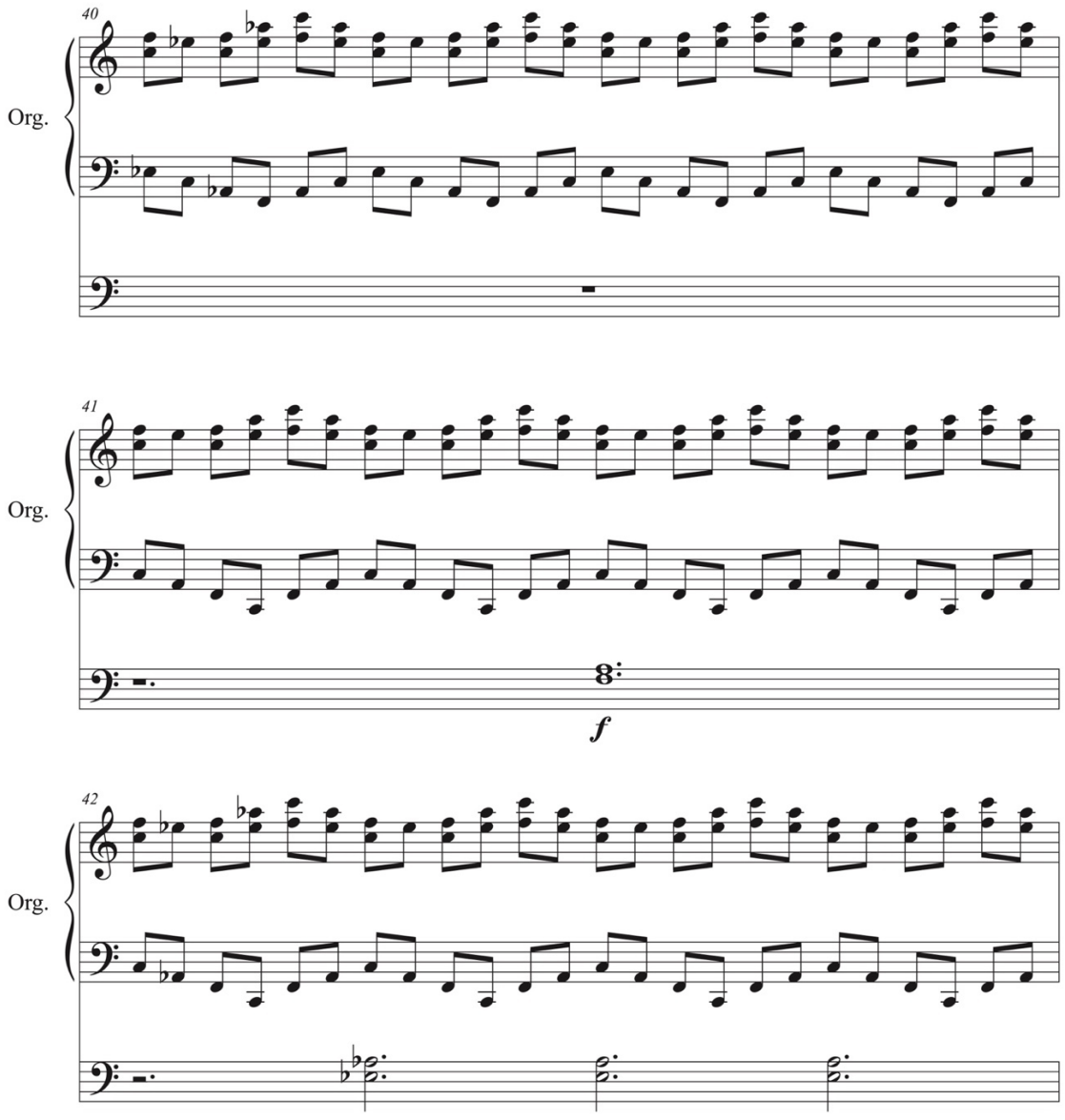
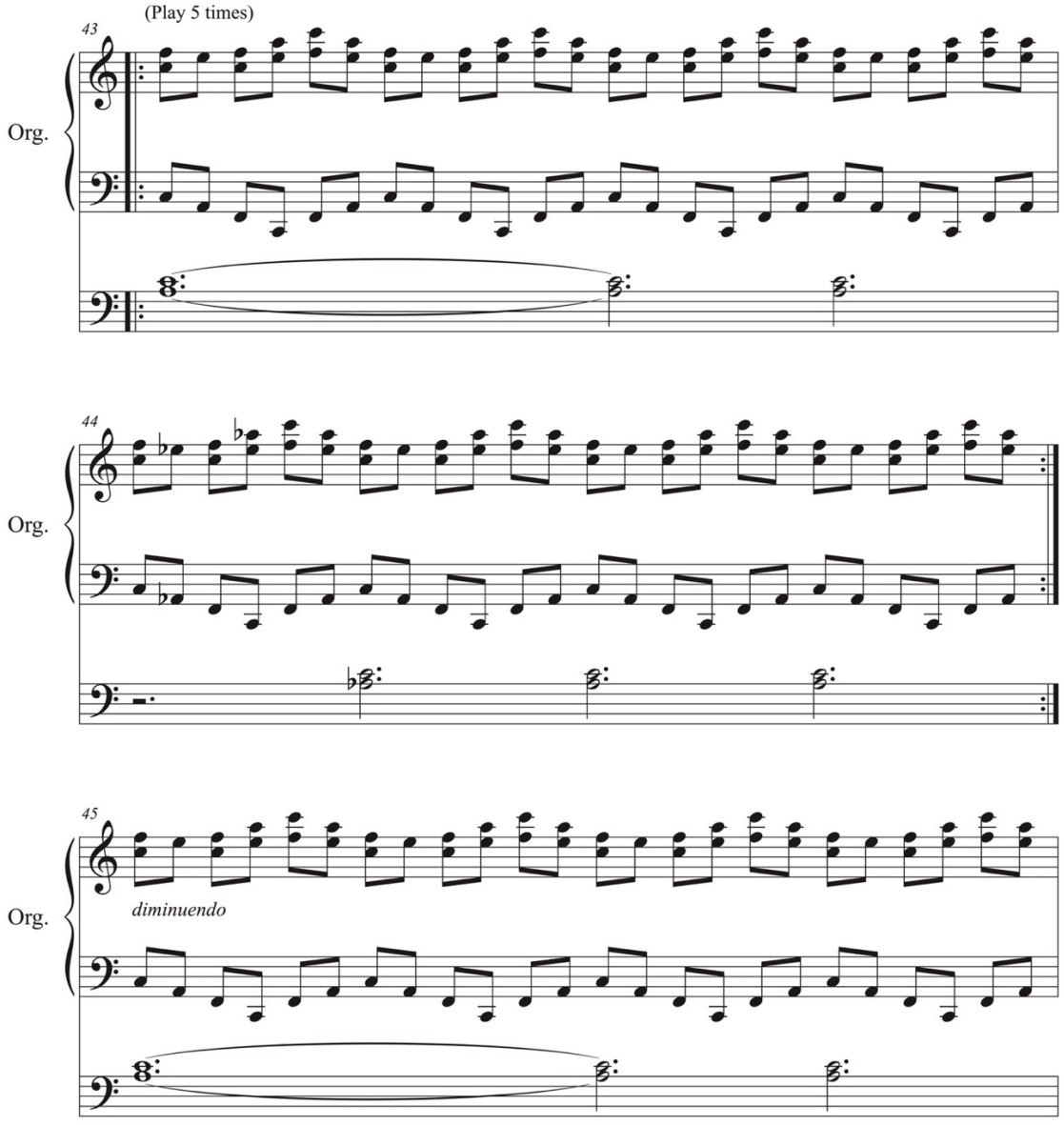
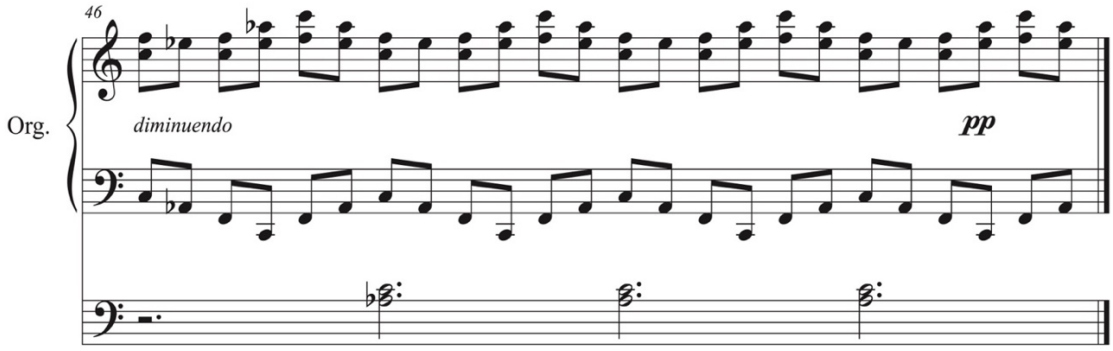
By Philip Glass



Glassworks
By Philip Glass



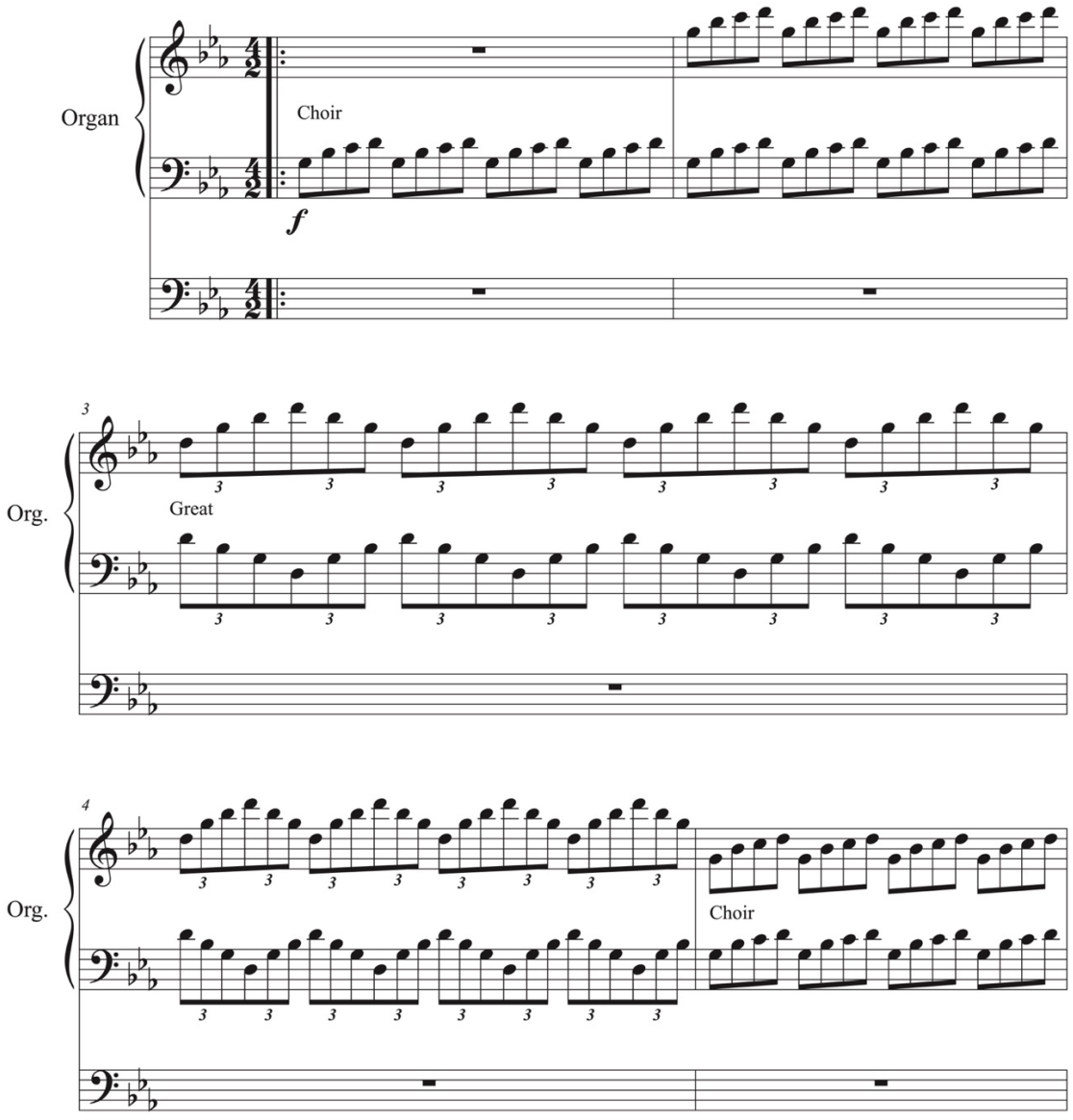
Glassworks
By Philip Glass

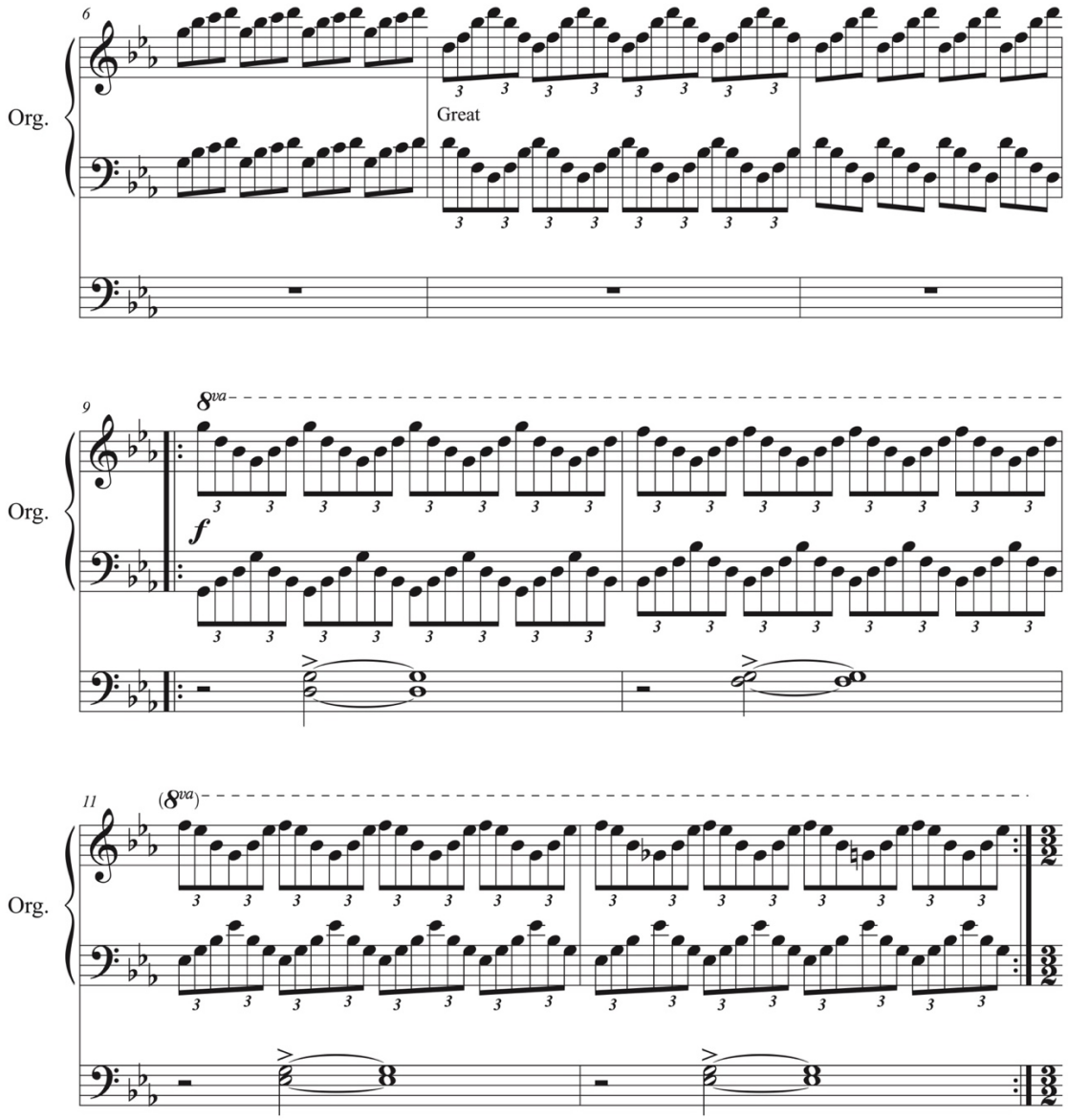


Glassworks
By Philip Glass

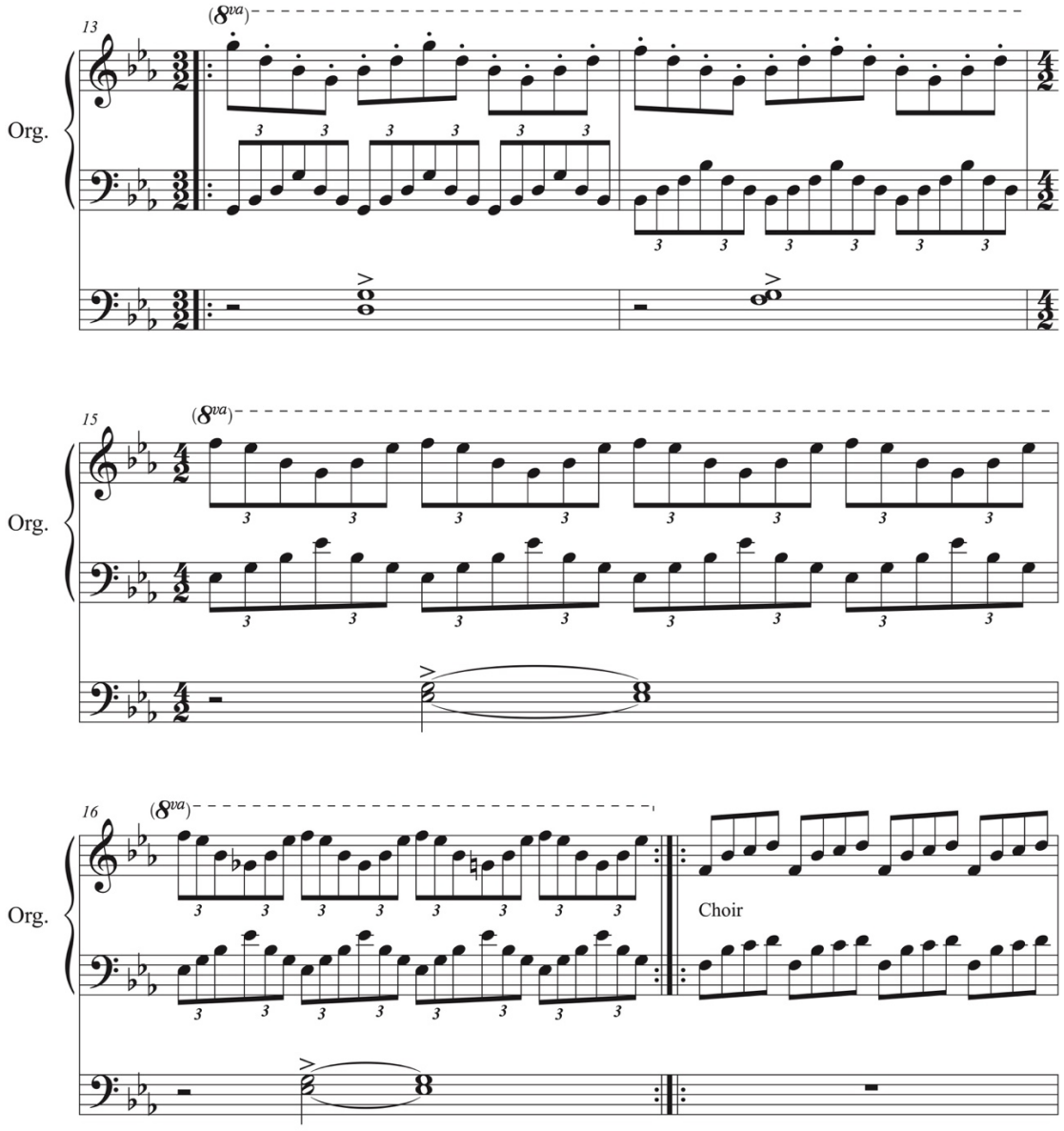
4 - Rubric

Music by Philip Glass
Transcribed for organ by Philip Hoch

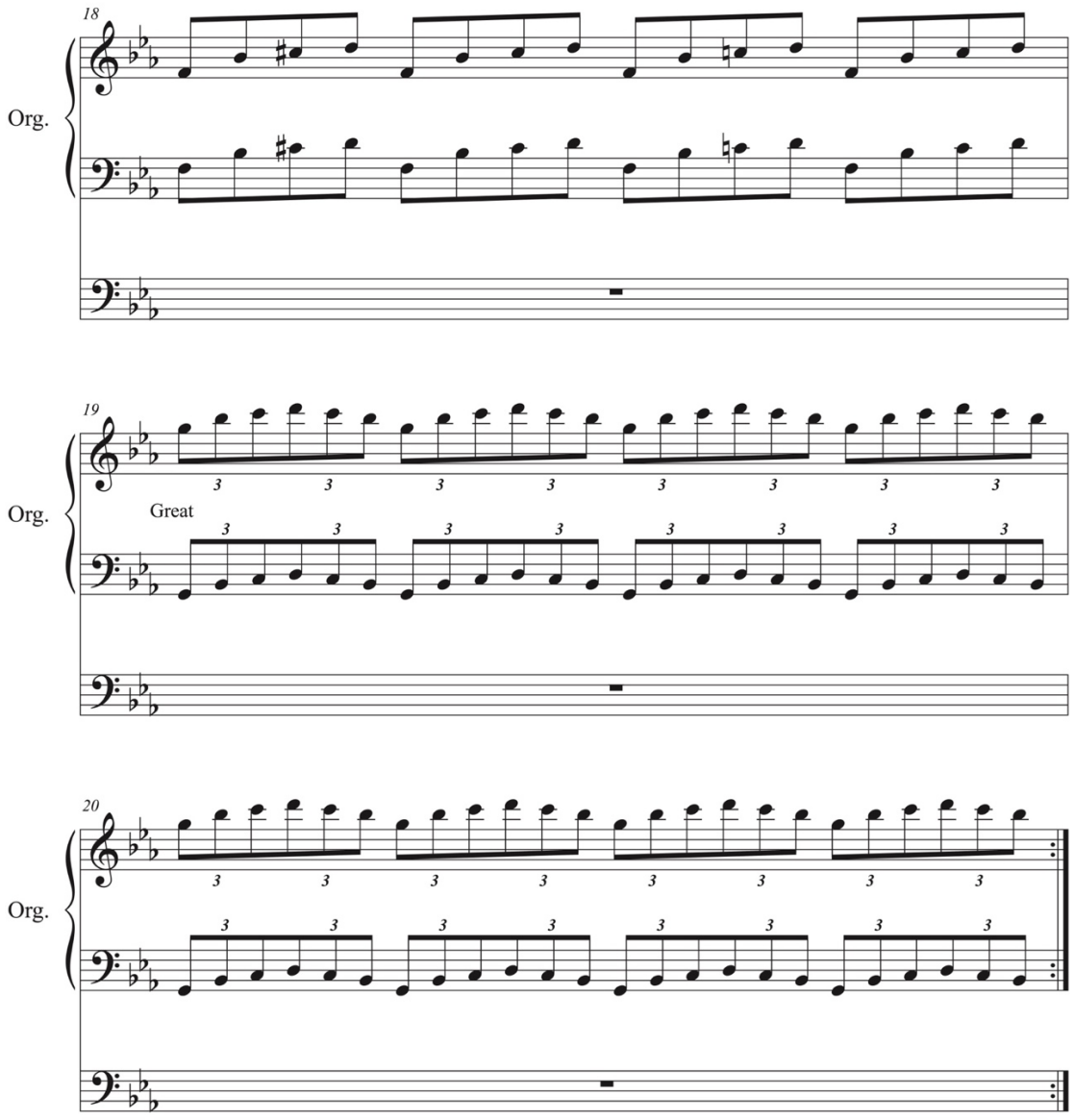




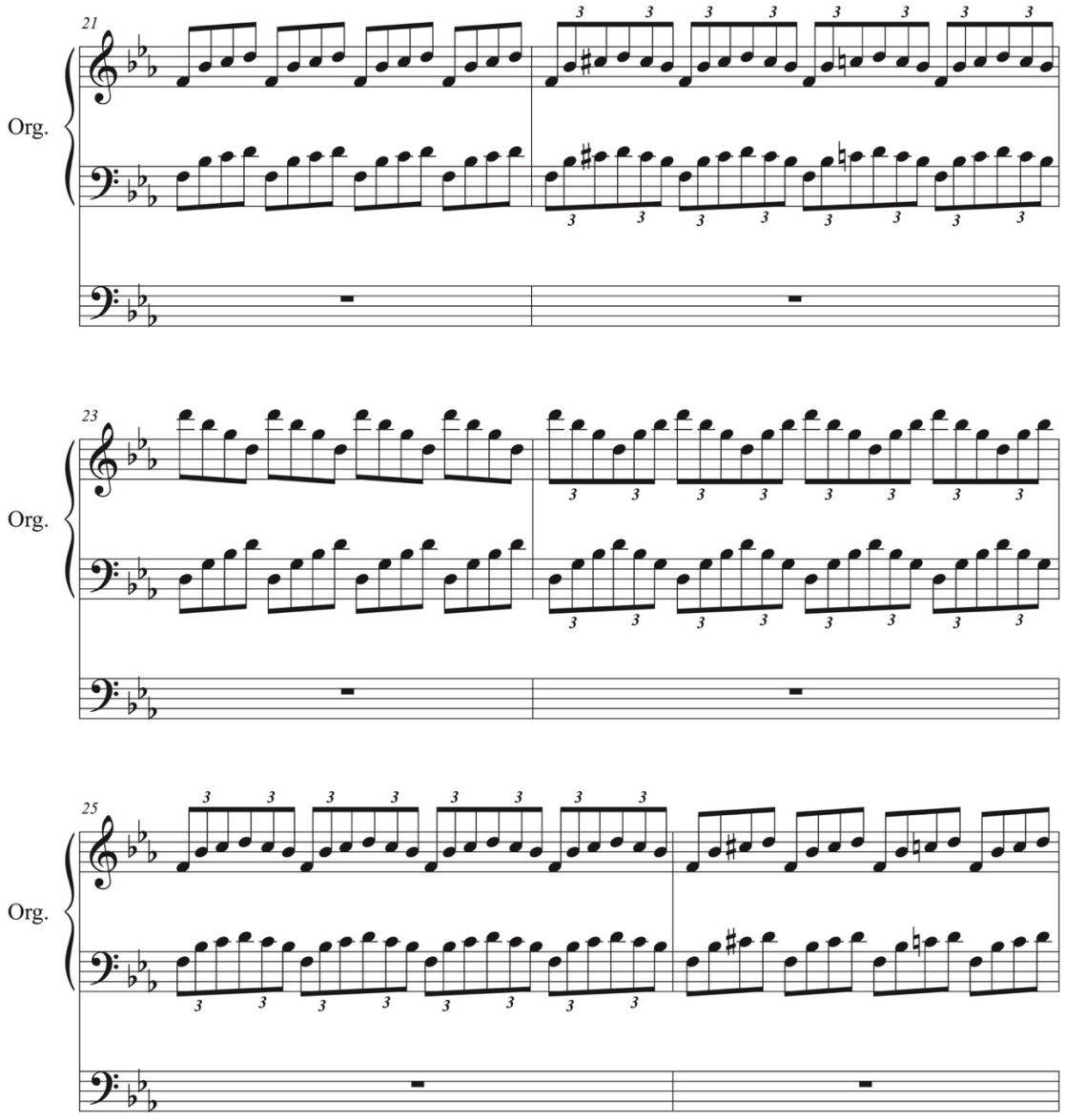
Glassworks
By Philip Glass



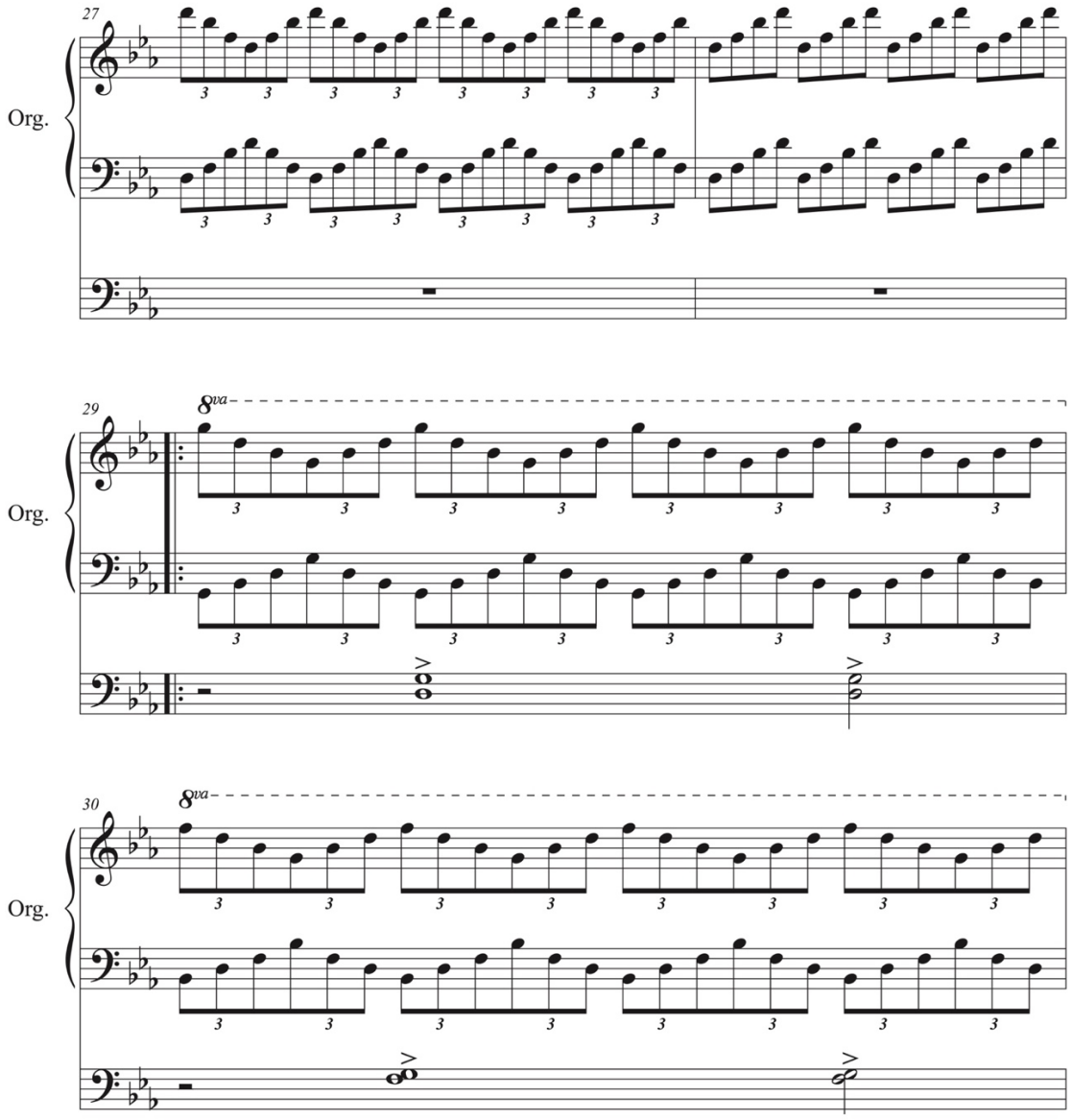
Glassworks
By Philip Glass



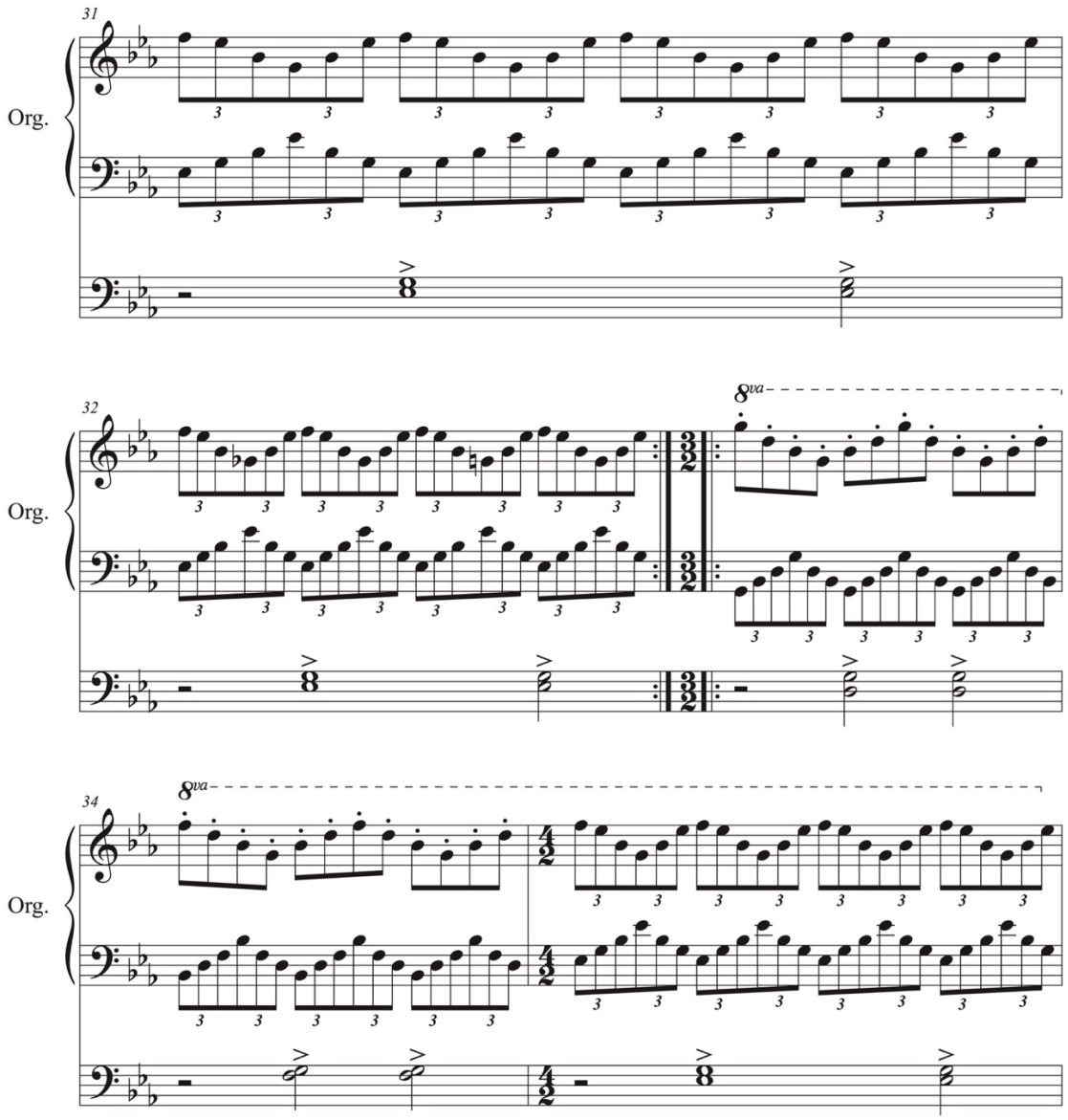
Glassworks
By Philip Glass



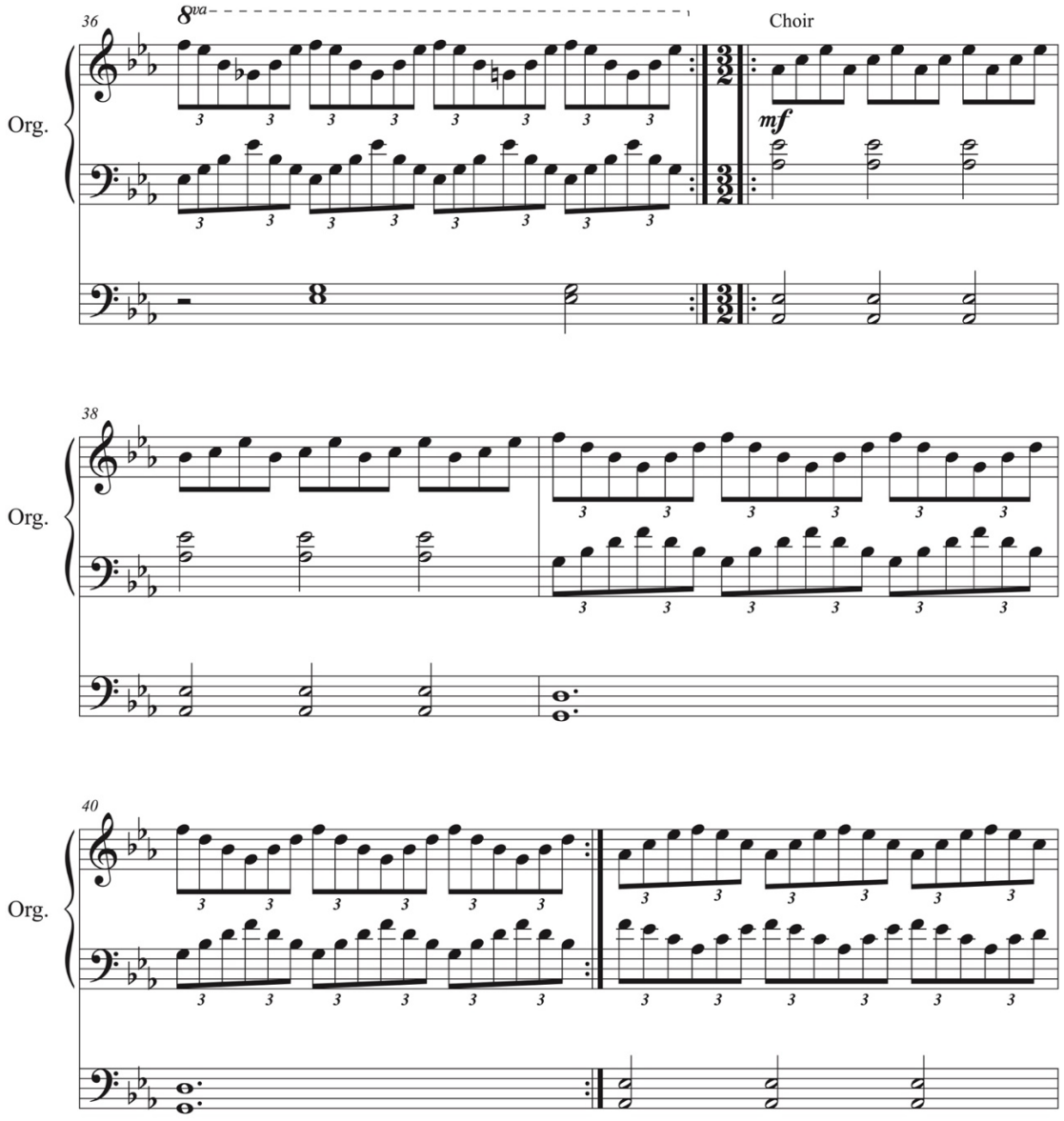
Glassworks
By Philip Glass



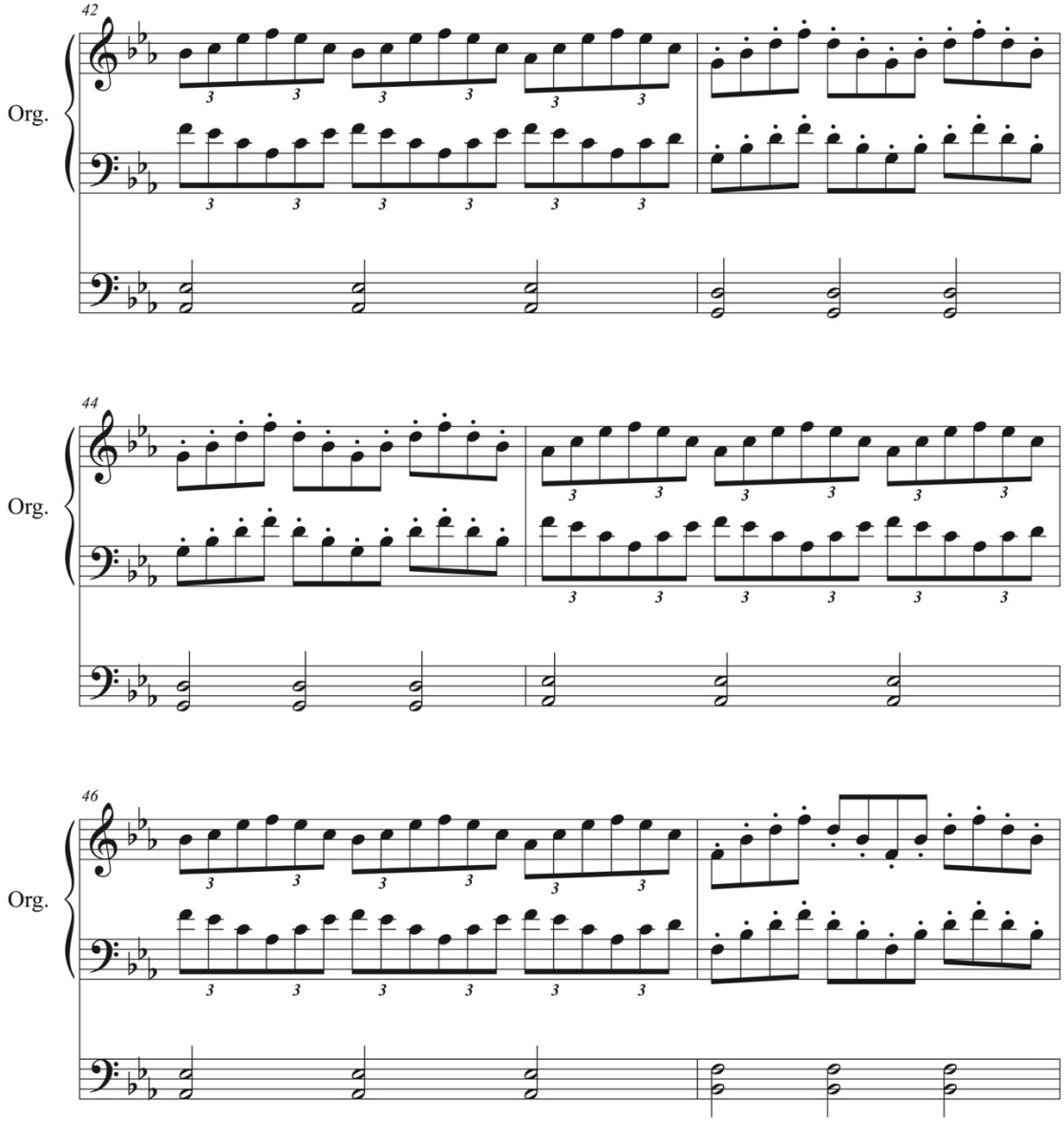
Glassworks
By Philip Glass



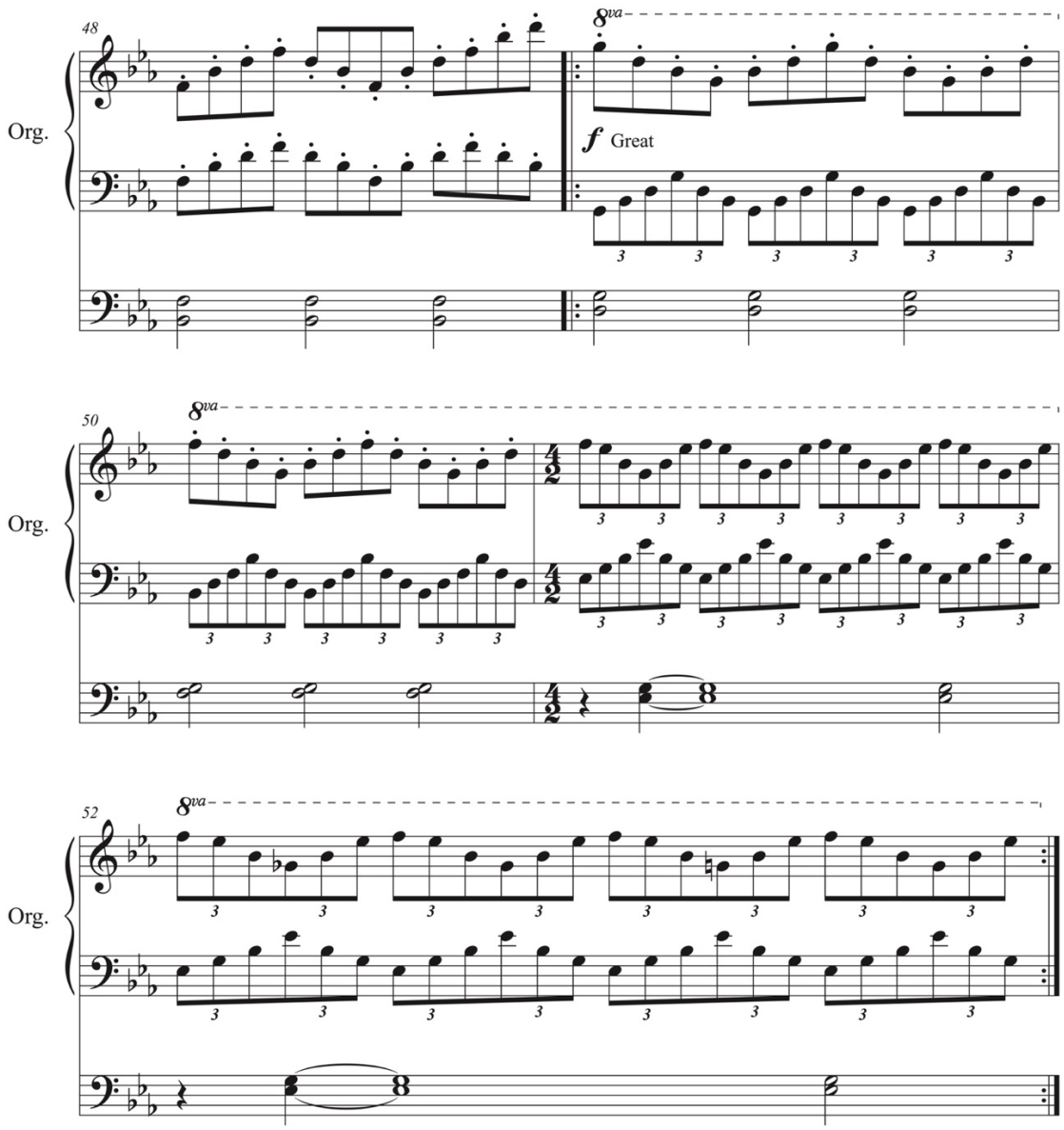
Glassworks
By Philip Glass



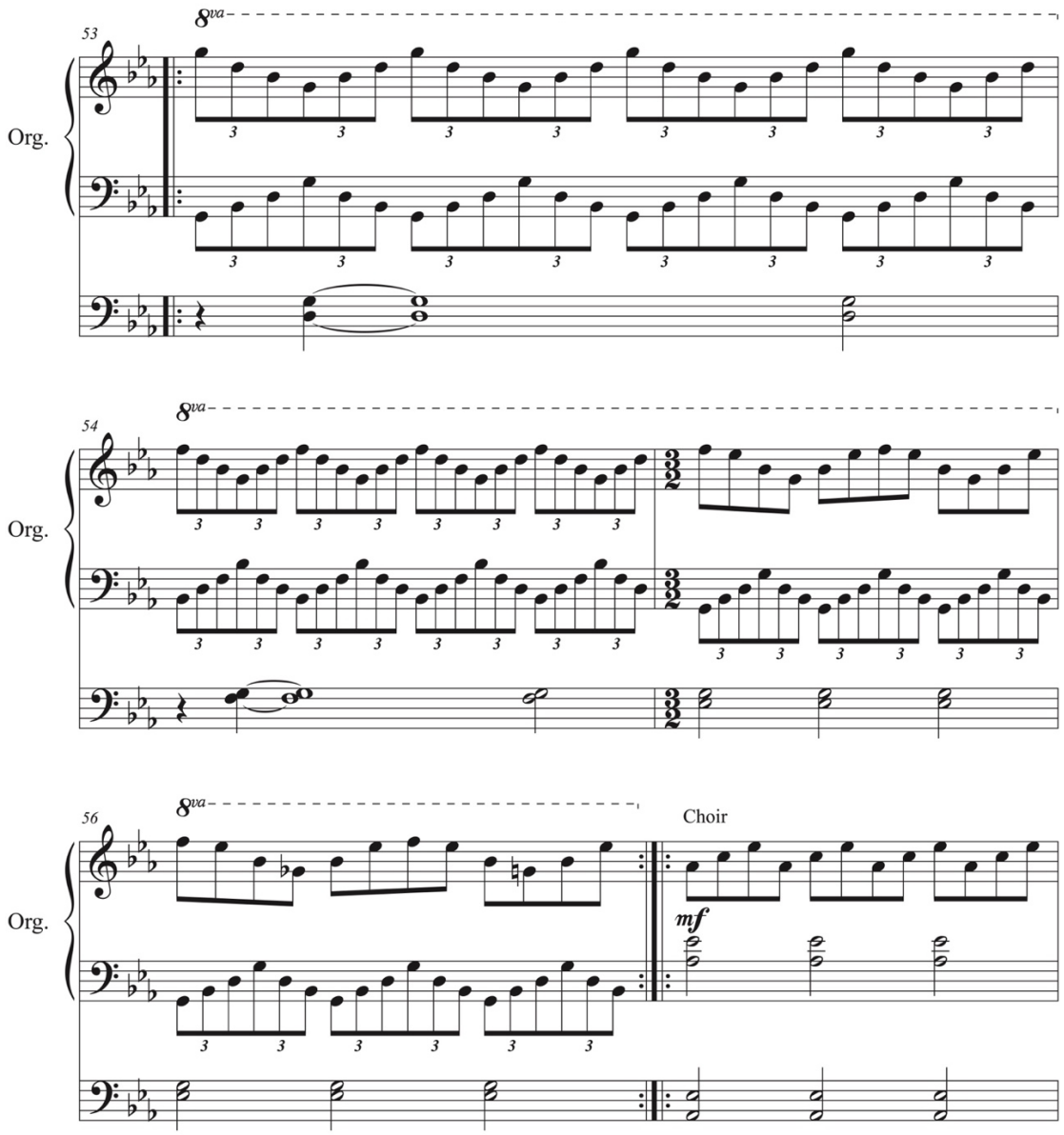
Glassworks
By Philip Glass



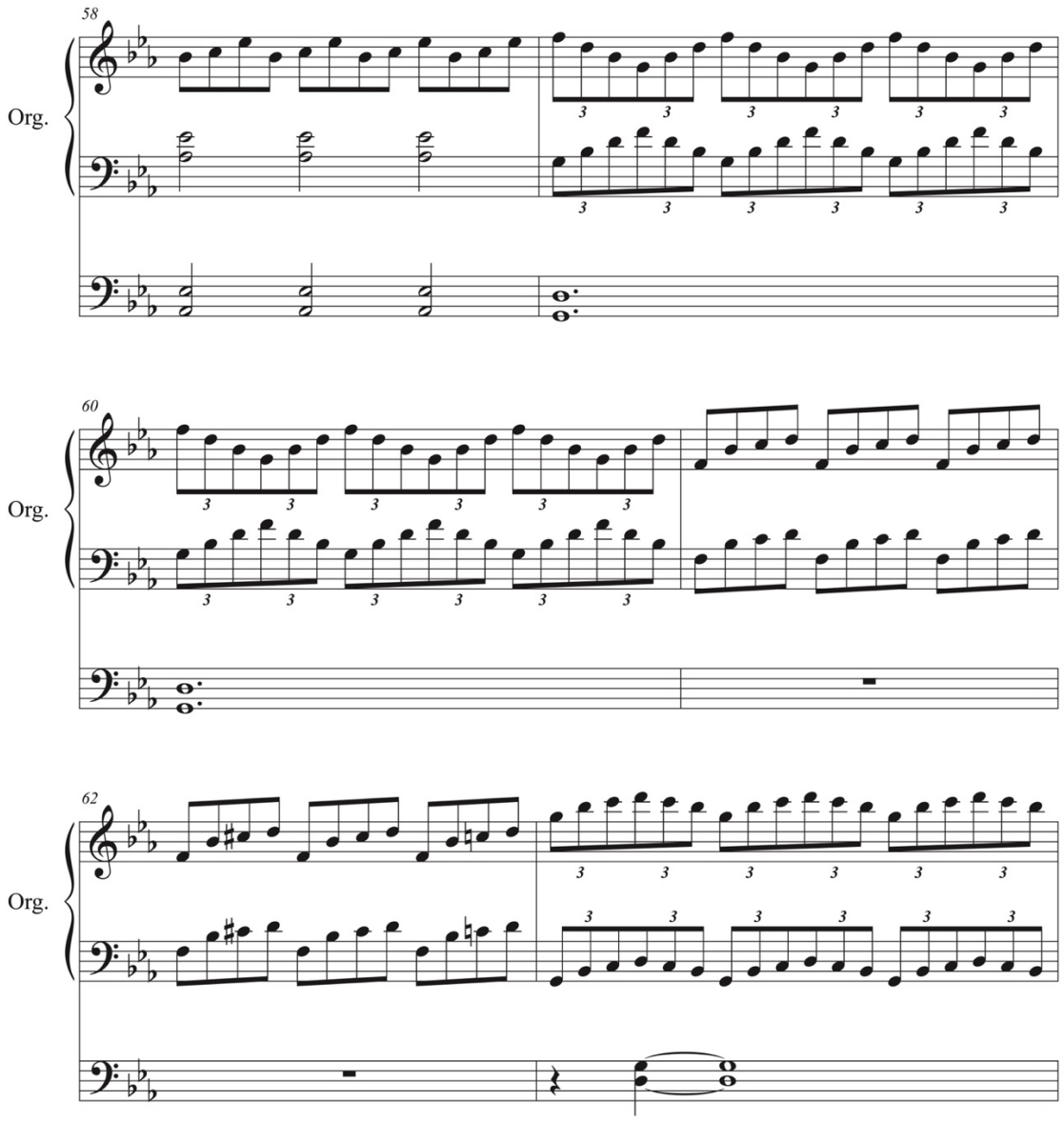
Glassworks
By Philip Glass



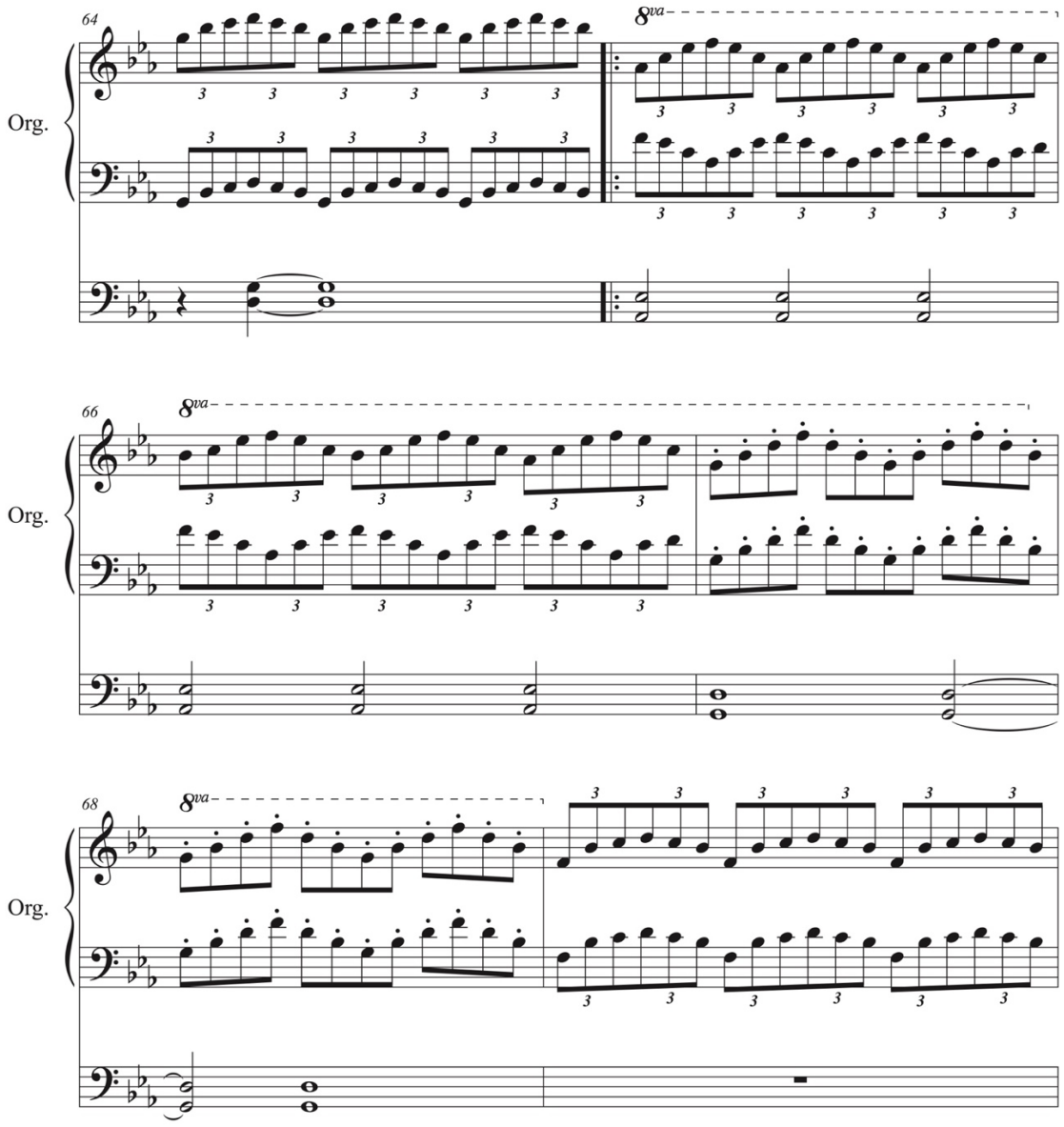
Glassworks
By Philip Glass



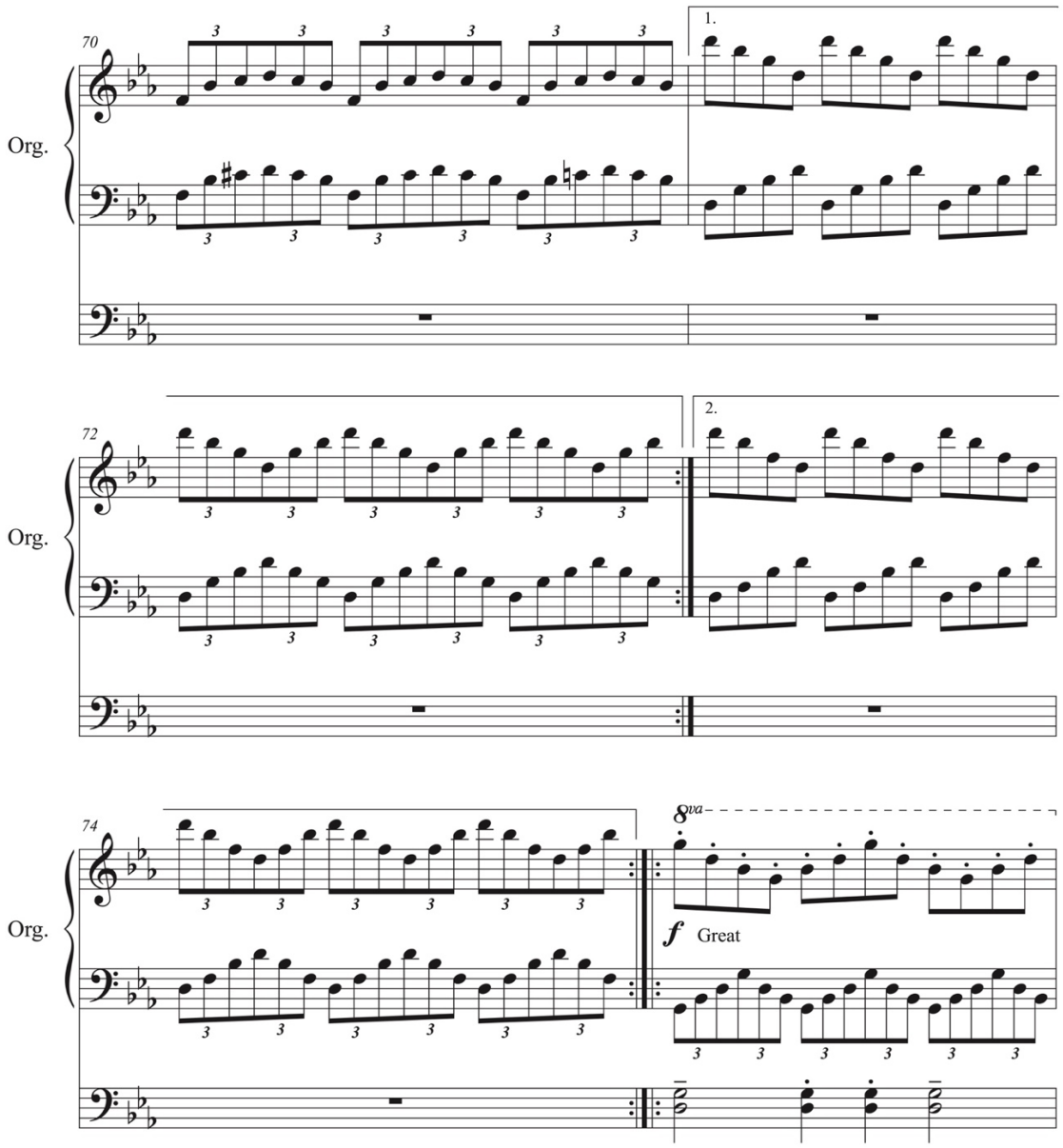
Glassworks
By Philip Glass



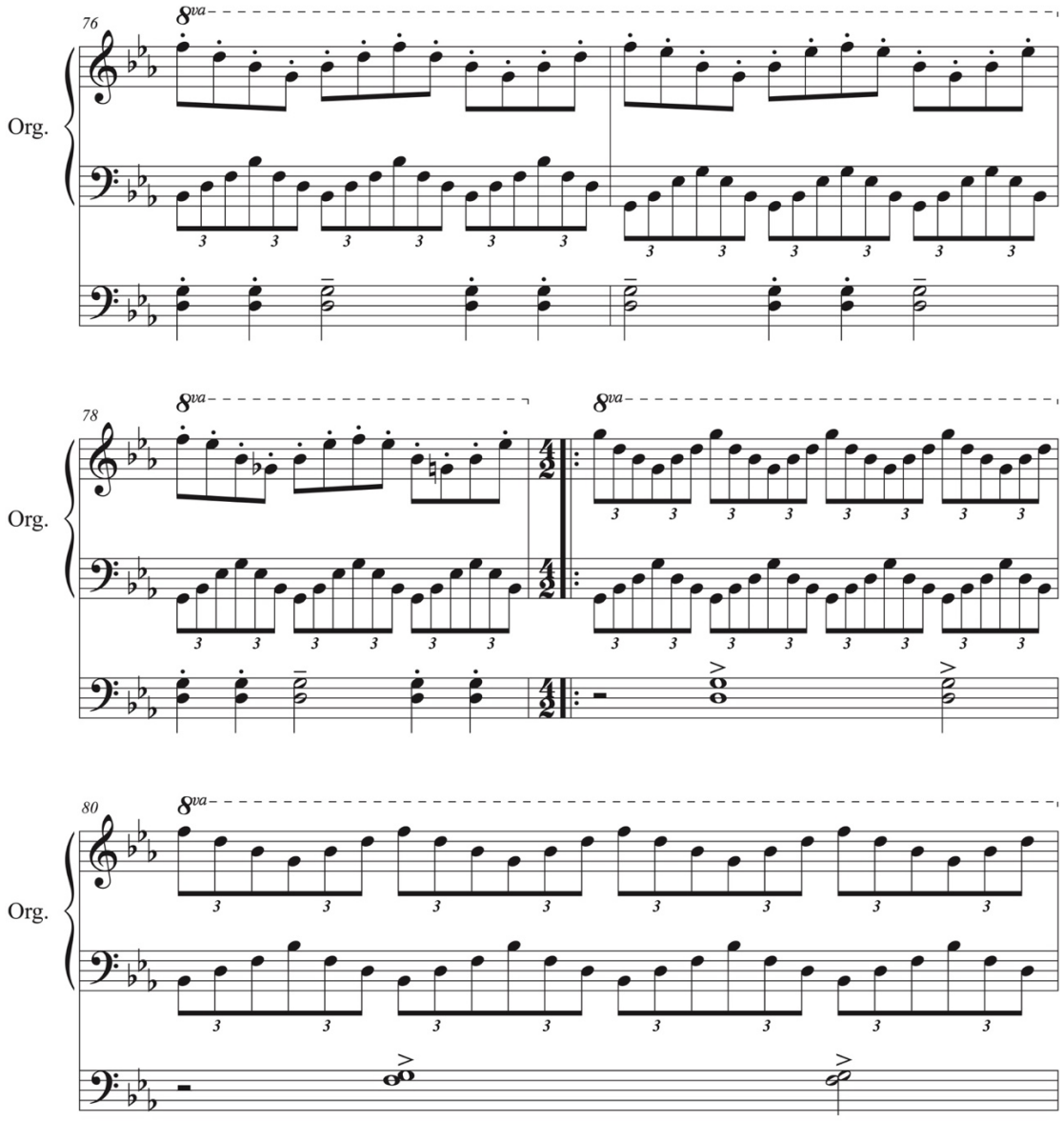
Glassworks
By Philip Glass



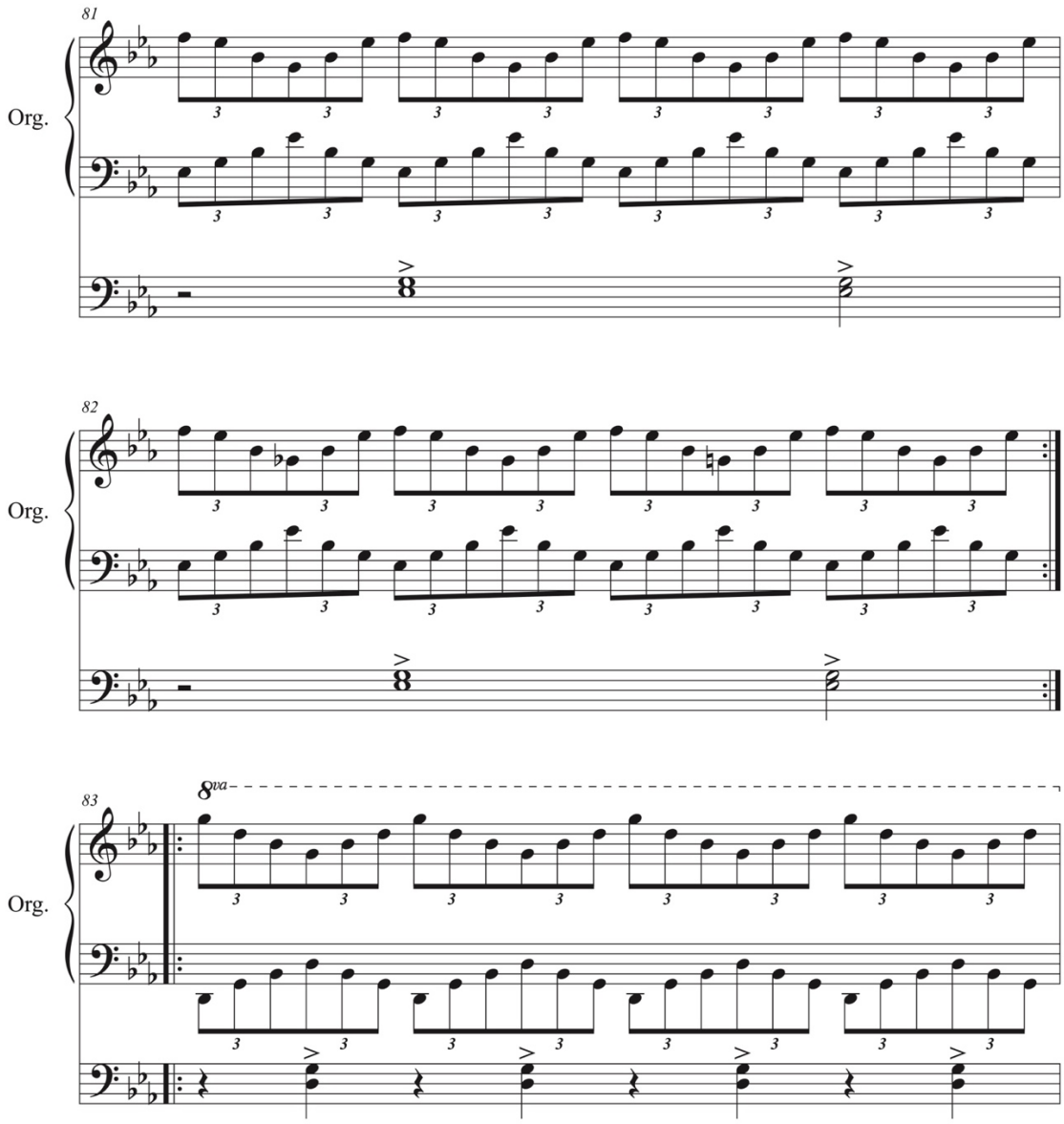
Glassworks
By Philip Glass



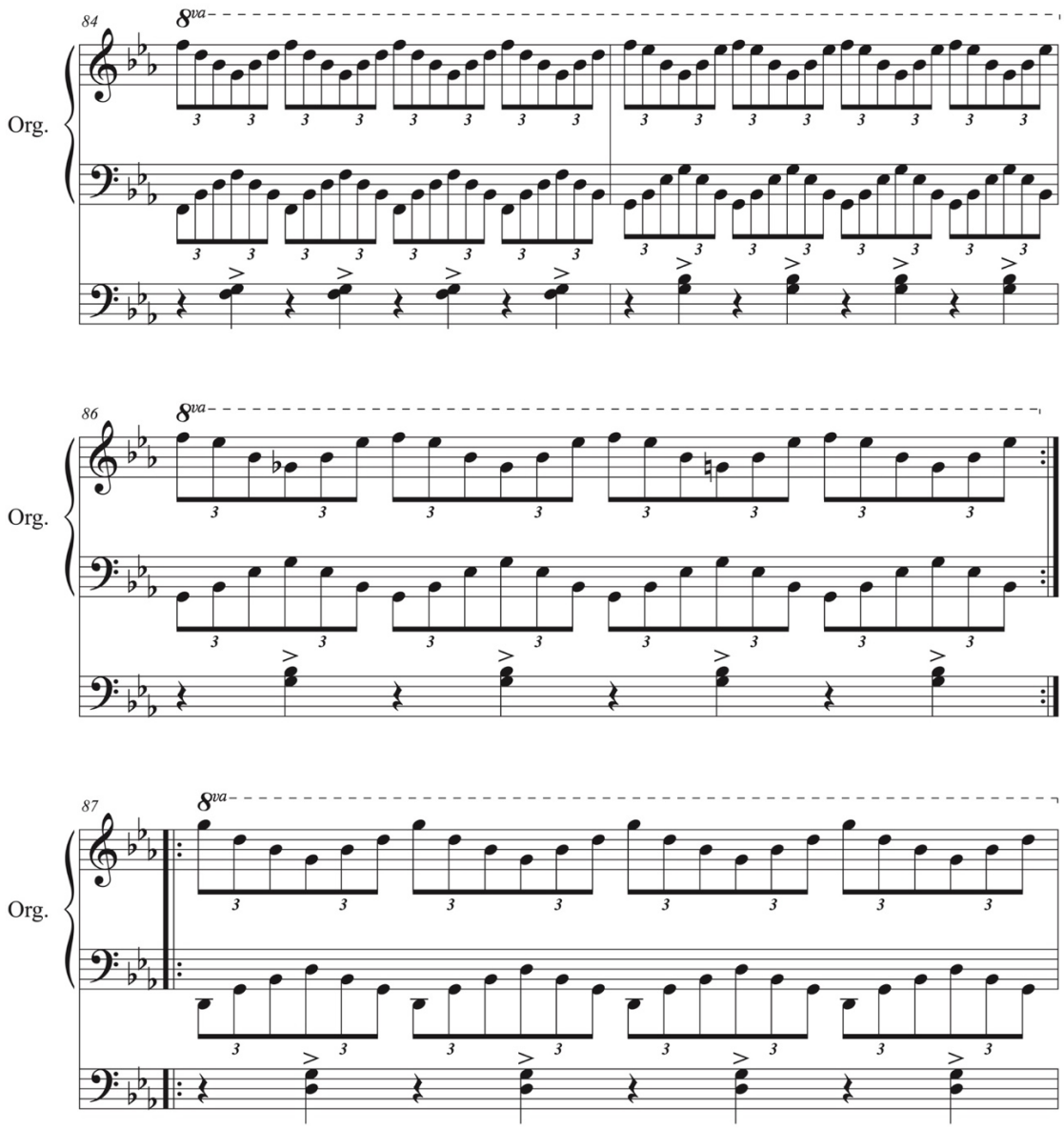
Glassworks
By Philip Glass



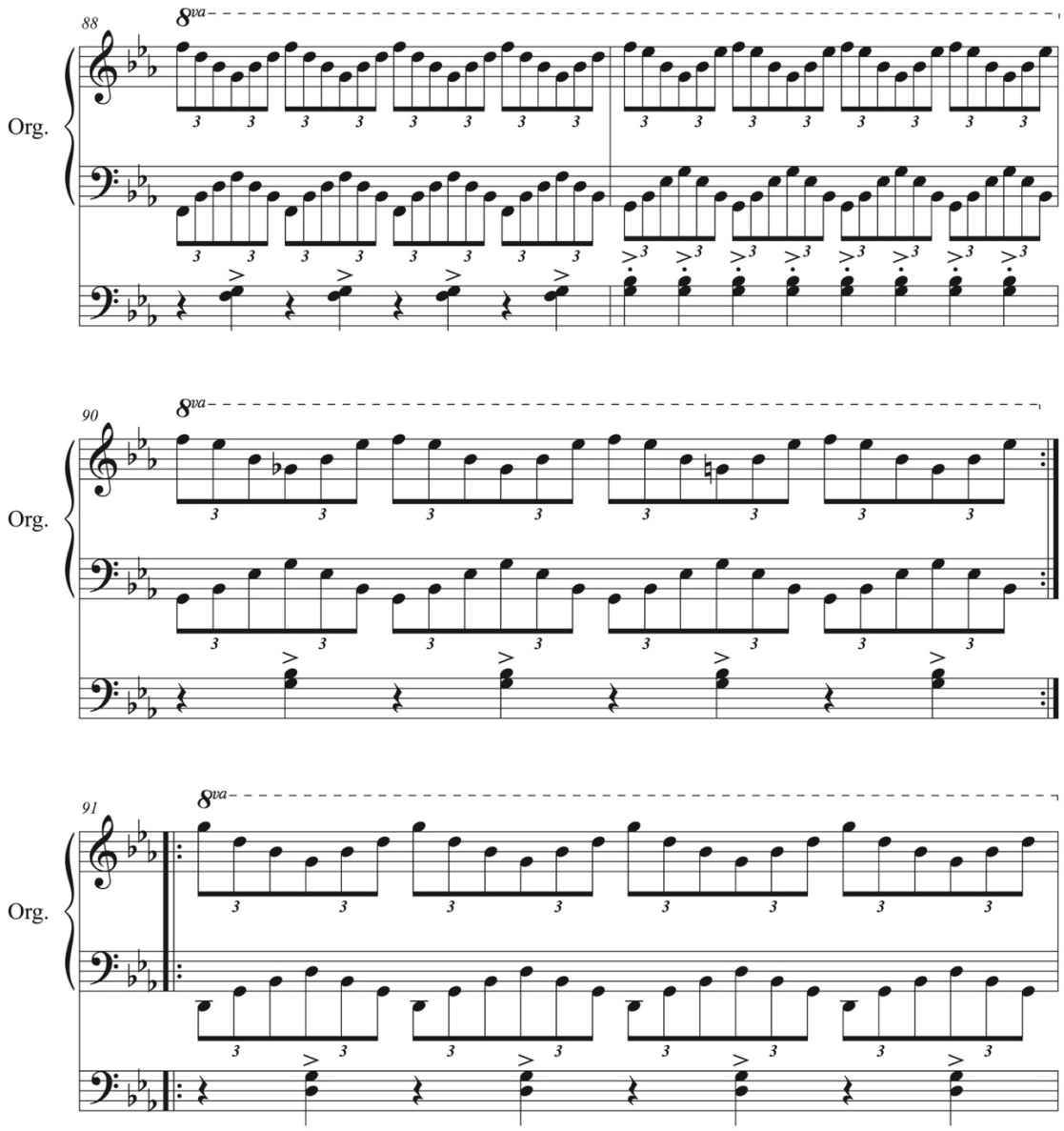
Glassworks
By Philip Glass



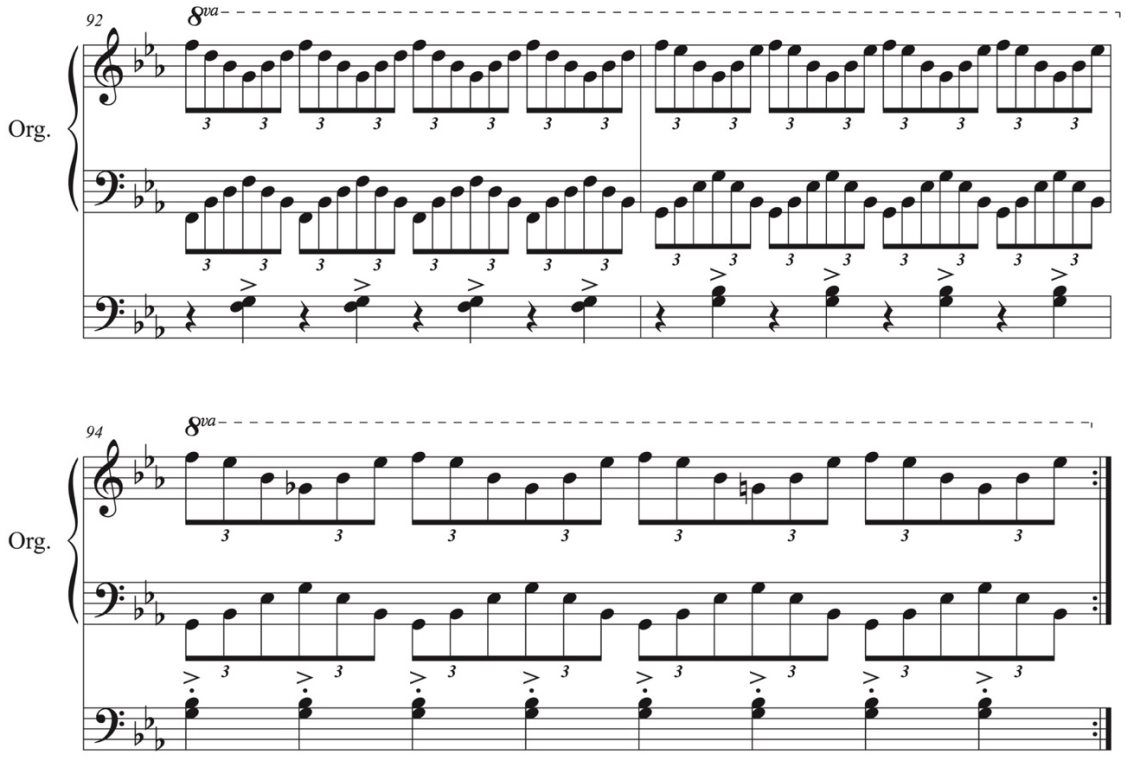
Glassworks
By Philip Glass



Glassworks
By Philip Glass



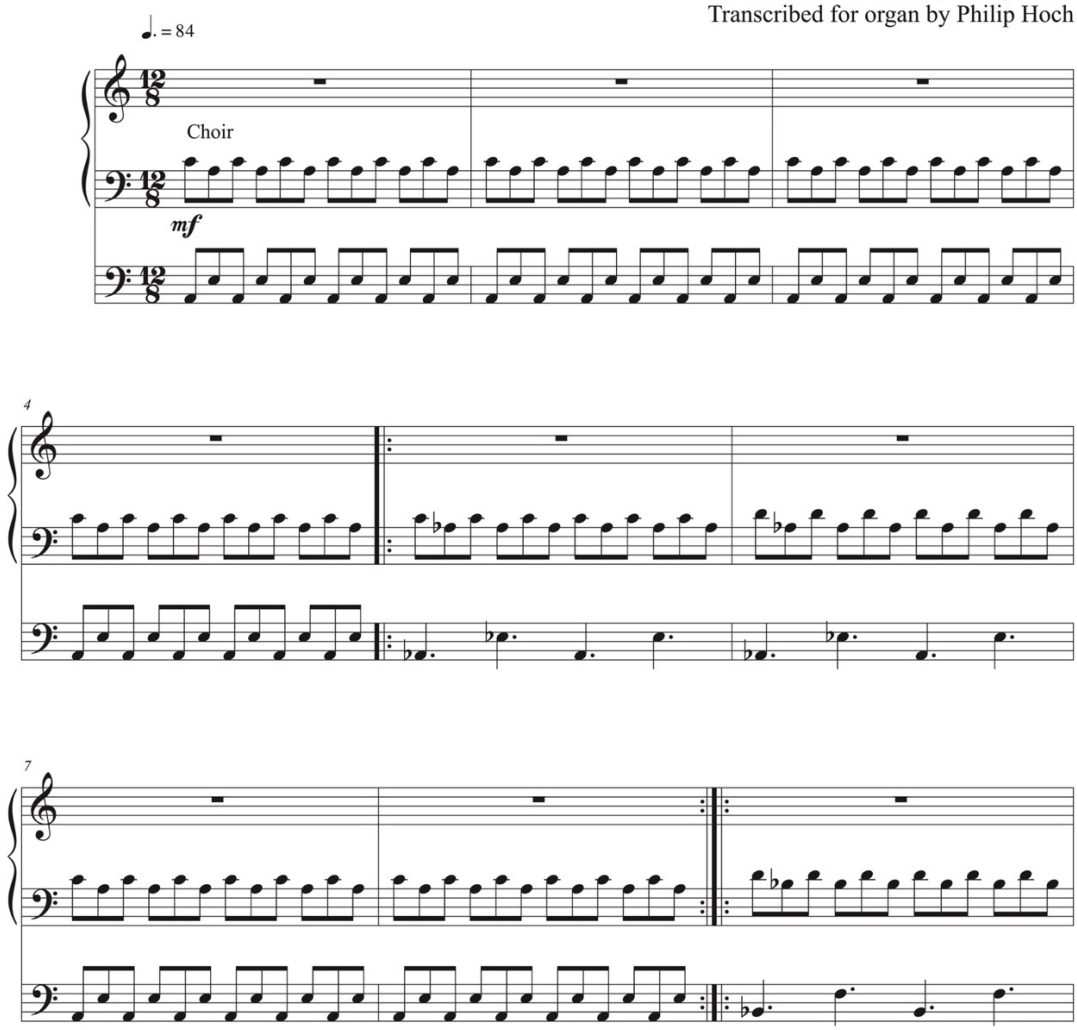
Glassworks
By Philip Glass

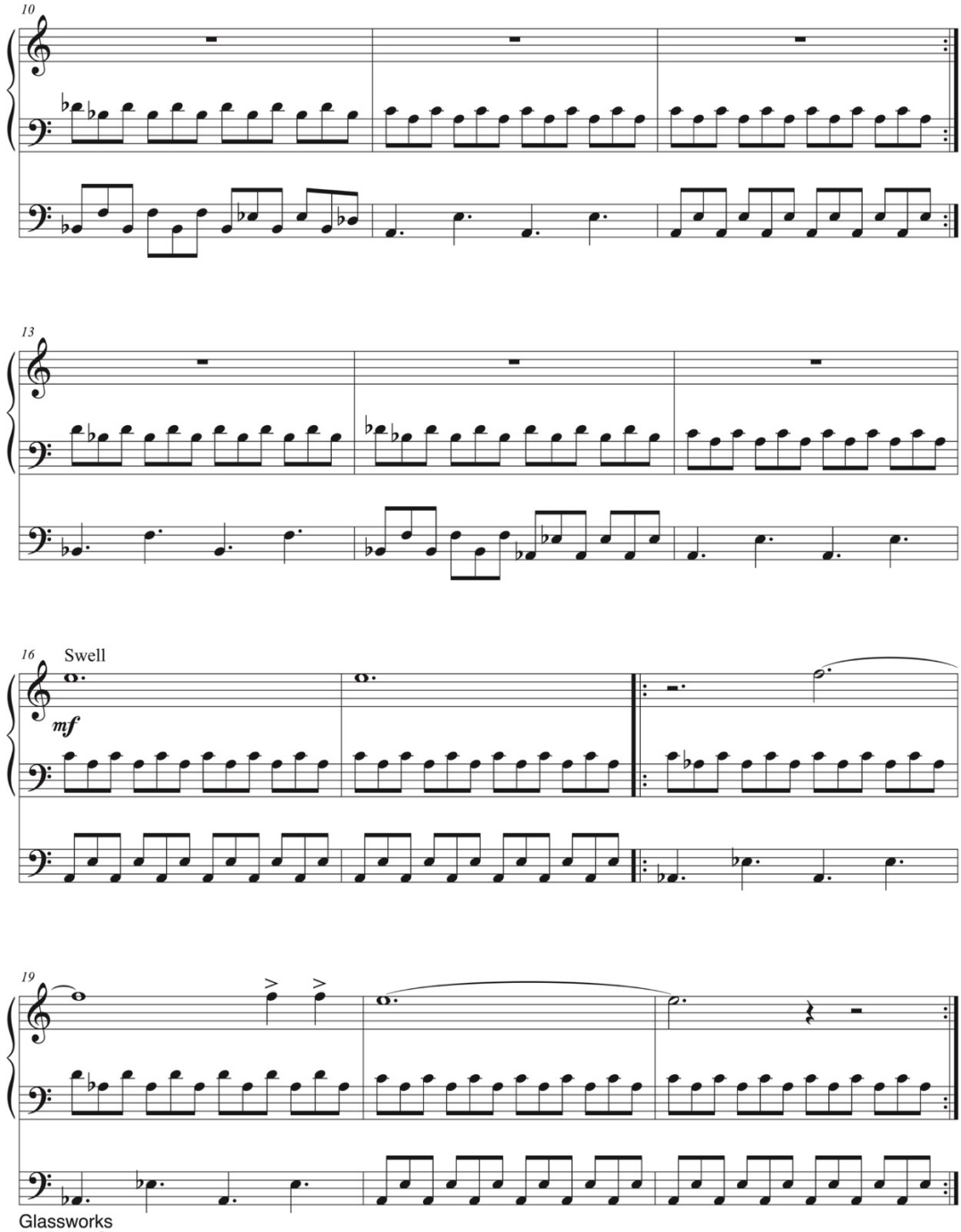


Glassworks
By Philip Glass

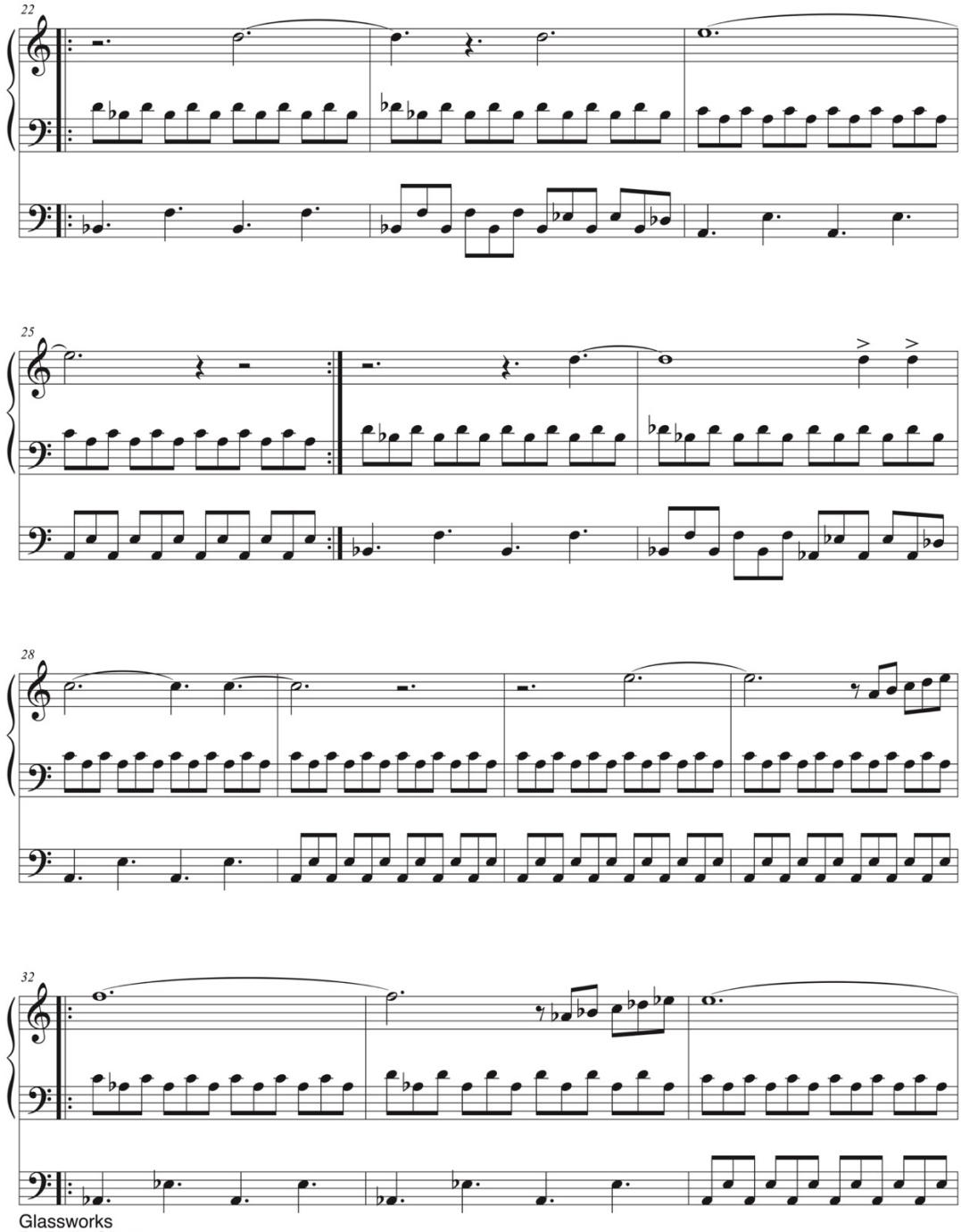
5 - Facades

Music by Philip Glass
Transcribed for organ by Philip Hoch





Glassworks
By Philip Glass



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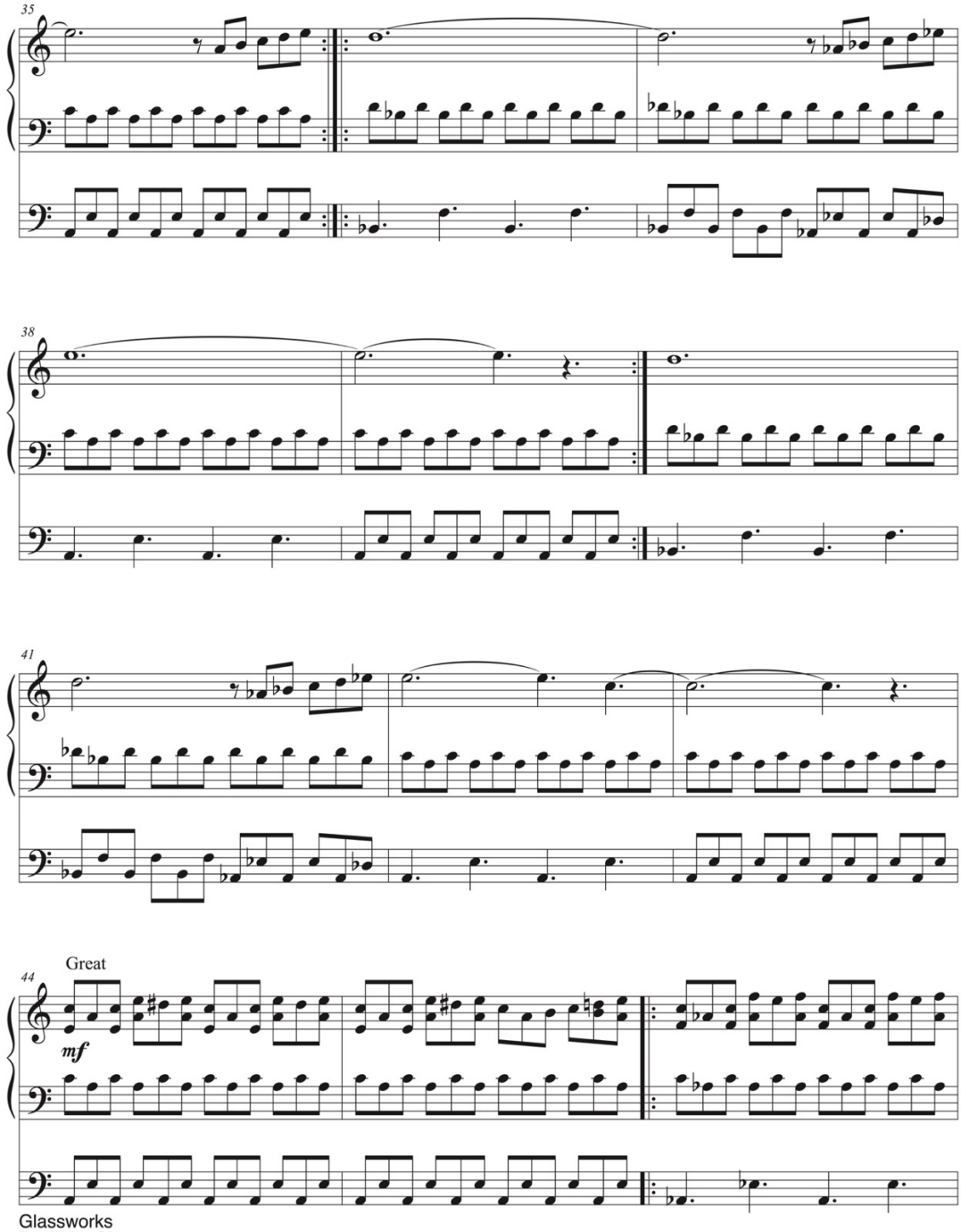
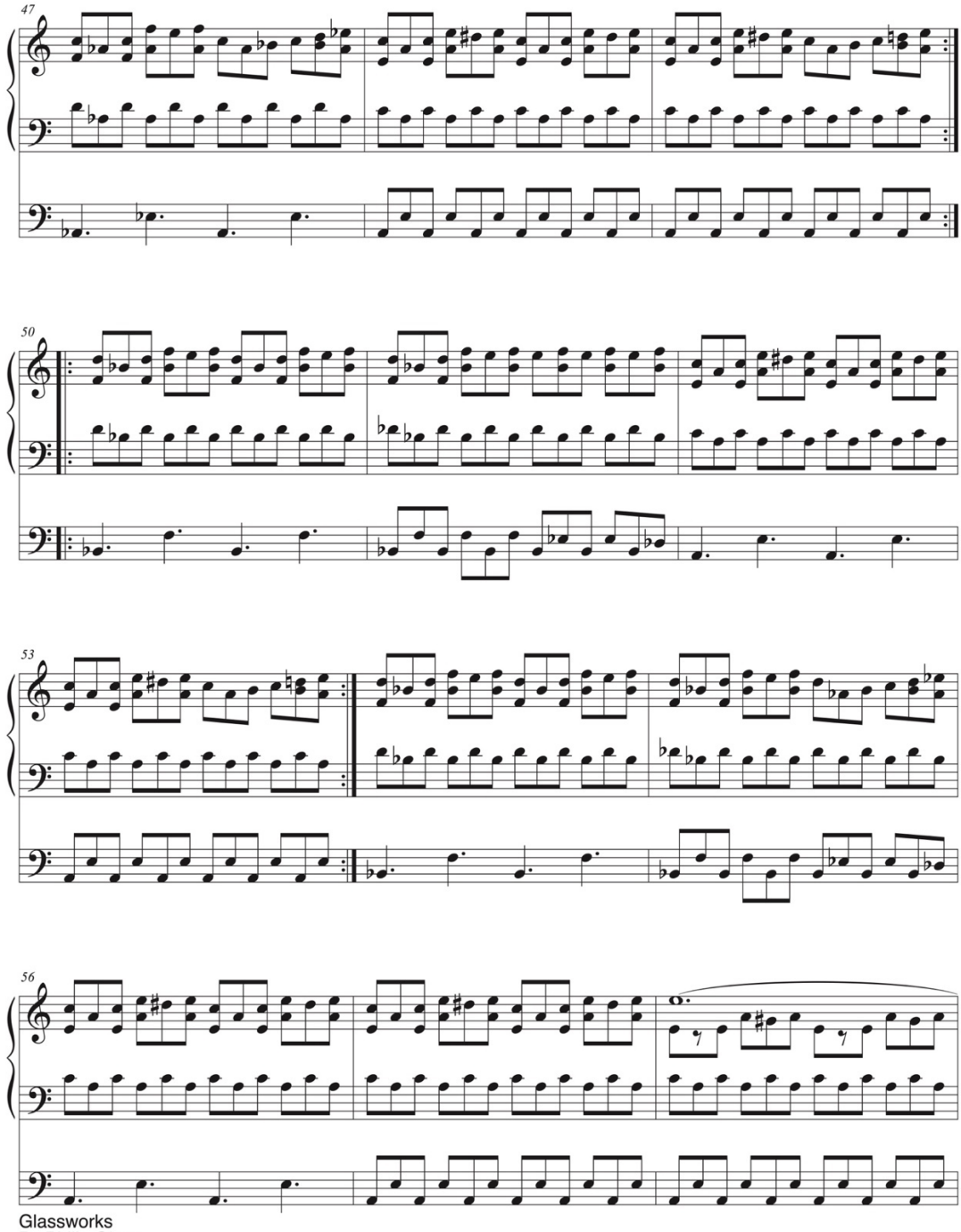
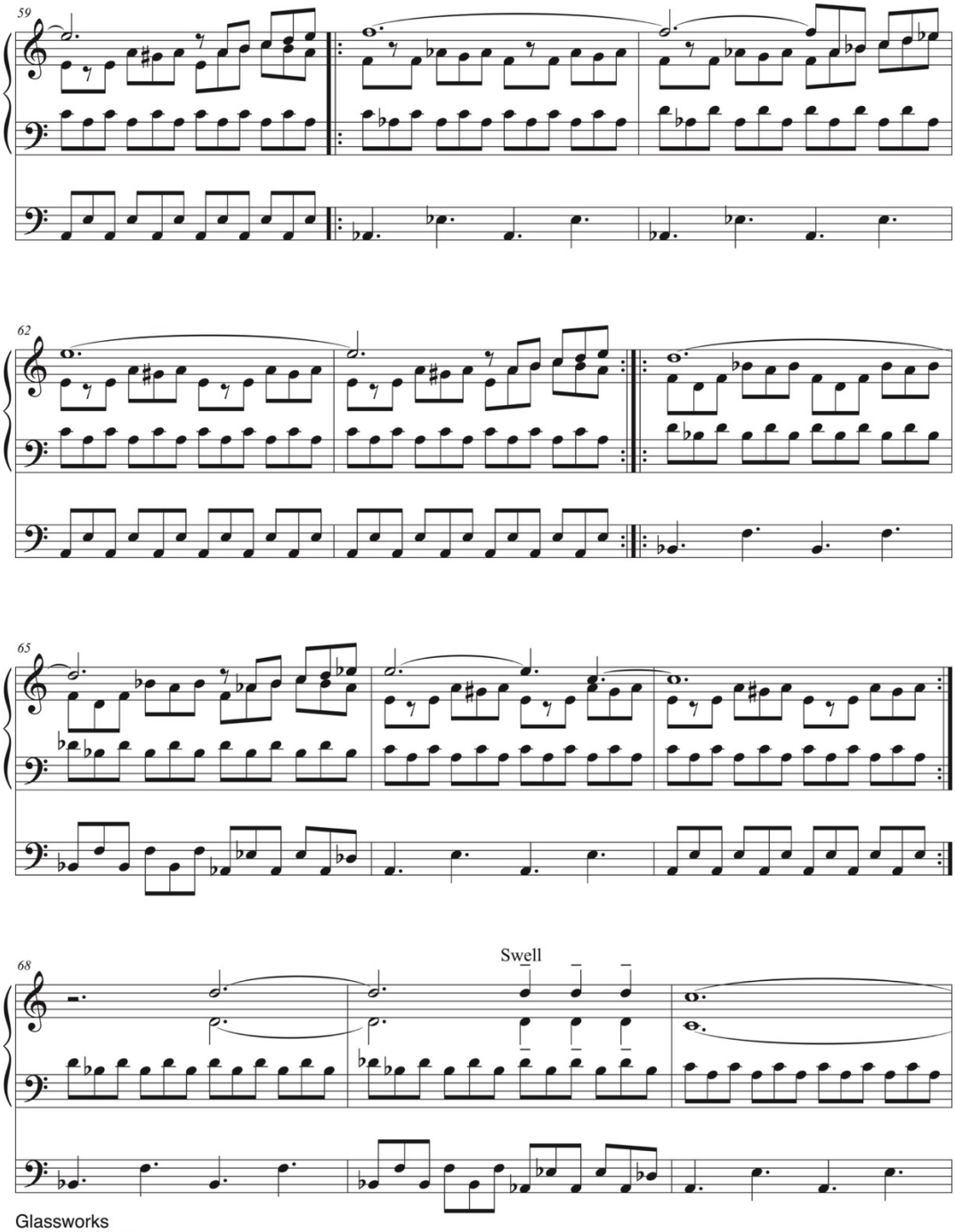
By Philip Glass



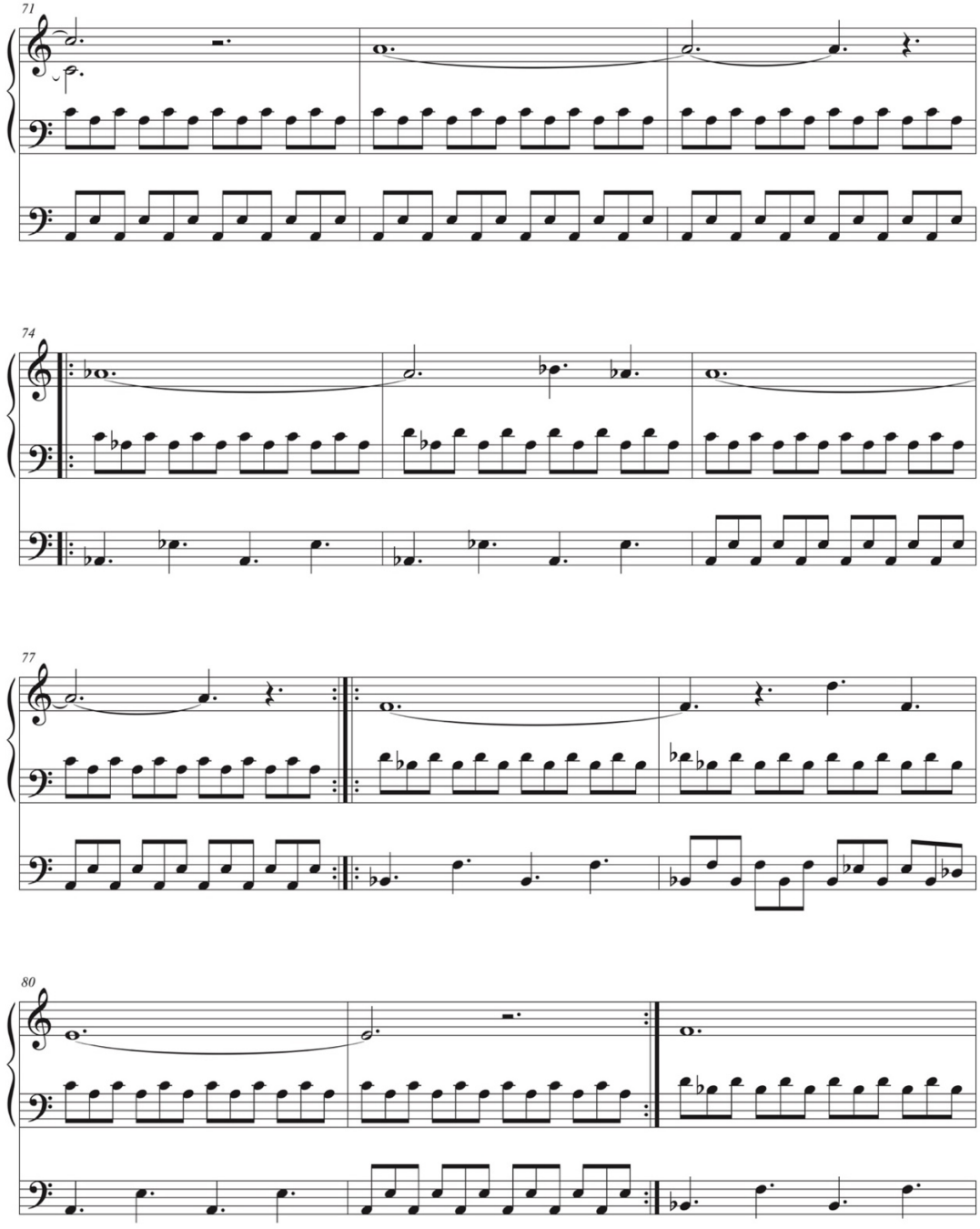
Glassworks
By Philip Glass



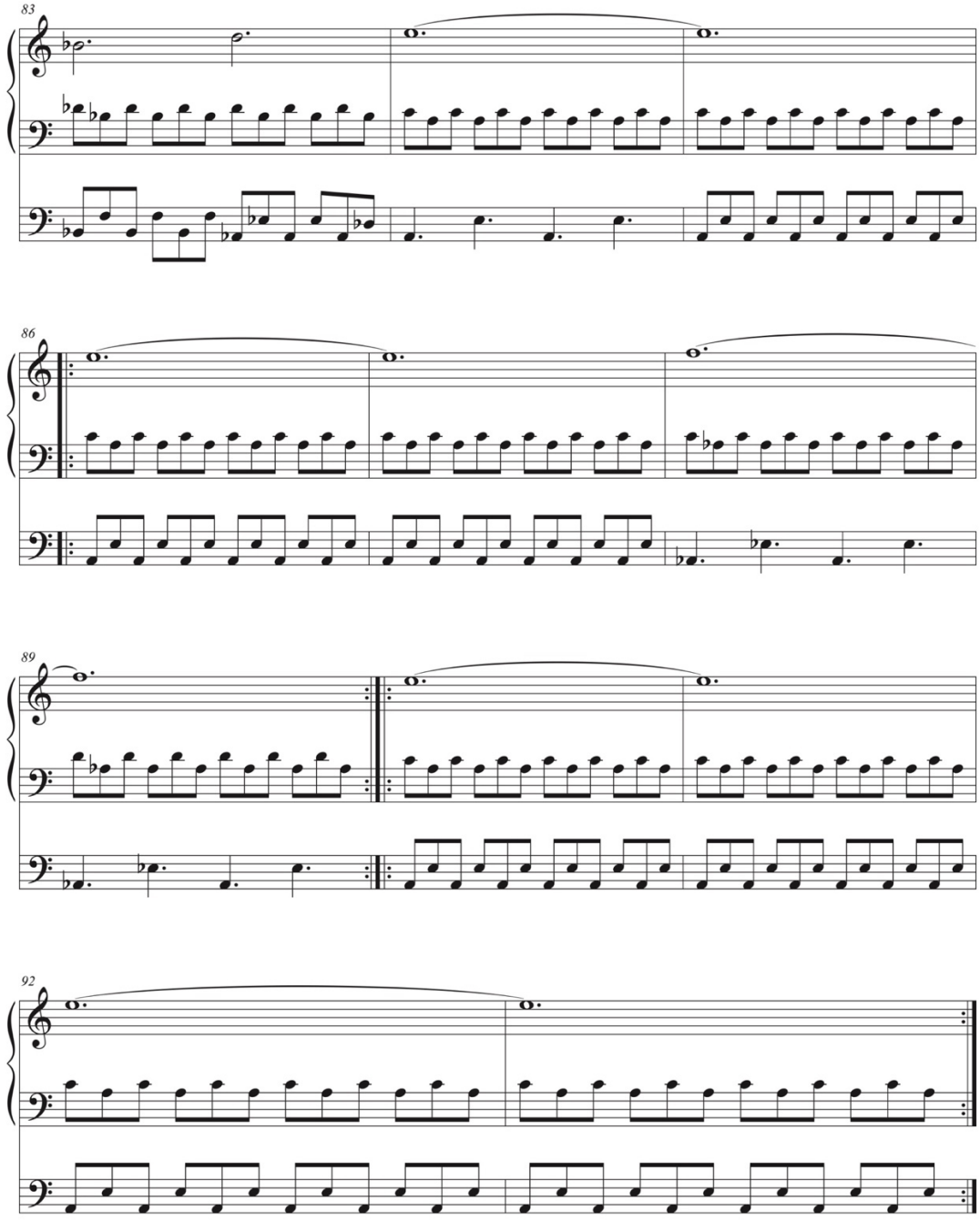
Glassworks
By Philip Glass



Glassworks
By Philip Glass



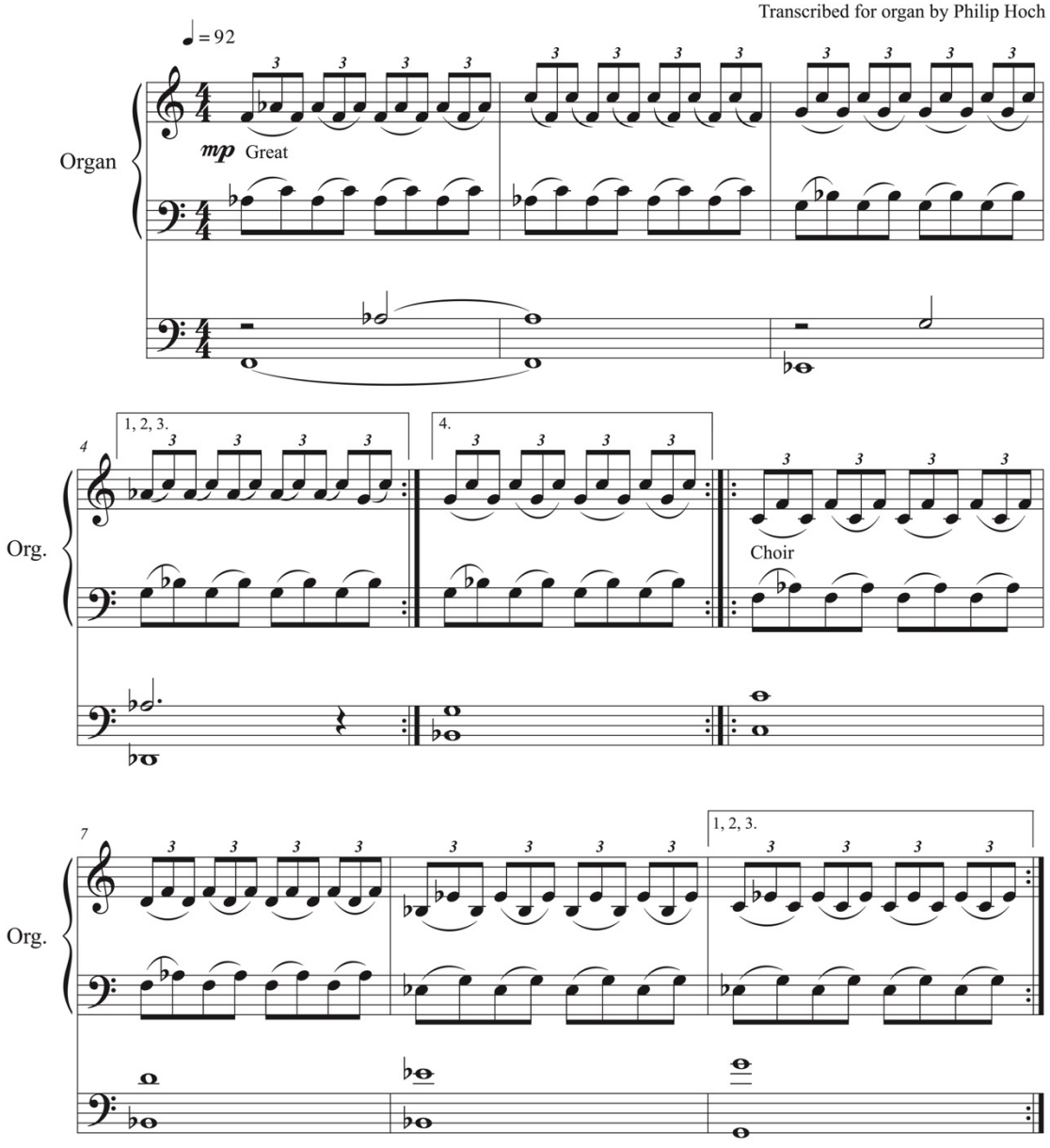
Glassworks
By Philip Glass

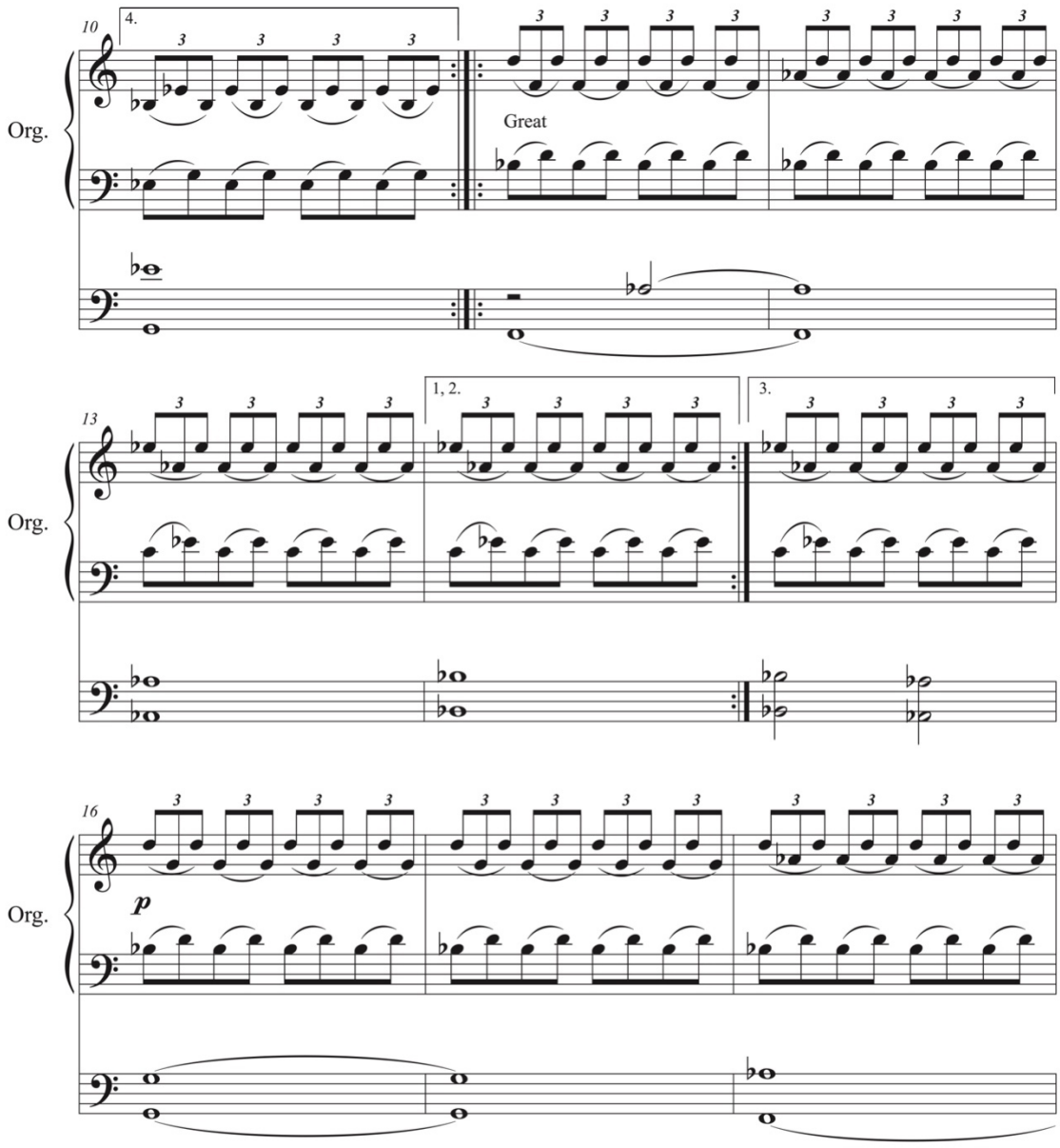


Glassworks
By Philip Glass

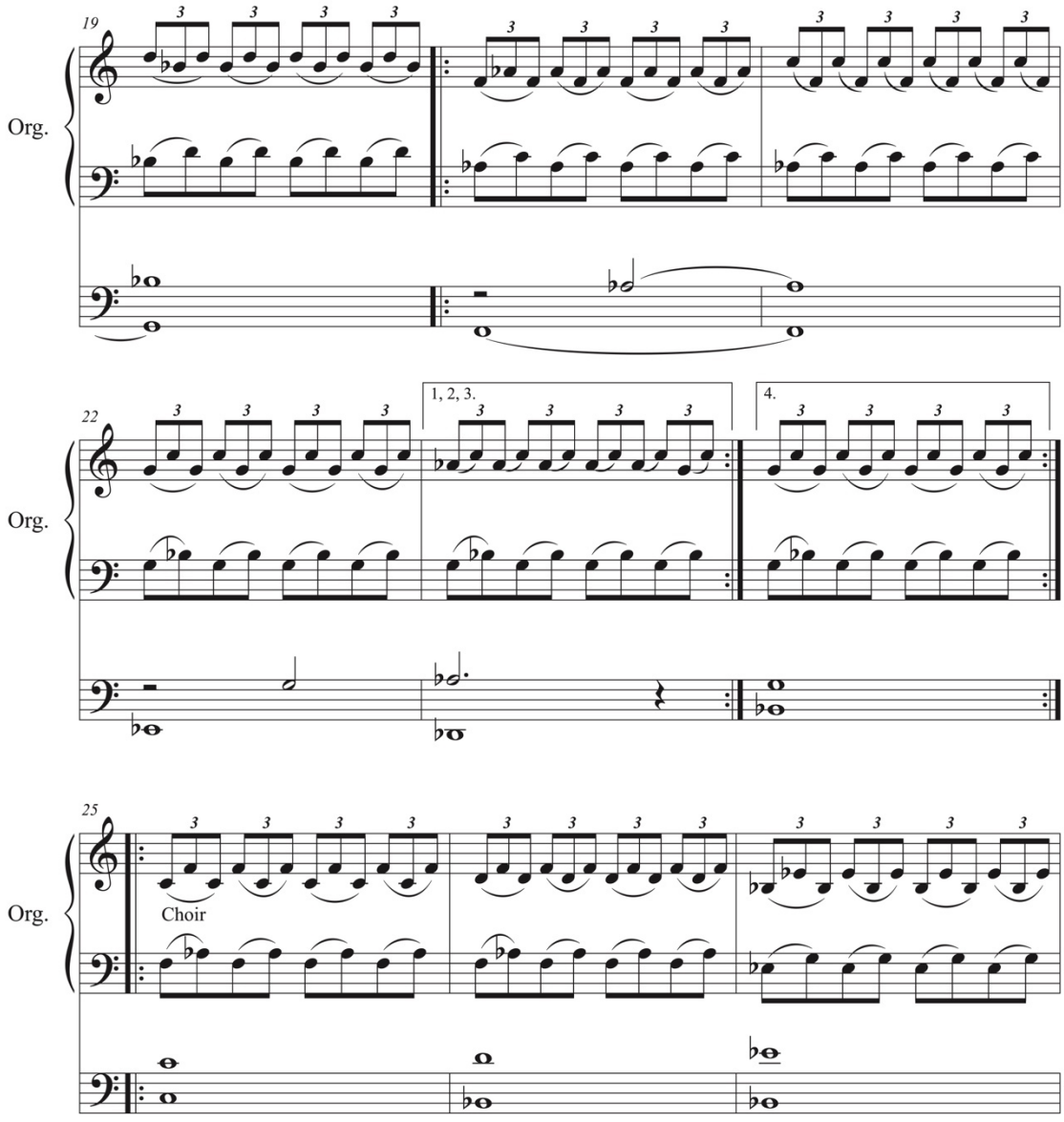
6 - Closing

Music by Philip Glass
Transcribed for organ by Philip Hoch

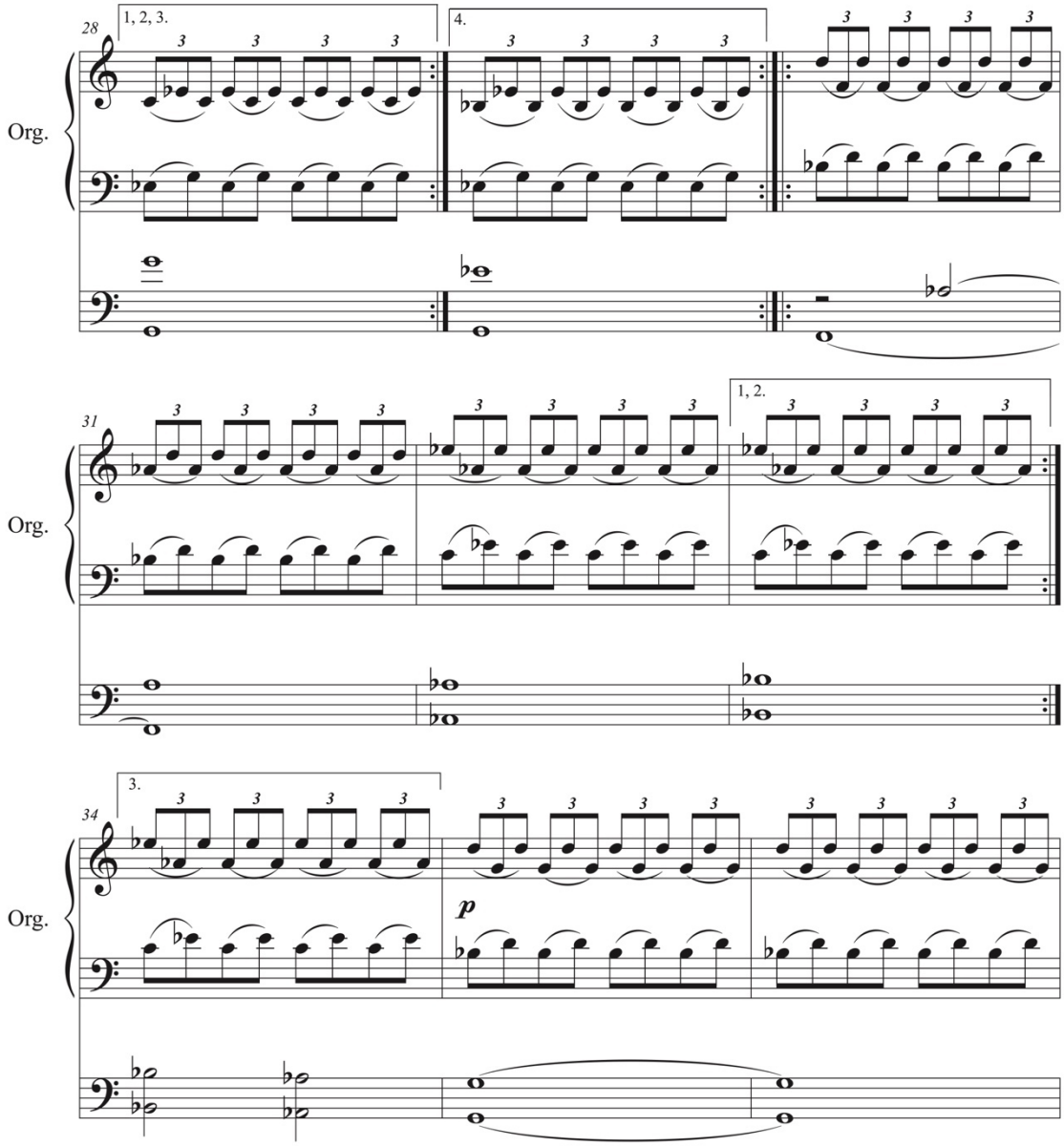




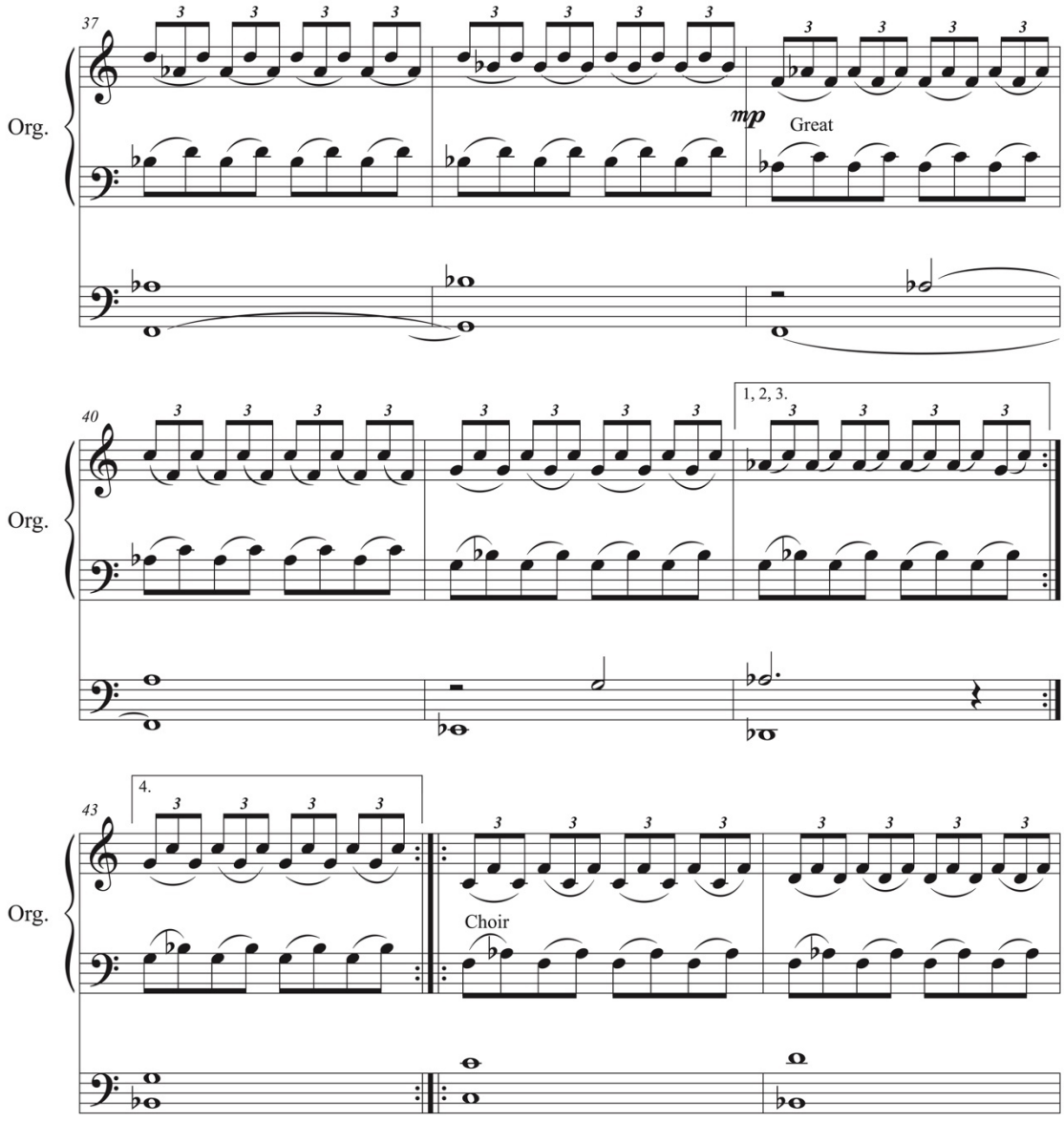
Glassworks
By Philip Glass



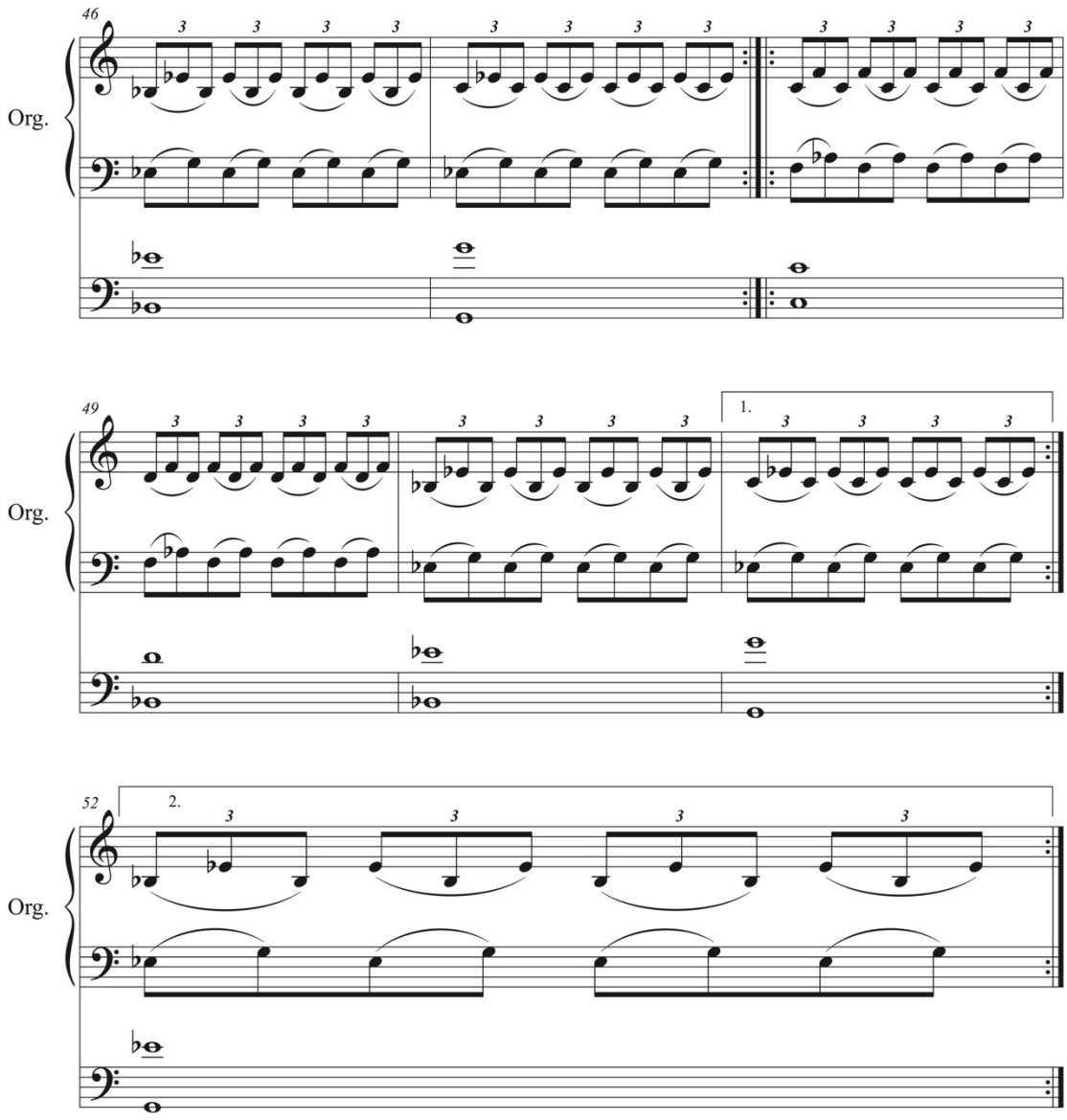
Glassworks
By Philip Glass



Glassworks
By Philip Glass



Glassworks
By Philip Glass



Glassworks
By Philip Glass

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