

11-25-2016

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Brielle Marie Frost

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

THEATRICAL ELEMENTS IN TŌRU TAKEMITSU'S *VOICE* AND
KARLHEINZ STOCKHAUSEN'S *ZUNGENSPITZENTANZ*

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Arts

Brielle M. Frost

College of Performing and Visual Arts
School of Music
Flute Performance

December 2016

This Dissertation by: Brielle M. Frost

Entitled: *Theatrical Elements in Tōru Takemitsu's Voice and Karlheinz Stockhausen's Zungenspitzentanz*

has been approved as meeting the requirement for the Degree of Doctor of Arts in
College of Performing and Visual Arts in School of Music, Program of Flute
Performance

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Date of Dissertation Defense October 21, 2016

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ABSTRACT

Frost, Brielle Marie. *Theatrical Elements in Tōru Takemitsu's Voice and Karlheinz Stockhausen's Zungenspitzentanz*. Published Doctor of Arts dissertation, University of Northern Colorado, 2016.

The flute has long been recognized for maintaining avian or mythological roles within music. The repertoire of the avant-garde era, however, has vastly changed the aural expectations to include more aggressive sounds through the use of extended techniques. Even though so-called extended techniques are often viewed as a new development, several have been in practice since the fourth and fifth centuries. A historical overview of such techniques demonstrates their significance in contemporary music. More recently, the solo flute repertoire has included interdisciplinary art forms such as theatrical elements, a much newer concept that was integrated during the mid-twentieth century.

Though rarely found within the solo flute and piccolo repertoire, dramatics such as spoken text and physical movement were first incorporated in *Voice* in 1971 by Tōru Takemitsu and in *Zungenspitzentanz* in 1983 by Karlheinz Stockhausen. The use of theatrics helps to define the formal structure of the pieces as well as enhances the mood of the works and creates visual interest for the audience. This combination of concert music with performance art creates a niche for musicians hoping to develop ensembles that can venture beyond traditional performance categories.

ACKNOWLEDGEMENTS

This document could not have been completed without the combined efforts of many individuals. I would like to express my sincere gratitude to the members of my committee, Dr. Jonathan Bellman, Dr. James Hall, Dr. Carissa Reddick, and Stephen Luttmann for their time, support, and knowledge in helping me shape this project. A special thank you to my research advisor, Dr. Jonathan Bellman, for his guidance, patience, and expertise. Without him, this document would not be possible. Thank you also to Dr. Gregory Klug for his feedback and help through the editing process.

Thank you to my wonderful family for their unwavering love, support, and encouragement throughout this process and over the course of my entire musical career. They have always maintained confidence in me, even at times when I was in doubt, and for that, I am truly grateful.

I would like to thank Hal Leonard MGB Publishing Co. and Stockhausen Foundation for Music, 51515 Kürten, Germany at www.karlheinzstockhausen.org, for giving me permission to use musical examples in the following document. All Stockhausen scores, CDs, and books can be ordered at www.stockhausen-verlag.com.



TABLE OF CONTENTS

CHAPTER	
I.	INTRODUCTION 1
II.	THE HISTORY AND DEVELOPMENT OF EXTENDED TECHNIQUES FOR THE FLUTE 9
	Circular Breathing..... 9
	Multiphonics 11
	Slides and Vibrato..... 12
	Key Clicks, Whistle Tones, and Jet Whistles 13
	Singing and Playing 14
	Theatrics..... 15
III.	<i>VOICE</i> BY TÔRU TAKEMITSU 20
	Analysis..... 25
IV.	<i>ZUNGENSPITZENTANZ</i> BY KARLHEINZ STOCKHAUSEN 43
	Analysis..... 56
V.	CONTEMPORARY PRACTICE AND CONCLUSIONS 73
APPENDIX	
	A. EXTENDED TECHNIQUES 79
	B. PERFORMANCE INSTRUCTIONS FOR <i>VOICE</i> BY TÔRU TAKEMITSU..... 82
BIBLIOGRAPHY 84	

LIST OF EXAMPLES

EXAMPLE

3.1	Tōru Takemitsu, <i>Voice</i> , H.11–H.12	27
3.2	Tōru Takemitsu, <i>Voice</i> , H.1–H.5	29
3.3	Tōru Takemitsu, <i>Voice</i> , H.17–H.18	30
3.4	Tōru Takemitsu, <i>Voice</i> , H.1	31
3.5	Tōru Takemitsu, <i>Voice</i> , H.6–H.10	32
3.6	Tōru Takemitsu, <i>Voice</i> , H.11–H.15	33
3.7	Tōru Takemitsu, <i>Voice</i> , H.27	34
3.8	Tōru Takemitsu, <i>Voice</i> , H.34	35
3.9	Tōru Takemitsu, <i>Voice</i> , H.41–H.42	36
3.10	Tōru Takemitsu, <i>Voice</i> , H.42–H.45	37
3.11	Tōru Takemitsu, <i>Voice</i> , H.51–H.54	38
3.12	Tōru Takemitsu, <i>Voice</i> , H.61–H.70	39
3.13	Tōru Takemitsu, <i>Voice</i> , H.76–H.80	40
3.14	Tōru Takemitsu, <i>Voice</i> , H.81–H.85	41
4.1	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , First rotation, mm.13–15	57
4.2	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , mm.17–18	57
4.3	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Second rotation, mm.19–20	58
4.4	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , mm.21–22	59

4.5	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Third rotation, mm.23–25	59
4.6	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Fourth rotation, mm.26–27	60
4.7	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Fifth rotation, mm.30–33	61
4.8	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Bändertanz, mm.34–38	62
4.9	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , One & Two o'clock, mm.39–54	63
4.10	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Three, Four, & Five o'clock, mm.57–74	64
4.11	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Six o'clock, mm.79–81	64
4.12	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Seven o'clock, mm.82–86.....	65
4.13	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Eight o'clock, mm.91–96.....	66
4.14	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Nine o'clock, mm.97–102.....	66
4.15	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Ten o'clock, mm.107–111	67
4.16	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Eleven o'clock, mm.117–127	68
4.17	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Twelve o'clock, mm.133–144.....	68
4.18	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Cadenza, mm.151–158.....	69
4.19	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Climax, m.159.....	70
4.20	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , Abgang, mm.170–175	71
4.21	Karlheinz Stockhausen, <i>Zungenspitzentanz</i> , mm.205–209.....	71

CHAPTER I

INTRODUCTION

Musical works are “of their time” stylistically, in a variety of different ways. They use contemporary idioms in order to connect with listeners, and even styles that stray from traditional musical norms still inevitably reflect their contemporary musical culture. On a technical level, the demands of difficult new works gradually become commonplace, with each succeeding generation of performers expected to master the challenges. This process, which developed out of the nineteenth-century virtuosity and conservatory traditions, has resulted in some of the most demanding works in the repertoire, especially in piano and violin works, which have proven to be models for technical growth in other instruments.

Composers further challenged the limitations of both the instrument and performer with the incorporation of extended techniques, musical effects not traditionally associated with the instruments. The Italian composer Luciano Berio (1925–2003), most known for using spatial notation, virtuosic technical passages, and extended techniques, challenged musicians with his collection of fourteen *Sequenzas*, which he composed from 1958 to 2002, each for a different orchestral instrument and the voice. Several of these *Sequenzas* were the first in the instrument’s repertoire to include special effects. One of these effects included pairing the voice and instrument together, either by humming while

playing, speaking across or into the mouthpiece, or saying words independently from the instrument. For example, in his *Sequenza V* for trombone solo, Berio requires the performer to speak “Why?” as well as hum, inhale, and make other vocal noises into the instrument all while performing specific physical movements.¹ These vocal sounds and gestures were unfamiliar effects on these instruments, yet, like other kinds of virtuosity they slowly became integrated into more instrumental works.

In the last century or so, composers have expanded the technical and musical requirements in the solo flute repertoire to include more experimental sounds; however, this was not always the case. Because of its characteristics and tonal qualities, the flute has long signified bucolic settings, birds, and mythological characters. During the nineteenth century, the flute sound and apparatus allowed for little more than traditional musical associations. Since the development of the modern flute in 1847 by Theobald Boehm (1794–1881), the instrument has had a much more consistent tone quality than its predecessors, and its technique has become more standardized. The mechanical standardization permitted musicians to perfect a homogeneous sound and to effortlessly navigate throughout the instrument’s registers.² Flute playing reached new heights of both technique and lyricism in the Paris Conservatory under the leadership of Paul Taffanel (1844–1908). Now generally considered to be the founding father of the French flute school, Taffanel expanded the flute’s expressive and technical capabilities, modified the approach to vibrato, reformed teaching methods, and revived Baroque works originally written for *flauto traverso*.³ The natural mechanism of the flute allowed for

¹ Luciano Berio, *Sequenza V for trombone solo*. (Vienna: Universal Edition, 1966).

² Nancy Toff, *The Flute Book. A Complete Guide for Students and Performers* (Oxford: University Press, 1996), 54–55.

³ *Ibid*, 252–253.

delicate phrasing, light articulations, playful melodies, and florid technique that permitted composers and performers to better take advantage of the flute's ability to render bucolic settings and other extra musical phenomena.

One of the most well-known solos that epitomizes this mythological role is Claude Debussy's *Syrinx*. Composed in 1913, this work set the trajectory for other flute solos during the twentieth century.⁴ Originally titled *La Flûte de Pan*, this programmatic work conjures imagery of the Greek god Pan, his reed flute syrinx, and an erotic idyll (perhaps remembered, perhaps imaginary) with a nymph.⁵ *Syrinx* was one of a group of works—such as the same composer's *Prélude à l'après-midi d'un faune*, Jules Mouquet's *La Flûte de Pan*, and Arthur Honegger's *Danse de la Chèvre*—to suggest eroticism with the instrument, via its associations in Greek myth and the essence of mythical creatures that played it or danced to it. Alongside this association, the instrument has long been used to suggest pastoral images generally as when a solitary shepherd played to pass the time; Ludwig van Beethoven's Sixth Symphony ("Pastoral") is probably the best-known example, but when Beethoven wrote it the tradition was well over a century old. The register and timbre of the flute also led many composers to evoke actual birds with the instrument, as exemplified by capricious melodies in Igor Stravinsky's *Firebird*, Olivier Messiaen's *Le Merle noir*, and Sergei Prokofiev's *Peter and the Wolf*. The modern silver flute provided a flexibility that enabled it to produce subtle nuances as well as robust and edgy tones, and although the French school refined certain qualities of the flute and its repertoire, the versatility of the newer instrument allowed composers to reach beyond

⁴ Claude Debussy, *Syrinx for flute solo*. (München: G. Henle Verlag, 1913).

⁵ Kirsten Jan Price, "Debussy's *Syrinx*: Mystery, Myth, and a Manuscript," *The Flutist Quarterly*, 34, no. 1 (Fall 2008): 19.

traditional performance practices, and the traditional associations of the flute came to be superseded.

More than two decades after *Syrinx* was written for the silver Boehm model, Edgard Varèse composed *Density 21.5* in 1936 to explore the capabilities of the new platinum flute, a stark contrast to Debussy's myth-inspired work. Varèse's piece was the first to include key clicks, and it exploited the extreme range of the instrument while juxtaposing sharp duple and triple rhythms, uncommon in flute music of the time. Georges Barrère premiered the work in 1936, and the new instrument could now be associated with a more aggressive sound than was the case with the traditional silver flute.⁶

The next major development in the solo flute repertoire was Luciano Berio's *Sequenza I*. Composed in 1958, the work uses spatial notation, an approach that we will later encounter in Tōru Takemitsu's *Voice* in Chapter 3. The piece incorporates such extended techniques as flutter-tonguing and multiphonics. Though scarcely used throughout the composition, these multiphonics are among the first double tones to be composed for a solo flute work.⁷ Berio's *Sequenza* not only challenges the technical capabilities of the performer, but also the performer's ability to interpret the rhythmic groupings of the spatial notation.

The technical and sonic possibilities of the flute thus progressed in tandem with the modernist experimentation of the twentieth century. *Avant-garde* methods and notation were integrated into flute compositions, leaving the conventional attractiveness and predictable musical content of the Paris Conservatory flute repertoire far behind.

⁶ Toff, *The Flute Book*, 274–275.

⁷ *Ibid.*, 276.

Following this, the next major development in the solo flute repertoire was the incorporation of elements from the theater: movement, spoken text, costumes, props, and lighting. At the vanguard of this creative shift were Tōru Takemitsu (1930–1996) and Karlheinz Stockhausen (1928–2007). They were among the first pioneers to introduce dramatic elements into flute and piccolo solo works, although other extended techniques had been gaining currency in flute performance for some time. Takemitsu included poetic text in his piece *Voice* for solo flute, composed in 1971, while Karlheinz Stockhausen indicated physical movement in his 1983 piece *Zungenspitzentanz* (Tip-of-the-Tongue Dance) for solo piccolo. Although both pieces are innovative in their integration of music and bodily gestures, performers much more commonly study *Voice* than *Zungenspitzentanz*, which remains much less familiar.

Though these were new and striking elements in the solo repertoire, performative elements were also being incorporated into chamber works at this time, many of which include flute. In 1966, for example, the American composer George Crumb (b. 1929) composed *Eleven Echoes of Autumn* for violin, alto flute, clarinet, and piano, based on Federico García Lorca's poem *Gacela de la Terrible Presencia*. During this piece, each performer softly speaks portions of the text before the flute, violin, and clarinet cadenzas, creating a dialogue between the performers. Crumb assimilated further theatrical elements such as costumes and lighting into one of his later and still popular chamber works, *Vox Balaenae* (Voice of the Whale) for electric flute, cello, and piano, composed in the same year as Takemitsu's *Voice*.⁸ In this work, Crumb instructs the performers to wear dark masks and use blue lighting. The costumes and light alterations create an

⁸ George Crumb, *Vox Balaenae*. (New York: C.F. Peters, 1971).

underwater atmosphere and are enhanced by the extended techniques and vocalizations, which generate a fantastical scene.

English composer Peter Maxwell Davies (1934–2016) also used a combination of spoken text, props, and costuming in his 1969 piece *Eight Songs for a Mad King* for baritone, flute, clarinet, violin, cello, piano, harpsichord, and percussion. The character of King George III, portrayed by the vocalist, is a tormented ruler who falls deep into insanity while coaxing his instrumentalist birds to sing. The instrumentalists are to perform while sitting in large birdcages and as the climax is reached the vocalist smashes the violin. Visual layers are created for the audience through the use of props, costumes, poetry, and music. The piece uses various extended techniques for all instruments, including the flute (doubled on piccolo), which is used to create a bird-like chirping conversation with the vocalist. In this musical exchange, Davies notates multiple staves in the score to create a picture of a birdcage on the page, a compositional approach referred to as *Augenmusik* (eye music), similar to the well-known early Renaissance composition *Belle, bonne, sage* by Baude Cordier (ca.1380–ca.1440), which is in the shape of a heart. As a companion piece to this serious work, Davies composed a comedic sequel titled *Miss Donnithorne's Maggot*, a 1974 music-theater work for mezzo-soprano and instrumental ensemble. The piece captures Miss Donnithorne, a woman left at the alter, during a vocal singing rage where she is standing next to what remains of her wedding cake, which is made up of musical instruments. Though this work can allow for as much visual spectacle as *Eight Songs for a Mad King*, it uses fewer extended techniques than its precursor.

During the same year as *Miss Donnithorne's Maggot* came another noticeable piece, *Augenmusik: A Mixed Mediocritique* by Donald Martino, which also demanded that the musician become an actor.⁹ This satirical work, composed for uninhibited female percussionist and pre-recorded tape, was composed as a reaction to the mixed-media works that became popular during the 1960s. The work is outlined in pictures and instructions for how and when the performer is to act, move across the stage, and remove articles of clothing, requiring the musician to be nearly or completely naked by the end of the piece, with the result that most performers are disinclined to perform it.

In 1982, one year before Stockhausen's *Zungenpitzentanz*, the American composer John Corigliano (b. 1938) composed *The Pied Piper Fantasy*, which he envisioned as a "programmatic fantasy-concerto." In this work Corigliano divides the orchestra into two musical sections near the end of the piece and instructs a group of children to follow the flutist off stage. The physical movement of the "Children's March" is an essential part of the work and has inspired further theatrical elements such as lighting and costumes to be incorporated into later performances of the piece. This has become a well-known work in the flute repertoire for its creatively fun subject matter and the opportunity for the flutist to delight the audience with showy technical passages.

Although several theatrically oriented compositions involving flute were written and performed within the span of a couple of decades, such pieces did not create a lasting trend in the solo flute repertoire. One likely reason is that they require an entirely new kind of performance practice not previously expected of musicians: the assumption of the role of actor, which must be executed competently. This additional layer calls for lengthier learning time for the musicians and a novel approach to the music, and it

⁹ Donald Martino, *Augenmusik: A Mixed Mediocritique*, (Boston: E.C. Schirmer, 1974).

remains a minority interest, practiced by only a small segment of the flute community. Nonetheless, *Voice* and *Zungenspitzentanz* were of signal importance in bringing the flute and piccolo into the world of performance art, and as such they are among the most innovative solo works in the repertoire. Beyond the extended techniques, alternate fingerings, and spatial notation, they also demonstrate a higher level of expectation for the flutist, who must incorporate a broader range of sound and master new and inventive performance practices. These two pieces have broadened the identity of the flute far beyond that of the traditional French school and its traditional pastoral and avian associations. They would not have been possible without the previous introduction of extended techniques to the flute repertoire, however, and so an overview of these techniques is a necessary prerequisite to understanding them.

CHAPTER II

THE HISTORY AND DEVELOPMENT OF EXTENDED TECHNIQUES FOR THE FLUTE

Extended techniques have become increasingly common in contemporary music. This evolving performance practice explores new sound capabilities that were not originally intended for the instrument, several of which include key clicks, multiphonics, residual air tones, flutter-tongue, and much more. This process allows composers and musicians to create unique colors of sound and to challenge the audience's expectations of a musical performance. Although extended techniques were frequently assimilated during the age of high modernism, many have earlier origins, dating back to the early nineteenth century or before, while others are twentieth-century innovations.

Circular Breathing

Circular breathing is a skill whereby one produces a constant stream of air from the mouth by simultaneously breathing through the nose and storing air in the cheeks. Unlike other extended techniques, which produce striking effects, this technique is imperceptible to general audiences. Though it is infrequently used and one of the more difficult extended techniques for flutists to master, this skill is one of the oldest techniques to be cultivated among woodwind players. It is more commonly utilized on a

double reed instrument; however, flutists have created their own technique for developing this breathing ability. The development of this technique is difficult to pin down due to its use in various cultures and musical genres and not one individual can receive credit for championing this technique. Despite this, several flutists within the jazz, popular, and contemporary realm such as Robert Dick, Rahsaan Roland Kirk, Sharon Bezaly, Alberto Almarza, and Andrea Griminelli are recognized for implementing the skill.

The tradition of circular breathing has extended over centuries and can be first traced back to the aulos players of ancient Greece during the fourth and fifth centuries C.E.¹⁰ The technique was practiced in several civilizations throughout history, including Malaysian seru-nai players, taking hold later in western culture.¹¹ The first documented use of this breathing came about during the mid-twentieth century. In 1959, it was recounted that the Czech flutist Antonin Mach had used this technique of circular breathing at the International Competition of Wind Instruments in Prague during a performance of the Allemande movement in J.S. Bach's Partita in A minor.¹² Almost two decades later, another Czech flutist, Zdenek Bruderhans, demonstrated his own ability in a 1977 recording of The Flight of the Bumble Bee and Niccolò Paganini's Moto Perpetuo.¹³ Today, it is more common for flutists to implement this skill in contemporary pieces rather than traditional classic works.

¹⁰ Annie Bélis. *Aulos* (Oxford Music Online: 2007-2015, accessed February 18, 2015).

¹¹ Toff, *The Flute Book*, 90.

¹² *Ibid*, 87.

¹³ *Ibid*.

Multiphonics

In 1810 in Vienna, the flutist Georg Bayr (1773–1833) astounded audiences by playing two simultaneous notes within a rapid musical passage during a concert. This was the first performance in which such an effect was heard, a great accomplishment at the time, and as a result it was greeted with astonishment and skepticism from audiences.¹⁴ Due to the growing interest of such a technique, a work was commissioned for Bayr to demonstrate this skill.¹⁵ He further explained this technical process in his book *Die Schule für Doppeltöne auf der Flöte* (The School for Double Tones on the Flute).¹⁶ Double tones came to be cultivated by several flutists during the nineteenth century, and soon others were recognized for executing this skill. The Dutch flutist Koppitz demonstrated a similar technical ability, creating several simultaneous sounds during a London Philharmonic performance, which amazed the conductor, Sterndale Bennett, and orchestra members.¹⁷ In 1882, a witness commented on this remarkable performance:

I was present at the Philharmonic rehearsal (in London), and well remember the brilliant and rapid staccato articulation with which the special wonder was ushered in. Presently came a pause; then amid deep silence and breathless expectation, the player emitted three several simultaneous sounds... which were greeted by the orchestra and its conductor (Sterndale Bennett) with one vast, irrepressible shout of laughter. When this subsided, the Dutchman had fled.¹⁸

Though some early flutists and teachers demonstrated such uses of multiphonics, it was not a standard technique; rather, it was considered to be a trivial musical trick. Only later, in 1958, were multiphonics first notated in a piece of music, Berio's solo flute work,

¹⁴ Nancy Toff, *The Development of the Modern Flute* (New York: Taplinger Publishing Company, 1979), 219.

¹⁵ Ibid.

¹⁶ Larry Krantz, "Robert Dick: Composer and Flutist." <http://www.larrykrantz.com/rdick.htm> (2007), accessed 3 December 2013.

¹⁷ Toff, *The Development of the Modern Flute*, 219.

¹⁸ Ibid.

Sequenza I. The effect has since become an easily mastered technique commonly found in contemporary works, which typically involves the use of alternate fingerings, not originally expected of the Boehm model flute, to produce the proper sound.

Slides and Vibrato

With the help of his father, a flute maker, the English flute virtuoso Charles Nicholson (1795–1837) enlarged the embouchure and open tone holes of his flute, allowing for a heavier sound.¹⁹ The open-holed keys enabled Nicholson to become one of the first performers to execute slides, glissandi, harmonics, and finger vibrato.²⁰ The “slide,” effective on an open-holed flute, was created by slowly sliding the finger off the key. Charles Nicholson and his student Joseph Richardson (1814–1862) often used this finger slide in their performances to evoke a sense of tenderness, pity, anguish, or despair.²¹

Alongside this effect, Nicholson codified the technique of finger vibrato, a practice that was previously used in Baroque flute music. It was considered a type of ornament to be applied to the existing tone of the flute. This was created by the use of the finger oscillating over the open holes to create a slight differentiation in timbre and pitch. Though finger vibrato added a decorative element, the technique was slightly cumbersome and was soon replaced by variations in the air stream. Several decades later

¹⁹ This new flute, which came to be known as “Nicholson’s Improved,” caught the attention of Theobald Boehm, who after visiting London in 1831 met with Charles Nicholson. Boehm was inspired to remodel his own flute with these similar sound capabilities, which later resulted in the modern Boehm flute. This new model became the standard.

²⁰ Toff, *The Development of the Modern Flute*, 204.

²¹ Henry M. Fitzgibbon, *The Story of the Flute. History of the Flute and Everything Connected With It* (London: William Reeves Bookseller Limited, 1914), 98.

breath vibrato was assimilated into the French flute school to enhance the tone of the flute, eventually becoming an integral part of the flute-playing tradition.²²

Key Clicks, Whistle Tones, and Jet Whistles

Although multiphonics, slides, and vibrato have been documented from the early nineteenth century, the much more recent key click is now considered to be one of the most common extended techniques. Produced by hitting or slapping the top of the flute key with the finger to create a popping sound, this effect is often thought of as the friendliest of effects since it can be executed successfully no matter the skill level of the flutist. The key click was first notated in Edgard Varèse's *Density 21.5* in 1936 and is shown by a + sign over the note, demonstrating the flute's abilities as a percussive instrument.²³ Since the introduction of this work, the key click has been incorporated in several works.

Unlike the easily-produced key click, whistle tones—an even more recent development—are more difficult to master. The delicate whistle tone is produced by gently blowing air into the embouchure hole to create a high-pitched sound. It is not commonly used due to its faint nature and the substantial control of embouchure and air supply needed to generate it. Moreover, for the effect to be heard clearly, the flutist must play alone.²⁴ This effect is often incorporated into a flutist's daily warm-up routine to develop focus and control of the embouchure and air stream.

²² Toff, *The Development of the Modern Flute*, 204.

²³ Toff, *The Flute Book*, 275.

²⁴ William Kincaid (1895–1967), former principal flutist of the Philadelphia Orchestra, was the first to incorporate whistle tones into a standard practice regimen. An iconic figure of the American school of flute playing, he was recognized for his robust sound. Equally impressive was his ability to achieve a prominent and clear whistle tone, an effect that is typically subtle.

In contrast to the quiet whistle tone, the jet whistle creates a loud, quick, high-pitched sound. The flutist must cover the entire embouchure hole with his or her mouth and blow a rapid single breath of air into the mouthpiece. This creates a noise much like the whistle of a jet. *Assobio a Jato* (The Jet Whistle), written in 1950 for flute and cello by Heitor Villa-Lobos (1887–1959), is commonly cited for exemplifying this technique.

Singing and Playing

Singing and playing is a popular and effective technique that creates a buzzing sound similar to an electric guitar with a distorted output. To achieve this sound, the performer can either sing or hum into the embouchure hole while moving the fingers to create a specific flute tone. This frequently used effect can be applied in various ways, as one may change the pitch of either the flute or voice, creating a polyphonic effect. As with circular breathing, the custom of pairing the voice with the musical instrument is a technique that has been practiced by several non-western cultures for centuries. West African Fulbe musicians have long performed this style in their traditional melodies as well as musicians in Papua New Guinea, Laos, India, the Solomon Islands, and Australia.²⁵

The practice of singing and playing was made legitimate in Western culture through jazz. There is some debate as to which jazz musician first introduced the technique; some believe Sam Most (1930–2013) to be the originator, while others argue for Herbie Mann (1930–2003). Regardless, it is undeniable that both contemporaries used the technique of humming and playing into the flute. Other jazz and popular artists such

²⁵ Don Michael Randel, “Africa,” *The Harvard Dictionary of Music*, 2nd ed. (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2003), 22.

as Eric Dolphy, Shib Shihab, Yusef Lateef, Rahsaan Roland Kirk, and Ian Anderson integrated singing and playing, syllable articulations, and percussive noises into their performances to create aggressive, airy, or polyphonic sounds.

Vocalizations and percussive effects were frequently seen as an extension of the body. Because the flute is closely related to the human voice, it could easily produce vocal noises. To enhance the adaptability of the voice and flute, composers included spoken text into their music, and other aspects of theatrics evolved thence. Soon, theatricality and extended techniques were combined in music to complement one another; however, not until the twentieth century were these performance practices embraced by flutists worldwide.

Theatrics

Extended techniques include not only unconventional sounds but also visual performance effects. These theatrics are defined by any non-musical actions, elements, or words that appear within a piece, such as dialogue, movement, props, set design, and lighting. Visual performance elements took form in many ways, becoming prevalent and developing simultaneously in various genres such as classical, popular, and jazz. Several non-classical performers made the combination of music and theatrics widely popular while also transforming people's perceptions of what was possible on the flute. The popular musical realm created a fresh and versatile identity for the flute, producing aggressive qualities on an instrument with established classical connotations.

In the 1960s, multi-instrumentalist and jazz flutist Rahsaan Roland Kirk (1935–1977) became a popular figure known for his dramatic performances. Even though he

was blind from a young age, his disability did not stifle his musical creativity. In his performances he danced, told jokes, and included political commentary to entertain his audiences, and frequently used multiple instruments at once, playing the transverse flute and nose flute simultaneously.²⁶ Kirk also combined several extended techniques in his performances such as humming and playing at the same time and incorporating key clicks and other percussive effects.²⁷

Influenced by the inspirational impetus of Kirk, the (originally) Scottish singer/songwriter Ian Anderson (b. 1947), lead performer for the band Jethro Tull, exploded onto the popular music scene in 1967. He brought an energetic stage presence, captivating performing style, and an “electric” sound on the flute. Anderson explored different sounds, working with several bamboo flutes to create overtone effects, singing and playing, and hole shadings.²⁸ Hole shading is an effect that creates a difference in pitch and tone color on the instrument simply by placing the finger over a portion of the open hole key.

In order to produce a forceful sound that would compete with the electric guitar, Anderson began to sing and play into the flute, creating a sharp buzzing sound. This technique allowed him to use the flute as a lead instrument in the band, marking a moment in history for the flute’s new role in ensembles. His charisma and musical talent enabled him to present the flute as a popular instrument with commercial appeal.

Anderson’s performances were full of stage costumes and visual theatrics, including his

²⁶Barry Kernfeld, *Kirk, (Rahsaan) Roland* (Oxford Music Online: Oxford University Press, 2007–2014 accessed October 5, 2014).

²⁷Powell, FluteHistory.com.

²⁸Peter Gammond, “Jethro Tull,” *The Oxford Companion to Popular Music* (New York: Oxford University Press, 1991), 297.

characteristic pose of standing on one leg while performing. His use of visual effects was spontaneous and different from his contemporaries. Anderson's style, which was heard in a rock concert setting, was widely accepted and loved by audiences, gaining unparalleled popularity. He was one of many musicians who expanded the role of the flute and brought greater visibility to extended flute techniques, an enduring historical fact that has received far less attention than conventional musical practices in written history.

Though theatrical aspects are found in all musical genres, the performance practice in each is quite different. Due to their musical tradition, jazz and popular entertainers incorporate abundant dramatic elements in a spontaneous and improvisatory manner, resulting in no one performance ever being the same; whereas classical musicians have developed a tradition of consistency for communicating the written music. In most recent years, contemporary composers have taken a compositional approach that resembles the methods of both jazz and classical styles. This has resulted in works that typically fall into one of two categories: extemporaneous or detail-controlled. Composers incorporate these characteristics in certain ways, either by giving performers more interpretive freedom or by trying to retain complete control of the performance, including explicit instructions to be executed in specific ways.

Takemitsu and Stockhausen incorporate aspects of these spontaneous and controlled approaches in *Voice* and *Zungenspitzenanz*. In *Voice*, Takemitsu gives the performer interpretive liberties through the use of spatial notation. Due to the absence of meter, this opens up a variety of possibilities for the speed at which notes are executed and even grouped in relationship to each other, resulting in a unique performance every time. The pairing of the voice with multiple harmonics will in fact result in various

sounds from different performers as well. Takemitsu uses a hybrid of musical notations, most of which are of his own invention, which also allows for new interpretations of the music.

In contrast, Stockhausen's compositional style is hyper-detailed and includes pictures for movements of the performer across the stage, specific breath marks, and calculated tempo changes, giving the performer a clear indication of how the music is to be performed. The tempo markings, which are calculated by numeric ratios, indicate the exact speed of the *rallentando* at the end of a phrase, while the meter and rhythms are stable throughout the piece. These rhythms are written with traditional western notation, which help maintain a consistent interpretation of the music.

Their approaches to creating sounds and using pitch collections also differ. Takemitsu creates textural and color changes through the use of numerous articulations, residual air noises, multiple stacked notes, and most importantly the voice. The sounds called for in his personal notation evoke both a Japanese wooden instrument and the contemporary silver flute. He uses intervals that vary between large leaps and multiple clusters, spanning several ranges of the flute, thus creating for more unpredictability for the listener. There is no tangible aural pattern for the listener. This enhances the mood of the work and as a result of combining the flute and the voice, Takemitsu creates two characters throughout the piece for a dramatic effect.

In contrast, Stockhausen uses note and rhythmic repetition on specific tonal centers, which allows the audience to recognize the correlation between the direction in which the performer is to turn and tonal center. The movement and rotation creates a visual roadmap for the audience, which guides them into each new section of the piece,

with every tonal center and rhythmic gesture symbolizing the passing of time.

Stockhausen creates a minimalistic effect, using closely contained note patterns that settle into a predictable configuration, until these rhythmic pitch arrangements change with each new hour of the clock.

To recognize the differences of compositional approach, it is necessary to first understand the personal motivations and inspirations of each composer and to take a detailed look at each piece.

CHAPTER III

VOICE BY TŌRU TAKEMITSU

Tōru Takemitsu (1930–1996), one of the most prominent Japanese composers of the twentieth century, developed a personal style combining elements of Eastern sound with the experimentation of the European avant-garde, exploring dichotomies such as sound and silence, life and death, and tradition and innovation. Born in Hongō, a small neighborhood of Tokyo, Takemitsu endured the circumstances of wartime Japan during World War II and struggled with poverty and illness throughout much of his youth. At fourteen years of age he was forced to work at a military provisions base, an experience that caused him much bitterness and resentment of his own nation and culture. Concomitantly, he embraced and found comfort in western-influenced music.²⁹

Takemitsu's military service prevented him from hearing much music, especially the popular western styles prohibited by the Japanese regime. The little he did hear was encountered in secret throughout his time at the camp. These jazz and popular styles left a lasting impression on him, and his limited youthful musical exposure did not hinder his later success as a composer.³⁰ At age sixteen, Takemitsu left the army and turned his attention to composition, studying with the Japanese composer Yasuji Kiyose from 1948 to 1950. This relatively limited formal training resulted in Takemitsu's freely formed

²⁹ Noriko Ōhtake, *Creative Sources for the Music of Tōru Takemitsu* (England: Scholar Press, 1993), 2.

³⁰ James Siddons, *Toru Takemitsu: A Bio-Bibliography* (Westport: Greenwood Press, 2001), 5.

musical style.³¹ He drew inspiration from numerous sources and was fascinated by European and American figures. Claude Debussy, Igor Stravinsky, Olivier Messiaen, John Cage, and a variety of artists, musicians, and dancers impacted much of his philosophy and musical approach, which reflected a synthesis of ideas gathered from each composer.

Takemitsu's harmonic language was strongly influenced by Claude Debussy (1862–1918) and Olivier Messiaen (1908–1992). He admired Debussy's ability to create light, shadows, and colors through orchestration, which motivated him to explore Eastern timbres in his own works. Debussy's interest in Japanese art and culture also inspired Takemitsu to embrace similar stylistic elements such as the artistically stylized movements of *Noh* performers, giving attention to silence, and producing hollow tones that are heard on Japanese instruments. Takemitsu also admired Messiaen's use of sounds from nature, particularly birdsongs, in his compositions. Due to the instrument's bird-like qualities, Takemitsu used the flute to achieve similar effects in his *Voice* for solo flute. Although Messiaen created nature sounds in both a melodic and technical way, Takemitsu's position was philosophical: musical sounds were a continuation of natural sounds, and so he took particular interest in the emergence of one from the other.³²

Takemitsu also took inspiration from film music, theater, and French literature. Besides composing music for radio, theatrical productions, and television, he actually spent most of his time writing film scores, of which he composed more than 100 in his lifetime. Through this process Takemitsu mastered the skill of combining sound with

³¹ Yoko Narazaki with Masakata Kanazawa, *Takemitsu, Tōru* (Oxford Music Online, accessed July 8, 2014).

³² Ōhtake, *Creative Sources for the Music of Tōru Takemitsu*, 7.

visual effects, uniting them in a way that would create suspense in film.³³ While pictures on the screen stimulated much of his musical creativity, Takemitsu found that words also generated powerful images for him to artistically draw upon, most of which came from poetry. Several prominent poets and writers inspired Takemitsu's love of literature; the writings of James Joyce (1882–1941), Kenzaburō Ōe (b. 1935), and Shūzō Takiguchi (1903–1979) affected him the most.³⁴ Takemitsu found creative genius in Takiguchi's poetry and used its subject matter for several of his musical titles.³⁵ From this shared passion, a great mutual artistic respect developed between the two.

During 1951 in Tokyo, Takemitsu and Takiguchi co-founded the *Jikken Kōbō* (Experimental Workshop), a group that consisted of musicians, poets, sculptors, painters, and choreographers. This organization departed from the typical approach to concert performance by integrating numerous aspects of art. The goal of this exhibition was to “combine the various art forms, reaching an organic combination that could not be realized within a gallery display, and to create a new style of art with social relevance closely related to everyday life.”³⁶

Takemitsu's traditionally rooted yet progressive compositional style began to receive a good deal of attention. Igor Stravinsky (1882–1971) was one of the first prominent composers to openly acknowledge his talent and creativity. Upon hearing a rehearsal of *Requiem for Strings* in 1959, Stravinsky was impressed with the quality of the composition and declared it a masterpiece.³⁷ This comment gave Takemitsu the long-

³³ Narazaki with Kanazawa, *Takemitsu, Tōru*.

³⁴ Ōhtake, *Creative Sources for the Music of Tōru Takemitsu*, 43–44.

³⁵ Siddons, *Toru Takemitsu*, 14.

³⁶ Tōru Takemitsu, *Confronting Silence: Selected Writings* translated and edited by Yoshiko Kakudo and Glenn Glasow (Berkeley: Fallen Leaf Press, 1995), xi.

³⁷ Anthony Burton, *Takemitsu, Tōru* (Oxford Music Online, 2007–2014, accessed July 8, 2014), 6.

awaited national and international recognition he deserved.³⁸ After listening to the work, Stravinsky met with Takemitsu, an experience Takemitsu described as unforgettable. Once Stravinsky returned to the United States it is assumed that he contacted Aaron Copland to share his thoughts and experience. Shortly after, Takemitsu received a commission for the Koussevitsky Foundation for which he composed his 1966 piece *Dorian Horizon*, later premiered by the San Francisco Symphony Orchestra, conducted by Copland.

It was during this period that Takemitsu was introduced to the music of American composer John Cage (1912–1992), whom he would later meet and with whom he would develop a close friendship. In 1961, Takemitsu heard a performance of Cage's *Concerto for Piano and Orchestra* by Toshi Ichianagi, solidifying his deep admiration for the composer. Cage's impact on Takemitsu was wide-ranging. He began to incorporate such new compositional approaches as indeterminacy and graphic notation, and reconnected with the Japanese culture he once rejected, a decision that was influenced by Cage's interest in Zen practices.

Similar to Cage, Takemitsu embraced a musical approach that emphasized individual timbre, sounds, and a philosophy of silence resembling *ma*, a Japanese concept that means blankness, emptiness, and space.³⁹ This attitude accentuates the power of opposing forces giving more impact to each other. Without silence, sound would be insignificant, and without sound, silence would be meaningless. Takemitsu began to avoid western structural and notational conventions such as formal syntax, fast tempi,

³⁸ Narazaki with Kanazawa, *Takemitsu, Tōru*.

³⁹ Peter Burt, *The Music of Tōru Takemitsu* (Cambridge: Cambridge University Press, 2001), 92.

regular rhythms, and barlines, and began to focus more on the imagery of meditation, dreams, landscapes, and nature.⁴⁰

In addition to *ma*, Takemitsu assimilated other aspects of Japanese culture including the theatrical art form *Noh* drama. Considered one of the highest and most expressive artistic genres in Japanese culture, *Noh* combines literature, music, drama, and dance.⁴¹ This highly stylized production contains choreographed movement with limited recited passages while relying on simplicity and restraint.⁴² Typically, the subject matter is of historical or heroic figures that often return in a ghostly or spiritual form near the end of the play; moments such as these are marked by silences, an effect considered to evoke the eternal.⁴³ The purpose of the drama, however, is not to develop the plot but rather to seek retrospection within the music and dance to achieve an emotional state of mind.⁴⁴

In 1970, Takemitsu served as music director for the Space Theatre at Osaka Exposition (Expo '70), the World's Fair held in Suita, Osaka, Japan between March 15th and September 13th.⁴⁵ This event brought people together from around the world to share knowledge, introducing new concepts while reaffirming others. Expo '70 featured the world's first spherical concert hall, a design based on the performance-space ideas of Karlheinz Stockhausen.⁴⁶ In this space, 50 loudspeakers surrounded the audience in groups of seven rings, allowing the sound to be issued in multiple directions. Takemitsu

⁴⁰ Anthony Burton, *Takemitsu, Tōru* (Oxford Music Online, 2007–2014, accessed July 8, 2014).

⁴¹ Kishibe Shigeo, *The Traditional Music of Japan* (Tokyo: Japan Foundation, 1982), 48.

⁴² Oscar G. Brockett, *History of the Theatre*, 6th ed. (Boston: Allyn and Bacon, 1991), 261.

⁴³ <http://www.newworldencyclopedia.org/entry/Noh>. Accessed July 9, 2014.

⁴⁴ Brockett, *History of the Theatre*, 262.

⁴⁵ Siddons, *Toru Takemitsu*, 9.

⁴⁶ Richard Toop, *Stockhausen, Karlheinz* (Oxford Music Online: accessed October 12, 2014).

felt that traditional venues restricted sound and creativity and that the design of this theater was much more conducive to the progressive aesthetic he desired. As he put it:

The conventionally arranged space of most halls initiates no movement, brings about no human experience (spatial or temporal) as a qualitative experience. Spatiality and spatial timbre...have been added as important parameters in the construction of music.⁴⁷

The festival was pivotal for Takemitsu; it drew worldwide attention to his solo works and initiated collaborations with international musicians. The experience allowed him to meet Stockhausen and witness his ideal performance space. Through their shared beliefs of space and movement of sound, the composers developed a deep rapport.⁴⁸

Analysis

Takemitsu's compositional style, attention to sound and space, and interest in theater and French literature are evident in his solo flute work *Voice*. Composed in one day—April 8, 1971—*Voice* was commissioned by and dedicated to the Swiss flutist Aurèle Nicolet (1926–2016), and premiered two months later at the Cross Talk Concert in Tokyo. As one of the first pieces in the solo flute repertoire to incorporate spoken text, it paved the way for other performance elements such as movement, lighting, and costumes to be assimilated into contemporary flute music.

Like many of his compositions, Takemitsu titled the work so as to reflect what is perhaps its most significant feature: the use of the voice, which is a crucial element that highlights the most dramatic moments of the work. *Voice* conjures imagery and prepares the audience for specific expectations and programmatic developments while creating an unsettling mood. This piece contains text that is verbalized by the performer, a feature

⁴⁷ Burt, *The Music of Tōru Takemitsu*, 132.

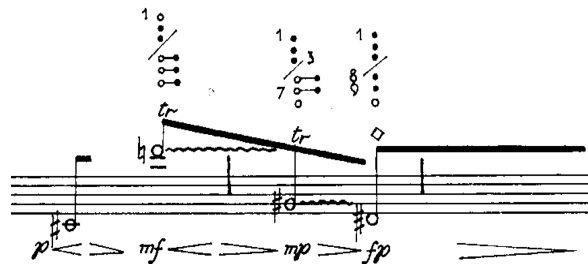
⁴⁸ *Ibid.*

rarely seen in other solo flute works. The literary component comes from Shūzō Takiguchi's poem "Handmade Proverbs:" *Qui va là? Qui que tu sois, parle, transparence! (Who goes there? / Speak, transparency, / Whoever you are!)*. Fragments of the text are paired with the flute sound to create distinct timbres throughout the work. The text functions differently, alternating between English and French languages and exploring a contrasting dynamic with each musical gesture.

The piece is divided into three sections: "Encounter," "Active," and "Calm," with portions of spoken text delineating this three-part structure. Takemitsu uses the voice in many different ways: the performer must hum into the flute, create breath-sounds across and into the embouchure hole, hiss, growl, shout, and declaim portions of the text. All this produces a unique mixture of sounds together with the traditional sounds made by the flute. By using the voice, a two-part counterpoint is created; the piece thus has three textural possibilities: music, text, and the combination of both music and text. The flute and voice thus become two main characters producing a single atypical musical effect, which can accommodate multiple interpretations.

These two characters create a dramatic plot. Simultaneously introduced in the opening, the voice and flute can either be unified (sounding together) or opposed (hocket) to each other. When they diverge, the parts create a protagonist-versus-antagonist relationship. The voice, the protagonist, questions an undetermined presence throughout the piece, while the antagonistic flute generates the musical activity and a restless atmosphere. This unnerving conversation persists throughout the work until the end when the tension softly dissolves.

Within its progressive aesthetic, the piece nonetheless references traditional aspects of Takemitsu's Japanese heritage. Like many avant-garde composers, Takemitsu incorporates various contemporary and extended techniques throughout the work, as shown in example 3.1.⁴⁹ He combines a notational system derived from Bruno Bartolozzi's method *New Sounds for Woodwind* (1967), symbol markings of his own invention (these may be found in Appendix B), and traditional fingerings of the Boehm model, all of which combine to produce the illusion of Japanese flute sounds on the modern western instrument.



Example 3.1. Takemitsu, excerpt from *Voice*: H.11, H.12. This image contains a traditional fingering on the C#4. Bartolozzi's notational system is found above the staff indicating the keys that are to be pressed on the flute, while Takemitsu's notation is marked by a diamond, representing a strong accent without the use of the tongue.

⁴⁹ The letter H (followed by the appropriate number) is used to reference each hash mark within the piece, to replace what would otherwise be measure numbers.

The alternate fingerings, specific notations, and large dynamic swells allow the performer to create a variety of Japanese sounds. Takemitsu's personal symbol markings include that of a diamond shape (shown in ex. 3.1), in which the note is to be unarticulated, recreating the sound of a wooden *Noh Kan* flute used in *Noh* theater. He also instructs the performer regarding the placement of the lips on the embouchure hole to produce a diffused sound while speaking into the mouthpiece (shown in Appendix B). The notations, which Takemitsu borrowed from Bartolozzi's system, instruct the performer regarding the size of the aperture needed to produce these hollow sounds, also seen in Appendix B. Takemitsu uses long pauses and fermatas after bursts of sound in order to suspend time, an aesthetic often associated with Japanese music (or perhaps more accurately with western perceptions of Japanese music). These moments of silence produce *ma*, a concept that is considered to evoke the eternal.

The frequent use of alternate fingerings and notations is a departure from the iconic flute solos of Debussy's *Syrinx*, Varèse's *Density 21.5*, and Berio's *Sequenza I*. It is unquestionable that these solos have been pioneering works in their own right. Yet, up until now, no other flute solo has integrated the voice in such a way that couples spoken text with articulated notes. This combination of the voice with various alternate fingerings and extended techniques to produce both contemporary and traditional Japanese sounds is progressive in comparison to the other solos.

As a result, Takemitsu's compositional style creates an unpredictable musical experience. Dynamic shifts and large intervallic leaps reduce the consistency of scalar patterns and cadences. The bursts of sound and use of extended techniques such as key clicks, flutter-tonguing, singing and playing, pitch-bends, multiphonics, and residual air

sounds also contribute to the irregular structural flow. Since there is neither meter nor bar lines, Takemitsu organizes the work in spatial notation using time segments that are indicated by hash marks (the short barline “ticks” seen in ex. 3.2). The bracket shown above the notes designates the approximate amount of time in seconds that the phrase’s execution should take.



Example 3.2. Takemitsu, excerpt from *Voice*: H.1–H.5. The beginning of the “Encounter” section. This demonstrates irregular intervallic leaps and phrase structures, and spatial notation, which is illustrated by hash marks.

Takemitsu varies the distance between hash marks throughout the piece, concomitantly affecting the number of seconds indicated, while the placement of the notes approximates how quickly they should be played relative to each other. The absence of bar lines and lack of rhythmic regularity result in a slower progression of time, an aesthetic often associated with Japanese music.

Because of the lack of conventional sounds in this abstract work, the text becomes the driving force for musical development and structure. Takemitsu’s selection of notes draws freely from the chromatic scale, and the notes function predominantly as counterpoint with the voice, with the lack of continuity creating a disturbed and anxious

mood. The intervals are often separated by large leaps in different registers and are difficult for audience members to recognize (shown in ex. 3.3). Some instances of these large leaps feature interval class 1 (IC1) or interval class 2 (IC2), creating tension and dissonance in the harmony.⁵⁰ Example 3.3 shows a compound instance of both IC1 and IC2 among the B \flat 6, A4, and B5.⁵¹ Were this not enough, Takemitsu indicates several quarter-tones throughout the piece which create additional intervallic complexity, indicated with a hash mark in front of C6 shown in example 3.3.

* (C) press down the ring of the ring key
appuyer sur l'anneau de la clé à anneau

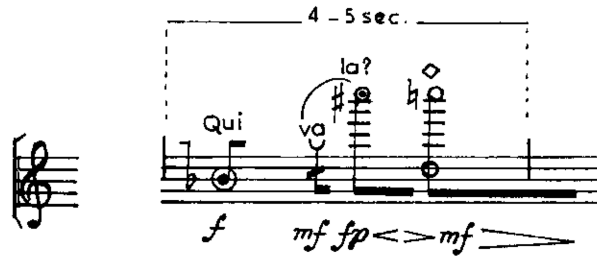
Example 3.3. Takemitsu, excerpt from *Voice*: H.17–H.18. The quick speed in which the B \flat 6, A4, and B5 are played become aurally perceived as a chord. The finger slide, which is indicated by a diagonal line between C6 and D6, creates the illusion of a diffused wooden flute sound.

Example 3.4 illustrates the opening of the piece, the “Encounter” section. The work begins with a forceful vocalization of text, *Qui va là*, “Who goes there?” This introduction may be rather surprising to audience members; however, it sets a precedent

⁵⁰ IC1 denotes minor seconds, major sevenths, and the parallel compound intervals and enharmonic equivalents of both; IC2, similarly, denotes major seconds, minor sevenths, and the parallel compound intervals and enharmonic equivalents of both.

⁵¹ The American Standard Pitch Notation is used to designate note names.

for what is yet to come. The protagonist voice, a lead character and interesting component of this dramatic work, begins to question the anonymous being, created by the interrogating flute sound.



Example 3.4. Takemitsu, excerpt from *Voice: H.1*, featuring a polytimbral texture in the opening bar of the “Encounter” section. The diamond and open circles are examples of Takemitsu’s notational system, explained in Appendix B.

Takemitsu indicates specific notes to be pressed on the instrument while the text is spoken, seen in example 3.4. The pitch-set of both the flute and voice includes B \flat 4, C5, C \sharp 7, D5, and C7—containing many instances of IC1 and IC2. The lowest line ascends upward by whole steps while the upper notes descend by a half step. As shown in example 3.4, the circled B \flat 4 notehead is to be pressed by the performer while vocalizing the *Qui va là* text over the embouchure hole. Though the voice is most noticeable, a polyphonic texture is created by the vocalization of the text paired with the note that is sounded on the flute. Similarly, *va* must be vocalized while pressing C5. This is followed by the C \sharp 7 combined with a quick hum from the voice after which the musician sings a D5 while playing a C7. With the diamond above the C7, Takemitsu instructs the performer to play with a “strong accent without tonguing” similar to a Japanese *Noh*

flute, shown in Appendix B. The addition of the voice creates pitch and timbral complexity for the flute, which without the voice would otherwise be impossible to produce.

Following the text, Takemitsu creates a mysterious atmosphere with the flute's use of random note clusters, multiphonics, swift and indeterminate speed changes, and sudden dynamic shifts. Frequent pitch bends and slides reinforce the sounds of a wooden flute. This effect transforms into insistent trills indicated by alternate fingerings that create an unfocused and hollow yet anxious sound (seen in ex. 3.5). The use of modern notations and sporadic intervallic leaps, paired with unfocused air sounds emphasize Takemitsu's compositional approach of intermingling both traditional Japanese and contemporary sounds. A slow chromatic ascending line creates tension in which the flutist plays a gradual crescendo while incorporating note slides and trills. The performer hums into the flute, then pulls the instrument away from the face while hissing, marked by an 8 and S figure shown in example 3.5.

The image shows a musical score for a flute, Example 3.5. The score is written on a single staff with a treble clef. It begins with a dynamic marking of *f* (forte). The first measure contains a single note. The second measure starts with a dynamic marking of *pp* (pianissimo) and features a series of notes with a wavy line above them, indicating a trill. The third measure has a dynamic marking of *p* (piano) and contains a single note. The fourth measure has a dynamic marking of *mf* (mezzo-forte) and contains a single note. The fifth measure has a dynamic marking of *f* (forte) and contains a single note. The sixth measure has a dynamic marking of *ff* (fortissimo) and contains a single note. The seventh measure has a dynamic marking of *f* (forte) and contains a single note. The eighth measure has a dynamic marking of *mf* (mezzo-forte) and contains a single note. The ninth measure has a dynamic marking of *pp* (pianissimo) and contains a single note. Above the staff, there are several performance instructions: a trill symbol above the second measure, a trill symbol above the fourth measure, and a trill symbol above the sixth measure. Above the eighth measure, there is a performance instruction: "peu à peu gradually" with a diamond symbol and a bracket. Above the ninth measure, there is a performance instruction: "8" with a diamond symbol and a bracket. Above the tenth measure, there is a performance instruction: "S" with a diamond symbol and a bracket.

Example 3.5. Takemitsu, excerpt from *Voice*: H.6–H.10, featuring a prominent pause in the “Encounter.”

Within the first minute the section comes to a dramatic pause, which is emphasized with a fermata, leaving the audience to anticipate whether or not the antagonistic flute sound has vanished. The flute tentatively emerges from the silence with a soft low C#4, seen at the beginning of the line in example 3.6.



Example 3.6. Takemitsu, excerpt from *Voice*: H.11–H.15. The antagonist returns with a soft swell on C#4 and continues to build tension through trills and sporadic note lengths, tempi, and rhythms.

By fluctuating dynamics and varying the space between each note, Takemitsu manipulates the listener’s perception of sound in the performance space. The “Encounter” section ends with a diminuendo on C#7 into *ma*.

The second entrance of the text, seen in example 3.7, marks the beginning of the “Active” middle section. The longest of all sections, it is harmonically and texturally dynamic. Unlike the “Encounter,” this begins pianissimo with the flute sound and builds to fortissimo. The melodic contour descends and the voice and flute converge onto C5, a contrast from the gesture shown in example 3.4, which boldly ascends to a high C7.

Example 3.7. Takemitsu, excerpt from *Voice: H.27*, featuring hocket between the flute and voice in the beginning of the “Active” section.

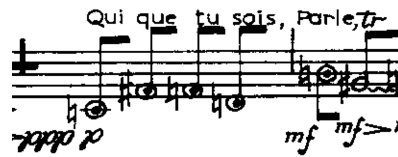
In this reappearance of the text, Takemitsu not only creates polyphony between the flute and voice, but also uses both of them to respond to each other in hocket, as if creating a conversation. Hocket, originally a medieval musical device, is a single melody that rapidly alternates between two voices. Here, the line is shared between the voice and the flute. The motion is abrupt, disjunct, and alternates quickly between parts, reflecting an argumentative mood of the text while creating a confused atmosphere.

As shown in example 3.7, Takemitsu calls for a harmonic on the D6, an effect he uses throughout the piece. The harmonic creates a pure sound and special timbre that can conjure images of the supernatural, a typical theme of *Noh* theater, while the crescendo-diminuendo recalls the *Noh Kan* flute. The notes of the flute are D6, B \flat 5, and C5 while the notes of the voice are F \sharp 4, E4 quarter-tone sharp, and C5. Takemitsu uses a melodic IC2 in this figure, outlining a part of the whole tone scale, while the E4 quarter-tone sharp and F \sharp 4 form a three-quarter-step relationship (IC1.5).⁵² The dotted slur connecting the B \flat 5 and C5 suggests that although those two notes are both articulated, they should

⁵² IC1.5 denotes any note that maintains a quarter tone relationship within a minor second, major seventh, and the parallel compound intervals and enharmonic equivalents of both.

be played as a single gesture. This sequence may appear to lack continuity; however, Takemitsu uses the IC2 to connect the note groupings.

Following the hocket section of example 3.7, the flute is the primary focus and continues to create a haunting atmosphere. Residual air sounds, harmonics, and trilling maintain the unpredictable and eerie mood of the piece until the next presentation of text, revealed in example 3.8: *Qui que tu sois, Parle* (Whoever you are, Speak). IC1 and IC2 define the contour of the flute and voice, which are heard simultaneously, creating a polytimbral texture.



Example 3.8. Takemitsu, excerpt from *Voice*: H.34, featuring a polytimbral texture between the flute and the voice.

Though Takemitsu has written traditional fingerings for the flute, the notes are heard as lingering air tones. The voice articulates the notes while the breath creates a residual air sound, making the flute resonate to produce a ghostly effect. After the vocal punctuation, the flute takes over with a brief ascending tremolo line after which a wandering mood is then created by large intervallic leaps and quick dynamic changes and swells among notes.

Example 3.9 reveals the fourth entrance of the voice and indicates a build of activity and tension with the flute. The following note collection: E \flat 5, E4, F4, F \sharp 4, and G5, maintain a clear chromatic structure, yet the B4 prevents the pattern from becoming a

complete set. Though this gesture contains these intervallic relationships, the disjoint placement of each note creates an atmosphere of chaos and instability. Each note is autonomous, a specific dynamic with its own individual dynamic indication, emphasizing independence and counterpoint between the flute and voice, while reaffirming hocket material. The lines above the notes suggest the speed at which the gesture is to be played; an ascending figure implies an *accelerando*. This hastened movement is suggested during the most active part of the hocket and relaxes near the end.



Example 3.9. Takemitsu, excerpt from *Voice*: H.41–H.42, featuring hocket between the flute and voice.

The hocket here features, for the first time, the flute and the voice as individually coherent and completely separate from each other; Takemitsu emphasizes this separation in his notation. The U-shaped figure on top of the stem is designated for the text; therefore, the voice is simply spoken and does not create any pitch-interval with the flute. A frantic trill, flutter-tongue, and harmonic passage lead into the text, shown in example 3.10. The text, which has been fragmented until now, is finally heard in its entirety in French.

Example 3.10. Takemitsu, excerpt from *Voice*: H.42–H.45, featuring a complete statement of the French text in the “Active” section.

Located in the middle of the arch structure, this moment is prepared by an E \flat 4 in the low register of the flute. The performer is to hum into the flute and crescendo to *mf* leading into the text, suggesting that the spoken text is a continuation of the low note. The words are vocalized over the E \flat 4, creating an airy undertone of sound and making the voice the primary sound element at this moment. Thus far, the flute has been a constant and often overpowering opponent to the voice; yet, it is now momentarily subordinate. The angst generated by the flute finally produces frustration in the voice, culminating into a loud scream of text: *Qui va là? Qui que tu sois, Parle, transparence!* The significant moment is emphasized by a powerful silence that follows.

After the stillness, Takemitsu continues to exploit the various timbres of the flute. The alternate trill fingerings allow for microtonal sonorities creating even greater ambiguity while sporadic note values and lengths add to the undefined nature. Takemitsu manipulates the large range, technical versatility, finesse, and dynamic control of the instrument. The flute increases tension through shorter and accelerating note values, trills, and multiphonics, shown in example 3.11. Now the voice functions as an intensifying

effect used to create noises rather than words, strengthening the sound and texture of the flute and enhancing the gestures. Takemitsu includes an *ossia staff* featuring an alternative passage for the flutist, an option most useful to those who do not have a B foot joint on their flute. In place of the B3, a high B5 harmonic is suggested instead.

The image shows a musical score for a flute part, specifically the climax of Takemitsu's 'Voice' (H.51-H.54). It consists of two staves: a main staff and an 'ossia' staff. The main staff begins with a key signature of one flat (B-flat major) and a common time signature. It features a series of notes with dynamic markings: *mf*, *f*, *ff*, *sfz*, *sfz*, and *sfz*. Above the notes, there are performance instructions: 'flatt.' (flattening), 'tr.' (trill), and 'shout/crier' with 'da da' syllables. The notes are clustered and ascend in pitch, ending with a 'growl' instruction. The 'ossia' staff provides an alternative passage for the flutist, starting with a key signature of one flat and a common time signature, with dynamic markings *p* and *pp*. Above the main staff, there are two diagrams showing fingerings for the flute, labeled '1' and '5', with dots indicating finger positions on the keys.

Example 3.11. Takemitsu, excerpt from *Voice*: H.51–H.54, the climax.

An unrelenting cacophony of sound ensues and the climax is finally reached in example 3.11. Takemitsu approaches this aggressive section with a calm E \flat 4, mimicking the *Noh Kan*. He uses flutter tonguing, trilling, and multiple stacked notes to create intensity, a combination that creates an aggressive and frenzied mood. Dynamic shifts are sudden and forceful, swelling into whole-step clusters: D \sharp 5, C \sharp 6, B6. The voice drives the energy by shouting “da da” while trilling on a chord and continues to growl into an ascending and accelerating line.

Takemitsu combines multiple notes at a dynamic range of fortissimo while incorporating vocal effects to intensify the sound. Because it is impossible for both parts to be created simultaneously, the voice comes across as an interjection amidst the chaotic

flute sounds. Once the climactic moment is reached, longer note values and softer dynamics decrease the momentum of the flute. Shorter note values and percussive breath tones are interspersed, creating one quick interjection from the antagonistic flute before it plays an ascending airy line that quietly disappears into a fermata, ending the “Active” middle section.

The “Calm” section begins with the flute playing a *pianissimo* low B3 shown in example 3.12. This quiet low note sets the tone for the entire section in which dynamics are soft, barring a few bursts of sound. The supernatural being is more distant during this moment, not aggressively threatening the voice, but still creating an undercurrent of angst with the use of soft dynamic swells.

Example 3.12. Takemitsu, excerpt from *Voice*: H.61–H.70 shows a fermata, which concludes the “Active” section and the “Calm” section begins with a low B3.

The rhythmic energy has lessened considerably, causing a slower progression of time. Fewer notes are contained between hash marks and the speed at which notes change is unhurried, enhancing the wide intervallic distance between. This is perceived less as hocket and more as a single disjunct line. The voice returns at the end of the “Calm” section with a sense of distance, shown in example 3.13.

Example 3.13. Takemitsu, excerpt from *Voice*: H.76–H.80: featuring the first statement of text in the “Calm” section.

Takemitsu introduces the text in English and resumes both the conversation and polyphony between the voice and flute. *Who goes there?* is first asked by the voice and is faintly answered by the notated F5. The voice and notes join together on the F#4 and B♭4 with the text: *speak, transparence*, followed by a harmonic D6 that ends the conversation.

Takemitsu alternates sections with and without text, finally bringing the conversation to an end, seen in example 3.14. The diamond above the B♭5, D6, and E♭4 is once again reminiscent of the *Noh Kan* flute. Takemitsu includes a rapid scale and burst of sound into a D6, symbolizing one final gesture from the apparition. The flutist firmly sounds a low E♭4, marking an ultimate punctuation of the antagonistic presence

before the sound fades. The performer continues to press the note while speaking over the embouchure hole, creating an airy indication of the note, while leaving the voice to whisper an unanswered statement.

très rapide
very rapid

Whoever you are!

April 8, 1971 Tokyo
duration: about 6'30"

Example 3.14. Takemitsu, excerpt from *Voice*: H.81–H.85 featuring a calm yet inquiring end with a final statement of text.

Takemitsu uniquely creates a dramatic plot with these two “voices.” Not often paired together in such a way to tell a story, Takemitsu uses this antagonist-versus-protagonist relationship to form the structure around the intensity of this dialogue. With the combination of both, he is able to create new timbres, airy sounds, and an ominous mood. The flute is the aggressor throughout the piece, haunting and terrorizing the voice relentlessly. The unpredictability of this character is emphasized by immediate dynamics, quick and aggressive note changes, and forceful multiple tones that prevents the listener from hearing any isolated pitch.

Throughout this story the flute haunts the voice, most aggressively during the middle and then finally weakening the intensity at the end, signaling that the mysterious being has vanished, and still leaving the voice to question its identity and purpose. The piece is unique in its approach due to the pairing of the flute with the voice, use of

alternative fingerings to create unusual sounds, and the incorporation of theatrical elements, all of which were innovative sounds in the flute repertoire at this time.

CHAPTER IV

ZUNGENSPITZENTANZ BY KARLHEINZ STOCKHAUSEN

Karlheinz Stockhausen (1928–2007), a revolutionary and controversial figure, was one of the first composers to incorporate choreographed movement as a vital part of musical language in instrumental works. He viewed music as a wide-ranging artistic experience, combining physical movement, spoken text, and dance. Stockhausen was driven not only by innovation, but also by a strong spirituality, seen in his compositional approach. Widely known for his work with total serialism, aleatoric techniques, electronics, and spatialization, his radical ideas were criticized and ridiculed by audiences. As the leading figure of the Darmstadt School during the 1950s and early 1960s, his music inspired composers such as John Cage, Pierre Boulez, Luigi Nono, and Bruno Maderna. What is more, his music left a lasting impression on prominent figures in the jazz and rock world, including Miles Davis, Charles Mingus, Herbie Hancock, Yusef Lateef, Frank Zappa, and the Beatles.

Born in Burg Mödrath near Cologne in 1928, Stockhausen had a difficult and impoverished childhood.⁵³ He moved numerous times and experienced devastating family loss as a result of WWII. His father Simon was a schoolteacher and had been a soldier during WWI. Having played both the piano and violin, his father instilled a love

⁵³ The following biographical information is derived from Michael Kurtz, *Stockhausen: A Biography*, trans. by Richard Toop (Great Britain: Faber and Faber, 1992).

for music in his son. Though Simon was enthusiastic about music, his talents were limited because he only played the black keys of the piano. Frequently hearing the pentatonic scale gave Stockhausen a distinct ear for specific harmonies and tonalities, which was only heightened by the eidetic memory he possessed, that allowed him to hear a tune once on the radio and play back the original version. Because of this, Stockhausen was quick to learn, developing a profound ear for all styles and for many things musical. He further nurtured these natural abilities through piano lessons, which he took with Franz-Josef Kloth during his youth. In addition to his interest in music, Stockhausen was also drawn to the stage. This was influenced by his father's passion for theater; Stockhausen regularly observed him directing performances for the drama community. Stockhausen cultivated both of these interests throughout his youth, eventually mixing dramatic elements into his musical style later in life.

Stockhausen's musical talents came from not only his father but his mother as well. Though his mother, Gertrud, came from a poor farming family, she was a gifted singer and pianist; however, she was unable to guide Stockhausen's musical growth during his childhood because of disturbing circumstances. In 1932, she suffered a mental breakdown due to the stress of giving birth to three children within a short period of time while managing the hardships of raising a family and was eventually institutionalized. In 1941, it was reported that she died of leukemia; however, it was commonly understood that she was a victim of the euthanasia policy enforced by the Nazi party—that is, mentally ill patients were simply put to death. Further loss occurred that year when Stockhausen's younger brother died just a few months later.

In 1944 Stockhausen was drafted into the war and assigned to a hospital where he cared for wounded soldiers, following a strict routine of grueling and emotionally difficult work that provided no time for relaxation.⁵⁴ Because he was regimented and structured, qualities that stayed with him throughout his life, he adapted relatively well to the situation. The initial shock of caring for hundreds of wounded soldiers, disposing of dead bodies, and living under the threat of bombings quickly became his reality. One day Stockhausen was walking outside and heard the squealing sounds of gunfire and bombs. He stopped, stood still, and closed his eyes. Once the firing subsided, he opened his eyes, looked around at the affected areas, and realized he was unscathed. Through the chaos of war, Stockhausen's composure and talents became a beacon for soldiers. To entertain and lift their spirits he often played the piano. His memory allowed him to draw from styles he once heard on the radio, taking requests that varied from classical to bar tunes.

After completing his hospital duties, Stockhausen faced more loss. In 1945, Stockhausen's father had volunteered to fight in the war due to his sense of national duty, preparing never to return; later it was reported that he had been killed. Although the news was devastating, Stockhausen by this time was leading an independent life. Despite having lost both of his parents and a brother by age 16, he remained unbroken:

The more that was taken away from me the stronger I became. I think, because of that, I have a very special relationship to my parents. I have never been angry or critical about them, as some people say. I think that, being dead, they gave me much more support than they would have in life.⁵⁵

After the war, cities were laid waste and citizens were homeless and hungry, making it difficult for Stockhausen to find work and survive. Stockhausen took odd jobs

⁵⁴ Karlheinz Stockhausen, *Stockhausen on Music: Lectures and Interviews Compiled by Robin Maconie* (London: Marion Boyars, 1989), 21.

⁵⁵ Stockhausen, *Stockhausen on Music*, 23.

in Blecher—a town about 25 miles from Düsseldorf—taking up salvage work and farming to support his siblings. After a day of labor, he would practice piano and study for hours, hoping to be admitted into the local grammar school in Bergisch-Gladbach. During this time, he was given an opportunity by his former teacher Kloth to direct chorus rehearsals for the theatrical society in Blecher. Stockhausen dedicated himself to the program, diligently working and making himself available for practices and performances, and continuing to direct the group for three more years. His hard work and determination paid off and in 1946 he was accepted to the Bergisch-Gladbach School.

After completing his schooling, Stockhausen returned to Cologne to pursue additional education, working various jobs and playing the piano to pay for his courses with well-respected instructors on subjects ranging from philosophy to acoustics. At 19 he enrolled at the Hochschule für Musik Köln, studying pedagogy and piano from 1947 to 1951, and studying musicology, philosophy, and German at the University of Cologne. Stockhausen later studied piano with Hans-Otto Schmidt-Neuhaus and composition with Frank Martin.

Though he took several music classes, Stockhausen was not focused on a compositional career; rather, his primary interest was in literature. During his first year in Cologne, he spent a great deal of time writing poems, stories, and plays, often combining them with his music. His love for writing was inspired by Hermann Hesse's novel *Das Glasperlenspiel* (The Glass Bead Game, begun in 1931 but only published in 1943), a book which aligned with Stockhausen's beliefs in a way that "connects the musician with the spiritual servant," and bridged his two main passions, literature and religion. His poetic efforts overshadowed his composing at this stage; it was only a performance of his

early work *Burleska* that gained his compositional efforts praise and admiration from his peers and professors. Performed at a summer music retreat, the piece was set to one of Stockhausen's own poems and included a chamber ensemble, vocalists, and pantomime dancers. Upon hearing the work, Hermann Schroeder, Stockhausen's counterpoint teacher, encouraged him to continue in this direction, and by the 1950s Stockhausen focused his attention on composing.

In 1951, Stockhausen attended the Darmstadt Summer Music Course, where he met several colleagues who encouraged him to explore radical compositional approaches. One such individual was Karel Goeyvaerts (1923–1993), a former student of Olivier Messiaen (1908–1992). The two quickly became close friends, sharing ideas and experimenting with electronic music. Goeyvaerts introduced Stockhausen to the works of Webern and Messiaen, which cultivated Stockhausen's deep appreciation for Messiaen's innovative style and integration of religious symbolism.⁵⁶ Messiaen had expanded compositional boundaries, experimenting with modes, rhythmic cells, and Asian musics, and created the concept of a single sound, which gave specific parameters for the pitch, loudness, duration, and timbre of a note.⁵⁷ Stockhausen was so fascinated with these ideas that in 1952 he moved to Paris to study aesthetics and analysis with Messiaen.

While in Paris he met Pierre Boulez (1925–2016) and Pierre Schaeffer (1910–1995). Schaeffer, a pioneer of *musique concrète*, introduced Stockhausen to his electronic studio in 1952. While conducting research for Schaeffer, Stockhausen was able to refine his skill in sound synthesis. During his experimentation he would splice millimeter

⁵⁶ Karl H. Wörner, *Stockhausen: Life and Work* (London: Faber and Faber, 1973), 81.

⁵⁷ Kurtz, *Stockhausen: A Biography*, 32–33.

fragments of tape to produce a single unique sound, a proud accomplishment, but the effect was less than appealing to Schaeffer and his colleagues in the electronic studio.

Nonetheless, Stockhausen continued to investigate new approaches to music and as a result his style transformed rapidly. From 1954 to 1956 Stockhausen studied with physicist and phoneticist Werner Meyer-Eppler at the University of Bonn. Meyer-Eppler showed Stockhausen how to incorporate aleatory and microscopic and macroscopic formal structures into his music. While at the University of Bonn, Stockhausen also analyzed noise sounds and statistical wave structures, which would later become an asset to him when composing works with electronics.

Stockhausen's ingenuity did not end with electronic music. He explored other areas of composition such as pointillism ("point music," from the German *Punktuelle Musik*), which emphasized a note-to-note relationship as opposed to vertical harmonies and melodic figures. Stockhausen used aleatoric processes in which indeterminate elements are left to the performer, and he emphasized spatialization throughout his works, localizing specific sounds in space. In 1968 he developed intuitive music, a type of improvisatory music in which verbal and graphic instructions are given to the performer.

As his career gained momentum, Stockhausen's musical style developed in visionary directions. Because artistic and musical movements often have close parallels, music and visual art have often drawn creatively from each other. Following this pattern, composers and artists including Claude Debussy, Olivier Messiaen, Edgard Varèse, Karel Goeyvaerts, Anton Webern, Robert Rauschenberg, Piet Mondrian, and later John Cage inspired Stockhausen's aesthetic philosophy and musical approach. Stockhausen also

took inspiration from certain performers, collaborating with them for years; these included the Dutch flutist Kathinka Pasveer (b. 1959), one of several musicians who worked closely with Stockhausen until his death.

Finally, the definitive aspect of Stockhausen's character that informed all his study and creativity was his religious faith. Growing up in the Catholic Church, he had taken comfort in the rituals and traditions of the Mass. He viewed the ceremonies of the Catholic Mass as resembling a "musical drama" and remembers the impact confession had on him:

The whole teaching of confession marked a new phase of my life. That had such a deep effect on me. To be at confession is like being at a musical rehearsal. The confession is rehearsed many times in advance... Even then I had such unbelievably deep experiences that it is hard to put them into words, because they are also experiences of temperature: for example, I have never felt so cold – the chill I felt in my spine after I had confessed... an absolutely incorporeal sense of soaring within the icy coldness of the body. Of course, that is partly to do with the fact that Altenberg Cathedral is so cold, whatever the time... And then I still know for certain that during the whole celebration of the first Holy Communion I was in a trance...⁵⁸

Paradoxically, these rituals provided stability and order alongside emotional unpredictability and interest in the dramatic. Stockhausen was drawn to religion and innovation both, a juxtaposition that seems rather striking; the combination of the comfort of rituals, structure, and balance, with the exploratory elements of modernism challenged audiences in a variety of ways.

The general attraction to ritual and ceremony led Stockhausen to connect with the spiritual practices of Bali, India, and Japan. He traveled to Japan several times throughout his life and while visiting he experienced *Noh* theater, *sumo* fighting, *gagaku* music, and

⁵⁸ Kurtz, *Stockhausen: A Biography*, 16.

shomyo temple music.⁵⁹ As he perceived it, Japanese society approached music and life in an artistic fashion, so that art was a part of daily activities rather than a separate detail.⁶⁰ Performers within *Noh* theater moved deliberately and in a stylized, premeditated manner, and (unlike western music) nothing was hurried. Music featured long moments of silence that were used to reflect on musical gestures.⁶¹ Additionally, the Japanese philosophy of contrast was valued, emphasizing that life can flourish from death, and order is established from chaos. This concept, which intermingles structure and disorder, is often seen in Stockhausen's musical performances; though these elements appear chaotic to general audiences, they are in fact crafted in a methodical and organized manner.

Taking inspiration from the details and intricacies in Japanese art forms, Stockhausen sought to approach every detail of his works in a meaningful way. He recognized the importance of these physical actions and began notating accompanying gestures in a way that was symbolic of a deeper meaning, much like in his first choreographed work *Kontakte* (1958–1960) in which he instructs both the pianist and percussionist to walk across the stage at specific moments in the piece. Stockhausen believed that audiences wanted more out of a musical performance than what was commonly provided, as he noticed their growing interest in the details of physical movement and gestures within dramatic performances. Stockhausen explains:

⁵⁹ Jonathan Cott, *Stockhausen: Conversations with the Composer* (New York: Simon and Schuster, 1973), 20.

⁶⁰ *Ibid*, 33.

⁶¹ *Ibid*, 30.

The public will not put up any more with the same old faces and worn out postures of the opera establishment, or with camerawork that focuses on one dull hand gesture after another, no matter what is being sung, reaching out first with the left hand, then with the right hand, without any meaning. This inability to move among European performers will have to go: what is needed is gesture of great refinement, as in *Inori* or my opera *Licht*.

He noticed the natural movements of musicians as they performed and the effects these gestures had on sound. This compelled him to experiment with moving performers from one location to another while playing with changes in musical effect as sound sources moved closer and further apart. Stockhausen experimented with the placement of the musicians in different venues, developing a type of “theatrical polyphony,” in which musical scenes were performed simultaneously in various locations as if to be experienced like an art exhibit, allowing audiences to freely walk around and enjoy the music they wanted to hear. In his 1968 piece *Musik für ein Haus*, which took place inside a home, he required a group of musicians to be situated in four rooms located on two different floors. The music was picked up by microphones and broadcast on loudspeakers throughout the house, which allowed the musicians to respond to the feedback they were hearing.⁶²

Due to the number and unique placement of performers in many of Stockhausen’s works, the traditional concert space did not create an ideal listening experience, and the growing frequency of visual performances began to affect other elements as well. Audio recordings were unable to capture the total experience of concerts; therefore, live performances and visual recordings became essential to witness the physical movements, costumes, and lighting effects. Stockhausen questioned the effectiveness of the traditional concert hall; as a result, experimentation with performance space became a priority. To

⁶² Wörner, *Stockhausen: Life and Work*, 170.

discover this full potential of sound, movement, and ingenuity, he imagined a venue that would facilitate his vision: a spherical space that had moveable seating, a sound system surrounding the hall, and three interconnected stages at the left, front, and right. This space would allow audiences to hear music from all directions.⁶³

His dream came to fruition in 1968. Stockhausen was invited to plan the musical hall structure for the World Fair (Expo '70) in Suita, Osaka, Japan. This architectural project was a massive achievement that garnered him great attention and recognition. The hall was modeled after the space he envisioned. Afterward, Stockhausen continued to build other venues that were conducive to his own compositions; however, some of these projects were abandoned due to lack of funding. One such unsuccessful undertaking in 1977 was when he attempted to construct his own music building: the Sirius Center, which would allow him to rehearse and perform his works, including his extended opera, *Licht*.

Of all his dramatic works, none was as massive as his operatic cycle *Licht* (1977–2003). This opera, which took Stockhausen 26 years to complete, is recognized as the longest concert work ever composed. It is 29 hours in length and is to be performed over the course of seven days, one for each day of the week (*Montag, Dienstag, Mittwoch, Donnerstag, Freitag, Samstag, and Sonntag*). The work is so long and so massive that it has yet to be performed in its entirety.

Licht, a mega-opera, was Stockhausen's attempt to unify music and religion, combining spirituality, mythology, and ceremonialism. The title references the biblical creation story and reflects the emergence of life after the creation of light. Michael, Eve, and Lucifer are the three prominent characters, each associated with a leitmotif and

⁶³ Wörner, *Stockhausen: Life and Work*, 161.

instrument.⁶⁴ The opera begins with the incarnation of Michael and follows him on a worldly and musical journey. Michael, represented by the trumpet line, is the creator who embodies development; Eve, the clarinet melody, signifies rebirth; and Lucifer, the trombone musical line, symbolizes death and destruction; on each day of the week the music illustrates a specific character and reflects on a dramatic theme. The piece follows one massive organizing formula involving rhythms, dynamics, and timbres, including individual note formulas representing Michael (13 notes), Eve (12 notes), and Lucifer (11 notes), all of which are combined throughout the opera.⁶⁵ The circular structure of *Licht* prevents it from having a beginning or end, symbolizing our experience throughout the days of the week. Because of this cyclical nature, Stockhausen constructed each part so that it could be extracted from the opera and played separately.

Samstag aus Licht (Saturday, the sixth of the opera's seven days) is the Day of Judgment (Lucifer's Day).⁶⁶ It consists of a greeting and four scenes: Scene I: *Luzifer's Traum* (Lucifer's Dream), Scene II: *Kathinkas Gesang als Luzifer's Requiem* (Kathinka's Chant as Lucifer's Requiem), Scene III: *Luzifer's Tanz* (Lucifer's Dance), and Scene IV: *Luzifer's Abschied* (Lucifer's Farewell). The sections portray Lucifer's destructive nature, guiding the audience into his subconscious mind and exposing his manipulative behaviors, culminating in his death and passage into the afterworld.⁶⁷

The beginning of Scene III: *Luzifer's Tanz* (Lucifer's Dance) reveals a distorted image of Lucifer's face that is created by instrumentalists. To form this image, the

⁶⁴ As noted in the score, a red circle on a white background with a black dot in the middle represents Lucifer. Each character that signifies Lucifer during the piece can wear this symbol.

⁶⁵ Kurtz, *Stockhausen: A Biography*, 210–211.

⁶⁶ *Samstag* (1981–1983) was premiered on May 25, 1984 in Milan at Palazzo dello Sport. The text is by Saint Francis of Assisi.

⁶⁷ The flute plays a Requiem for Lucifer, guiding him into the afterworld and protecting the deceased souls from temptation. The flute is associated with Eve, symbolizing rebirth.

musicians align themselves vertically along the wall on steps, each fashioning a section of the face with moveable features. The flutists form his left eyebrow, the clarinetists make up the right eyebrow, the saxophonists create the left eye, and so on. The flutists move to create the first facial expression, then another group follows until all of his facial features are in motion and producing sound.⁶⁸ Kathinka, the black cat, appears on the tip of Lucifer's tongue, and begins playing the piccolo solo, *Zungenspitzentanz* ("Tip-of-the-Tongue-Dance") that is our primary interest here, hailing Satan's children and evoking a magical scene. The dance ends with a percussive strike from the orchestra.

During *Zungenspitzentanz* the piccoloist enters from upstage right and crosses diagonally while playing and spinning clockwise. The performer changes direction five times during the piece until arriving downstage left. Here, the piccoloist stands facing the audience looking upward while playing, marking the moment of the *Bändertanz* (Ribbon Dance).⁶⁹ This section of the piece contains 14 sub-phases. Each subsequent phase indicates the hours of the clock from one o'clock until midnight, which leads into the final phase, the cadenza. In the cadenza, the piccoloist shouts a greeting to the audience: "*Salve Satanelli!*" ("Greetings, little children of Satan!"), a message containing 14 letters in Latin corresponding to the number of sub-phases. After the cadenza, the piccoloist departs to the back-right of the stage.⁷⁰

Stockhausen's music creates a hypnotic atmosphere, embodying Lucifer's crafty nature. This spellbinding effect results from the combination of choreographed body

⁶⁸ Robin Maconie, *Other Planets. The Music of Karlheinz Stockhausen* (Lanham, MD: Scarecrow Press, 2005), 451.

⁶⁹ The *Bändertanz* is to be performed by a dancer in other versions of the piece.

⁷⁰ Instructions are provided in the musical score. See Karlheinz Stockhausen, *Zungenspitzentanz for solo piccolo*. 1st ed (Kürten, Germany: Stockhausen-Verlag, 1990).

rotations, drone-like pitch centers, repetitive rhythmic patterns, and recurring technical effects such as flutter-tongue. The most significant and visible theatrical element used is physical movement, distinguished by the rotation that represents the passing of time; the kneeling, which signifies reverence; and the upward motions of the instrument to resemble salutations. This choreographed movement corresponds with a new motivic idea and tonal center, creating a dramatic thread throughout the work. In addition to physical movement, Stockhausen incorporates vocalizations and spoken text. Though not as consistent as the physical movement, the spoken text serves as the climactic moment of the piece.

Prior to the 1970s, Stockhausen had not incorporated many extended techniques in his compositions; it was only when writing *Licht* that he began to do so more consistently, and even here they are only used to a limited extent. Stockhausen focuses on techniques such as flutter-tonguing, vocalizations, and alternate fingerings for microtones and tremolos to develop musical motives, glossing the score with performance instructions including pictures, diagrams, and explanations. Furthermore, he prescribes the sound equipment, placement of lighting, and stage design, while also providing details for the notated music and movement directions, complete with translations.

Zungenspitzentanz exists in several versions. Premiered on May 25, 1984 in Milan, the work was originally composed for wind orchestra, piccolo, dancer, and bass singer. Other versions include: piccolo and synthesizer (1986), unaccompanied piccolo solo (1984), and piccolo, dancer, euphoniums, and percussionist (1986).⁷¹ Though there

⁷¹ Kathinka Pasveer premiered *Zungenspitzentanz* for unaccompanied piccolo solo on March 13, 1984 for the California Institute for the Arts at the Japan-American Theatre in Los Angeles.

are many versions of the piece, the following analysis examines the unaccompanied piccolo solo.

Analysis

Zungenspitzentanz begins with an “Eingang” (Entrance), in which the performer slowly rotates or “spins” clockwise while diagonally crossing the stage. As shown in example 4.1, the musician intones a D5 three times, establishing the first tonal center of the piece, as if summoning the beginning of a meditation. Rhythmic and melodic energy increase with each repetition of the pitch and a trance-inducing state is evoked. Notes begin to emerge from the recurring D5: F#5, C6, and B4, using the pitch class set (0,2,6,11) shown in example 4.1.⁷² This repeating D5 pattern creates familiarity for the listener while the intervallic leaps and tremolos build energy. The D5 and F#5 (2, 6) are fundamental tones outlined in this section and are connected by an ascending chromatic gesture shown in mm.15–16. Because of the note repetitions and tremolos, the music has a mesmerizing quality.

⁷² The notation used for sets follows *Introduction to Post Tonal Theory* by Joseph N. Straus, New Jersey: Upper Saddle River, 2005. Square brackets indicate normal order; parenthesis indicates the set class, or the prime form of the set. (0,2,6) is the primary set for the work.

EINGANG

bis Takt 34

Wenn Lautsprecherlürme auf der Bühne stehen: Spielanfang.

Auftritt

klings immer Oktave höher

$d = 50,5$

molto vibr.

13

15

Tremoli immer mit der Hauptnote beenden

Example 4.1. Stockhausen, excerpt from *Zungenspitzentanz*, the first rotation: The beginning of the piece illustrates the diagrams and instructions to be executed. During the ensemble staging, the piccoloist is tacet until m. 13.

During the first physical rotation of the performer, the music presents significant ornamental figures, including quick mordents, arpeggiation, chromatic glissandi, and tremolos. A musical thread is established by using repetitive pitches and rhythms, which allows the tonal center to be sustained in the audience's ear. The measured tempos and rallentandos finally slow to an end with the D5 accented thrice with tremolos and trills (shown in ex. 4.2). A breath-mark ends the section, yet the silence sustains the hypnotic moment.

BREIT ($d = 90$)

SEHR BREIT ($d = 20$)

$f^{\frac{3}{2}} 240$

a tempo $d = 50,5$

rit.

17

Example 4.2. Stockhausen, excerpt from *Zungenspitzentanz*: the end of the first section with a repeated D5. Stockhausen details a calculated tempo change on each gesture leading into m. 18.

The second rotation begins in m. 19 where the performer is instructed to turn counterclockwise, corresponding to the new tonal center of C \sharp , shown by the circular arrow in example 4.3. The changes in rotation, tonal center, and technical effect establish a fresh section for the audience to take notice of. Similar pitch materials are outlined through short chromatic runs between D5, F \sharp 4, F \sharp 5, and C \sharp 6 [1,2,6], sc (0,1,5).



Example 4.3. Stockhausen, Excerpt from *Zungenspitzentanz*, the second rotation: This sub-phrase is illustrated by a new tonal center and physical second rotation.

The repeated D5 creates a trance-like state through rhythmic variations, illustrated in example 4.4. The strict rhythmic pulse alternates between triplets and duplets, creating tension with each interchange while dynamics abruptly shift between *f* and *p*, building intensity and implying two contrapuntal voices through a single line. The D5 and D4 maintain a subservient role, producing a drone-like undercurrent of sound, emblematic of a musical incantation. The prevailing upper voice continues to build in an ascending yet random pattern, finally arriving on D \flat 6 (enharmonically equivalent to the tonal center of this rotation, C \sharp) and marking the next rotation for the performer.

Example 4.4. Stockhausen, excerpt from *Zungenspitzentanz*: This shows a strong emphasis between duple and triple rhythms, emphasizing a hypnotic state. The dynamics clearly mark the polyphonic texture in this line.

Once the $D\flat 6$ is reached (example 4.5), the third rotation begins, and the key center settles onto $C6$. This distinct key area is active with arpeggiations. The pairing of quick rhythms and large intervallic leaps creates an unsettling mood for the listeners, releasing them from the prior trance-like mood. This brief section ends with a crescendo into a fermata, suspending the sound.

Example 4.5. Stockhausen, excerpt from *Zungenspitzentanz*, the third rotation: The ascending and uncategorized intervallic class builds tension into the arrival at $D\flat 6$.

The next phase is indicated by a counterclockwise rotation (m. 26) shown in example 4.6. This unexpected section presents a deviation from the sound and rhythmic pattern of the chromaticism and arpeggiation previously heard. The primary effect has altered to an extended flutter-tongue passage that is heard on rapidly passing sixteenths, creating a frenzied atmosphere. This flutter-tongue effect creates roughness and instability in the sound and completely awakens the listener from any previous hypnotic impression.



Example 4.6. Stockhausen, excerpt from *Zungenspitzentanz*, the fourth rotation: Flutter-tongue is the primary extended technique that is used, creating a distinct sound.

This phrase implies a polyphonic texture between the high and low registral “voices,” which is stabilized by the D5 (mm. 26–27). While the D5 remains a pedal-point, the upper voices maintain the melodic line while alternating between D \flat 6, C6, G \flat 6, and G \flat 5 [0,1,2,6]. The register, staccatos, and accents enable the melodic line to be prominently heard.

A short new sub-phrase begins on D5 in m. 31, seen in example 4.7 in which the performer must trill while rotating clockwise. The performer is to play the trill in an irregular manner, sounding chaotic and uncontrolled, perhaps as if Lucifer were in command (i.e., representing a kind of “pandemonium”). An accented chromatic line

gradually slows and ascends (m. 33), while the performer produces forceful rushing wind sounds indicated in the score by the slash marks through note-heads. This forceful air and breath sound creates an atmosphere of the nonphysical, something that is intangible and mystic. Though this fifth rotational section contains less musical material than the other sections, the rate of the rotation is unchanged.

The image shows a musical score for two staves. The top staff begins at measure 30 and features a series of triplet notes with 'rit.' (ritardando) markings above them. A tempo change is indicated as 'a tempo d = 50,5'. A specific instruction reads 'unregelm. Griffwechsel auf d mit 1. Trillerklappe' (irregular fingering change to d with 1st trill key). A dynamic marking of 'mp' is present. The bottom staff starts at measure 32 and includes a 'Rauschen' (rushing wind) effect indicated by a box and a 'rit.' marking. A performance instruction in German states: 'In der Version mit Tänzer zieht sich während dieses Taktes die Flötistin mit Blickrichtung zum Saal zurück.' (In the version with dancers, the flutist withdraws during this measure with her gaze directed towards the hall.)

Example 4.7: Stockhausen, excerpt from *Zungenspitzentanz*, the fifth rotation.

The fifth and final rotation of the section prepares for the *Bändertanz* (Ribbon Dance) shown in example 4.8. The piccoloist is instructed to face the audience, looking forward and upward, while standing downstage—a defiant and confident physical gesture. The main motivic idea, an ascending flutter-tongued chromatic line, signifies the beginning of both the Ribbon Dance (m. 34) and the countdown of the clock. Each hour, however brief, encompasses a distinct sound, technical effect, pitch center, or rhythm. The subsequent sections mark a new hour on the clock and correspond with a letter spelling out the phrase *Salve Satanelli*. The letters and parallel hours will go unnoticed by

audiences who are unfamiliar with the work. Though the hours of the clock are not visually evident, they provide a strong symbolic message for the passage of time.

BÄNDERTANZ

S ♩ = 80

zum Publikum stehen,
nach vorne oben schauen

Flzg.

34

3

3

3

3

poco rit.

Example 4.8. Stockhausen, excerpt from *Zungenspitzentanz*, the beginning of the Ribbon Dance [S].

The one o'clock hour begins with a distinct change in sound; D, which was once a fundamental tone, has given way to G \sharp , shown in example 4.9. This change of a tritone is striking and creates an anxious and disturbing quality. The section outlines the pitches: G \sharp , D, and E (2,4,8), sc[0,2,6], while the rhythmic pattern comprises large leaps and tritone tremolos in various registers, increasing the instability and restlessness. Alternate fingerings are included to create microtonal pitches shown in m. 40. The same microtones, intervals, and chromatic glissandi continue into the two o'clock hour.

The image shows a musical score for flute in three systems. The first system (measures 39-44) is marked 'A' and 'J=80'. It includes instructions like '(rit.) (Flüg.)', 'etwas breiter', 'normal', and '1. Flöte auf 12 Uhr richten'. A fingering diagram for G# shows five different fingerings: 1 (index), 2 (middle), 3 (ring), 4 (ring), and 5 (pinky). The second system (measures 45-50) is marked 'L' and 'J=80', with 'subito J=50' and 'molto vibr. (langsam)'. The third system (measures 51-54) is marked 'L' and '2. Flöte auf 12 Uhr richten'.

Example 4.9. Stockhausen, excerpt from *Zungenspitzentanz*, one o'clock [A] & two o'clock [L].

At the end of the second hour the piccoloist is instructed to stand rigidly in a pose, as indicated in m. 59 (see ex. 4.10). This position is held in silence for the length of two bars, providing a moment of space. At three o'clock a microtonally altered $G\sharp$ is repeated while a chromatic descending scale connects the octave (mm. 63–64) in example 4.10. The tremolo effect outlines the tritone between the D and $G\sharp$ pitches. Appropriately, the work pairs this unstable technical effect and interval—the *diabolus in musica*—in order to clearly portray an image of Lucifer. The four o'clock hour, also seen in example 4.10, is structured around the half-steps separating $E5$, $D\sharp5$, and $D5$ [2,3,4]. The performer is instructed to use an alternate fingering for the $E5$ in this section to produce an out-of-tune and unfocused quality between the $E5$ and $D\sharp5$ tremolo. The notes are not intended to make a clear intonation, but rather a strong accelerating wind noise.

Example 4.10. Stockhausen, excerpt from *Zungenspitzentanz*, three o'clock [V], four o'clock [E], & five o'clock [S].

New theatrical and musical effects are introduced at five o'clock (m. 73). The piccoloist is to kneel, a traditionally prayerful gesture that, in this Luciferian context, has a pointedly equivocal implication. This moment is significant due to the physical gesture, noticeably ushering a different section in the piece that features the tonal centers E and E \flat , again exploiting the semi-tone. The performer is to create a popping effect with the lips: “pi” and “u” while playing ascending/descending chromatic octave slides achieved with the embouchure. This extended technique leads into the six o'clock hour while the music crescendos and decrescendos on an E \flat trill as seen in example 4.11.

Example 4.11. Stockhausen, excerpt from *Zungenspitzentanz*, six o'clock [A].

During the seven o'clock hour the music isolates the E \flat and D semi-tone relationship and transforms them into various rhythmic arrangements contrasting between duple and triple meter seen in example 4.12. This reestablishes a hypnotic sequence. Once again the music fixates on a particular rhythm, thereby creating an idea that is easily recognizable by the audience. The transforming patterns produce a hysterical and haphazard whirlwind of sound, clearly intended to have a disorienting effect.

Example 4.12. Stockhausen, excerpt from *Zungenspietzentanz*, seven o'clock [T].

The E \flat 5 settles into a *fortissimo* flutter-tongue effect at eight o'clock, which is then transformed into a rushing noise in m. 91 of example 4.13. Stockhausen instructs that the E5 in m. 93 be played with an alternate fingering (seen previously in ex. 4.10). This entire passage contains flutter-tonguing and slowly progressing linear semitones, maintaining the chromatic tension. At the end of the eighth hour, the performer is instructed to stand up from the kneeling position, signaling that the invocation to Lucifer is over.

Example 4.13. Stockhausen, excerpt from *Zungenspitzentanz*, eight o'clock [A].

In example 4.14, at the nine o'clock hour, the prominent notes B5 and B♭5 alternate between the implied chords of G major and G minor. The superfluous notes act as ornamentation for the B5 and B♭5 and allows for an improvisatory atmosphere. At this moment the piccoloist is at a normal standing position, not the previous prayer posture. Moreover, there is no further use of alternate fingerings and microtones, and the rhythmic pattern has decreased in intensity and drive. Still, a good deal of vibrato yet is indicated, and this contributes to an uncontrolled feeling.

Example 4.14. Stockhausen, excerpt from *Zungenspitzentanz*, nine o'clock [N].

The piece reaches a G tonality at the ten o'clock hour, beginning in m. 109, illustrated in example 4.15. The tonality is emphasized with the implication of dominant-to-tonic relationship between the D5 and G6 grace notes (shown at the end of the example). Ascending and descending chromatic runs enhance this relationship in a rhythmically spontaneous manner while the quick exchanges between the runs and grace notes establish a chaotic mood.

The image shows a musical score for a piano piece. It starts at measure 107, marked with a circled '107'. The key signature has one sharp (F#). The first measure contains the instruction 'gliss. möglichst tief' and a dynamic marking 'f'. The score consists of several measures of chromatic runs, some marked with '3' and a downward arrow, indicating triplets or specific rhythmic patterns. At the end of the excerpt, there are two grace notes: a D5 (F#) and a G6 (G), which are connected by a line, illustrating a dominant-to-tonic relationship. Above the final measure, there is a box containing the letter 'E', with a downward-pointing arrow and the number '80' below it, likely indicating a tempo change or a specific performance instruction.

Example 4.15. Stockhausen, excerpt from *Zungenspitzentanz*, ten o'clock [E].

In example 4.16, eleven o'clock, the central note is F5, which is elaborated with grace-notes and arpeggiations on the pitch-class D. The music presents repetitious quasi-minimalistic material, using only two pitch classes throughout this section while the changing rhythms create an organic crescendo, accelerando, and rallentando. To emphasize decrease in motion, Stockhausen uses longer note values while indicating an actual “rit.” in mm. 134–135, before twelve o'clock, seen in example 4.17.

Example 4.16. Stockhausen, excerpt from *Zungenspitzentanz*, eleven o'clock [L].

At the twelve o'clock hour, the performer must point the piccolo vertically upwards while playing (m. 136), symbolizing the arrival of midnight. A quick mordent is to be played on the F5 three times while the tempo gradually accelerates, leading into a new extended technique. The effect is produced forcefully and clearly, vocalizing the consonant sound "ki." In m. 142 the piccoloist is to direct the produced sound forward, upward, and toward the audience, as if in salutation. Midnight announces the long-awaited cadenza and salute to Lucifer.

Example 4.17. Stockhausen, excerpt from *Zungenspitzentanz*, twelve o'clock [L].

The piece reaches the cadenza in example 4.18 where one last vocalization on a long-held note transitions into a natural-tone sound in m. 154. This is to be held in length, with a pronounced vibrato, sustaining a loud and unrestrained sound. A repeated D4 is played at m. 157 at which point all physical body movements can be performed freely by the musician until m. 170.

Example 4.18. Stockhausen, excerpt from *Zungenspitzentanz*, cadenza.

The cadenza unfolds with pointed rhythms, accented notes, and sudden tempo shifts in an extemporaneous style, leading into a climactic moment in example 4.19. Here, the piccoloist shrieks a D6 while playing an F#5. After a fermata, the sung note is to glissando down to an F#4. Following a breath, and in a completely free manner, the performer calls out in a cat's meow: SALVE SA-TA-NEL-LI!, crying out to those who worship Lucifer.

159

singen Picc. lang gliss. (ca. 67) ganz frei miauend rufen lang

(ff) SAL- VE SA-TA-NEL-LI ! f (lange Konsonanten)

Example 4.19. Stockhausen, excerpt from *Zungenspitzentanz*, climactic moment of the piece, m. 159.

The cat-like speech is to be articulated in a slow and controlled manner, illustrated by the pitch-contour, rhythm, and range of the gesture and syllables (ex. 4.19). This moment is followed by a long fermata, which sustains climactic suspense. Throughout the piece, the piccoloist has represented a black cat with all the obvious occult and demonic implications; however, only now does the musician scream out to depict this image explicitly. During the medieval period it was imagined that the devil would transform himself into a black cat, rumors which were heavily associated with Catharism and their strong beliefs of both good and evil powers.⁷³ Folklore such as this perpetuated the tale that when a cat was tortured to death, its screams were those of Lucifer himself.

At the end of the cadenza, the piccoloist slowly moves backwards, crouching forward while walking with cat-like steps, indicating the beginning of the “Departure.”⁷⁴ The performer’s eyes are wide open, staring at one place. Throughout this time, the musician is to look up at the ceiling during the fermatas, like a cat stopping to observe cautiously, fearful of being sacrificed. The cat’s “Departure” offers a sense of cyclic return in that it uses similar compositional techniques to those first introduced in the

⁷³ Walter Stephens, *Demon Lovers: Witchcraft, Sex, and the Crisis of Belief* (Chicago: The University of Chicago Press, 2002), 281.

⁷⁴ As notated by the score: these movement directions only apply to versions without a dancer.

“Entrance” of the piece: chromaticism, duple and triple rhythms, flutter tonguing, and quick mordents, seen in example 4.20.

Example 4.20. Stockhausen, excerpt from *Zungenspitzentanz*, beginning of the “Departure.” Diagrams and instructions are included to direct the performer how to leave the stage.

Unlike the beginning of the work, this section is not divided into sub-phrases. Instead, it proceeds uninterrupted. The “Departure” contains more rhythmically agitated material and disconcerting pitch-bends, generating an unsettling mood. The use of repetitive note patterns and inconsistent tempi creates an entrancing effect until the very end. The musician holds the final note as long as possible while disappearing into the back of the stage.

Example 4.21. Stockhausen, excerpt from *Zungenspitzentanz*, ending of the piece.

Stockhausen combines a multitude of techniques: dramatic, visual, and musical, in a meticulously organized manner to create a mystical and ritualistic effect. The circular spinning carries a compelling undertone; an evident theme throughout the entirety of the piece, while also becoming a visual indication for the audience when the motivic ideas change. From the kneeling gesture, hypnotic turning, and cries of salutations to Lucifer, the movements and spoken words help create the mystic underworld quality, which Stockhausen intended for his opera *Licht*.

CHAPTER V

CONTEMPORARY PRACTICE AND CONCLUSIONS

Drama has always maintained a connection with music, never far from the concert stage. One clear example dates back to 1772, during a performance of Joseph Haydn's Symphony No. 45 in F-Sharp Minor ("Farewell"), where Haydn instructed the performers to snuff out the candles on their music stands, get up, and leave the stage one by one as the music continued, in order to communicate to Prince Nikolaus Esterházy that they wanted to return to Vienna from his Hungarian estate where they spent their summers. The theatrical impulse was seen in a performance of J.S. Bach's St Matthew Passion, realized in 2010, under the baton of Simon Rattle (b. 1955) and stage direction of Peter Sellars (b. 1957). Here, the Berlin Philharmonic performed this work in a manner not previously seen before, where the musicians were positioned across from each other to emphasize physical interactions and the vocalists were able to sit, stand, move around, and even situate themselves among the audience. The performers took on the additional role of dancers and actors, having memorized the piece in order to free themselves from the scores. A similar approach was taken by the New York Philharmonic when performing several traditional orchestral works, recounted by music critic Anthony Tommasini of *The New York Times* in a 2013 music review of their performance of Igor Stravinsky's *Petrushka* in the themed concert "A Dancer's Dream." In this particular

performance, the instrumentalists took on interactive roles not only as musicians, but also as minor characters of the ballet. They wore costumes, stomped on the floor, and passed food and drinks around to each other, all while the lead ballet dancers performed in front and a video played in the background.⁷⁵ It would thus be a mistake to imagine that theatrics and concert music occupy entirely separate spheres.

In recent decades, the dramatic element has piqued the interest of several musicians who have taken it upon themselves to create their own ensembles in order to incorporate theater and other art forms into their performances. This approach is not only a creative outlet for musicians, but also it is an inadvertent reaction to the meticulously prescribed details and restraints of previous modernist works, many of which include instructions specifying every detail, leaving little room for spontaneity. These contemporary ensembles have taken a more performer-driven approach rather than one that is guided entirely by the composer, a process that echoes the improvisatory styles of Ian Anderson and Rahsaan Roland Kirk and allows the performers to retain more artistic control.

One of the most recognized performance art ensembles to build a following for a musical movement such as this is the American Grammy-award-winning group *eighth blackbird*. Recognized for creating an entirely new visual experience for audiences, the ensemble was formed by several students at the Oberlin Conservatory under the direction of Tim Weiss, the group went on to win the Fischhoff National Chamber Music Competition in 1996. From the beginning, the musicians were committed to

⁷⁵ Anthony Tommasini, "Everyone's a Dancer at the Philharmonic. 'A Dancer's Dream' Includes Orchestra in Stravinsky Ballets." *The New York Times*, 28 June 2013.

memorization and the incorporation of choreography, electronic sounds, and visual screens with the help of theater artists and lighting designers.⁷⁶

Not only do they promote artistic collaborations and experimentation with new dramatic elements, but also the performers breathe new life into established ensemble works. In 2012, *eighth blackbird* performed a dramatic rendition of Arnold Schoenberg's 1912 piece *Pierrot Lunaire* in a fresh and novel way. Having all musical parts memorized, the performers took upon the roles of both musician and thespian, freely moving about the stage, playing their instruments or singing, while interacting with one another. Though the piece was not originally performed in this way, the ensemble also incorporated props and special lighting to enhance the music.⁷⁷

Many ensembles are following a similar path, taking well-known works and discovering new ways in which they can artistically enhance the music through the use of theatrics. The hybrid arts ensemble *The Fourth Wall*, co-founded by flutist Hilary Abigana; trombonist, actor, and dancer C. Neil Parsons; and percussionist and narrator Greg Jukes, is gaining popularity for their integration of various artistic disciplines in an interactive manner. Their performance of J.S. Bach's Suite for Solo Cello no. 1 in G Major – Prelude, brought about a fun and light-hearted interpretation of the work, in which all three perform on the ground with colorful plastic tubes of varying lengths that allow for different pitches to be produced when hitting the floor. The ensemble even encourages audience participation by walking into the audience, bringing them on stage, and giving the audience members a choice as to what the musicians should play or say

⁷⁶ "eighth blackbird." <http://www.eighthblackbird.org/ensemble/> (accessed April 15, 2016).

⁷⁷ DeChiazza, Mark. "eighth blackbird: Pierrot Lunaire." Video. <https://vimeo.com/20252277>. 2016 (accessed April 18, 2016).

next.⁷⁸ The ensemble's priority is to make music fun, educational, and accessible to all people.

The *International Contemporary Ensemble* (ICE), founded in 2001 by the American flutist Claire Chace (b. 1978), is another contemporary ensemble that maintains analogous philosophies by closely collaborating with composers, combining inter-disciplinary art forms, and developing strategies for educating and attracting new audiences. The artist-driven ensemble consists of a flexible and interchangeable group of 33 musicians; their special mission is to premiere new solo and ensemble works that incorporate extended techniques, movement, memorization, electronics, multimedia, and electroacoustic elements. Comparable to Stockhausen's experimentations with the use of space, the ICE seeks out unusual places to perform.⁷⁹ For example, their concert "For the Birds" took place inside the Park Avenue Armory in New York City, and much like Stockhausen's *Musik für ein Haus*, ICE performed in various rooms and lofted areas of the venue, encouraging the audience to follow them room to room. This idea of concert music as an interactive art form has struck a chord with a significant number of musicians and audiences. This approach not only interests veteran concert goers who are knowledgeable of the repertoire, but also it can reach a new audience, providing non-regular attendees an exciting new way to enjoy music.

Dramatic ensembles such as these are appearing more frequently throughout the world, more so than in solo performances. This difference is largely due to the fact that musical ensembles allow for a variety of physical gestures and interactions among several individuals. Much like a monologue within a play, solo works present a message by a

⁷⁸ "The Fourth Wall: Hybrid Arts Ensemble." thefourthwallensemble.com (accessed April 15, 2016).

⁷⁹ "International Contemporary Ensemble." <http://iceorg.org/> (accessed April 15, 2016).

solitary performer; this can result in limitations of physical gestures, and it can be challenging for audience members to interpret the actions of only one individual.

Because few solo works include performative elements, Takemitsu's *Voice* and Stockhausen's *Zungenpitzentanz* hold a significant place in the flute repertoire and thus should be recognized for their historical importance. These pieces, like similar works for other instruments, have influenced the way audiences experience music aurally and visually, and have expanded the tonal and visual possibilities of concert music while incorporating a depth of symbolism and meaning in their works. They demonstrate how, in contrast to earlier examples, the theatrics themselves—in counterpoint with the musical elements—create meaning, unity, and structure in the form of the piece.

Though Takemitsu and Stockhausen are remarkably different, their musical perspectives and motivations for incorporating theatrics are quite similar. For all the differences in their compositional styles, their philosophical kinship is difficult to ignore. Each overcame a difficult childhood, and endured personal hardships that fostered resilience and served as motivation to follow a unique path. Their life experiences shaped their passion for the theater and as a result compelled them to feature this art form in their works. Through the use of theatrics they create a new layer of meaning within music. The dramatic effects tighten and define the formal structure and function as thematic material by recurring throughout the pieces, increasing sensory interest for the audience. As a result, these features open a new dimension and texture in live performance, stimulating the audience visually as well as aurally.

Theatrical elements thus still have a place, though an ever-changing one, in new music, and only recently has it become more common that the theatrical elements in

music are performer-driven. In the twenty-first century, musical experimentation and extended techniques have come to be more or less expected from contemporary composers, as has the incorporation of other elements such as electronics, recorded sounds, and videos. Dramatic elements have long been integrated within music, yet they have now become even more visually evident and accepted within the repertoire.

APPENDIX A**EXTENDED TECHNIQUES**

EXTENDED TECHNIQUES

Key clicks: Percussive sounds produced by slapping the finger on the key of the flute.

This may be created with or without breath.

Whistle tone: A very soft and controlled sound that is produced by gently blowing the air stream across the lip plate creating a high pitched “ghost sound.” This is derived from the overtone series.

Microtones and quarter-tones: Smaller intervallic tones in-between the equally-tempered scale degrees created by alternate fingerings.

Flutter-tonguing: An onomatopoeic “rrr” or “lll” sound created by rolling the tongue in the mouth or produced by growling in the back of the throat.

Multiphonics: The production of two or more notes at the same time. This is often created by alternate fingerings.

Slides and glissandi: These are effectively produced with an open-hole flute by sliding the finger off of the key, creating a bend in the pitch. For a more dramatic effect, the mouthpiece can be rolled in or out to create a noticeable slide/glissandi effect.

Singing and playing: A polyphonic sound that is created by singing into the flute while producing a pitch on the instrument.

Residual air tones: Unfocused air sounds that are created by blowing at different angles either across or into the lip plate.

Vibrato: An oscillation of the pitch by use of air or by oscillating the finger over the open hole. Typically, vibrato is produced with the air.

Tongue Pizzicato: A popping effect created by placing the tongue between the opening of the lips and suddenly withdrawing the tongue into the mouth.

Circular Breathing: A process of breathing through both the nose and mouth that allows the performer to maintain a constant air stream without disrupting the music to breathe. This is possible by storing air in the mouth while inhaling through the nose.

Jet Whistle: A sound created by covering the entire embouchure hole with the mouth and blowing a forceful speed of air down into the hole. To create the most effective sound, quickly shift the angle of the flute upward in order for the airflow to hit the back of the embouchure wall. This will create a very strong high-pitched sound, much like a jet whistle.

Tongue Ram: A slapping effect produced by covering the entire embouchure hole with the mouth, forcefully and quickly stopping the air with the tongue. This can be more effectively produced on the bass or alto flute.

Pitch Bending: Created by either rolling the headjoint of the flute in or out or quickly shifting the direction of the airstream from into the embouchure hole to across the lip-plate and vice-versa. Sliding the finger off of the open-hole key can also produce this effect.

APPENDIX B

**PERFORMANCE INSTRUCTIONS FOR
VOICE BY TÔRU TAKEMITSU**

PERFORMANCE INSTRUCTIONS FOR VOICE BY TŌRU TAKEMITSU

TORU TAKEMITSU

VOICE

for flute solo

This piece is written for and dedicated to Aurèle Nicolet.






The text is taken from «Handmade Proverbs» by Shuzo Takiguchi with the author's permission:

QUI VA LA? QUI QUE TU SOIS, PARLE, TRANSPARENCE !
WHO GOES THERE? SPEAK, TRANSPARENCE, WHOEVER YOU ARE!



N.B. In the first edition of this work the use of microphones was advised in order to obtain some slight amplification of volume. In the present edition the composer no longer feels this to be necessary.

Notation and playing instructions.






Ⓐ – Normal playing

- 1)  A note the length of which depends on the length of the horizontal bar.
- 2)  Legato.
- 3)  A short staccato sound.
- 4)  Grace notes; to be played as fast as possible.
- 5)  Strong accent without tonguing as on Japanese Noh flute (i.e. including forceful breathing mixed in with the sound).

Ⓑ – Finger tapping on the keys

- 6)  With normal play (notes with pitches).
- 7)  No sound except that of finger tapping on the keys.

Ⓒ – Other special instructions

- 8)  To be played «pizzicato».
- 9)  With voice, humming, shouting, singing, etc...
- 10)  A more breathy sound than a whistle tone.
- 11)  Speak into the instrument with lips almost entirely covering the mouthpiece.
- 12)  Speaking (normal speech, whispering, shouting) but with the lips off the instrument.
- 13) $\text{̣} - \text{̤}$ With voice; move gradually from a voiced consonant (̣) to an unvoiced (̤).

...and any combinations of the above techniques.

The multiphonics and the quarter-tones used in this piece are indicated in Bruno Bartolozzi's notation:

- Lips well apart (as for the lower register).
- Lips wide apart and completely relaxed.
- ◉ Lips moderately apart (as for the middle register).
- Lips slightly apart (as for the high register).
- ‡ Quarter-tone sharp.
- ‖ Quarter-tone flat.
- ‡‡ Three quarter-tones sharp.

Ⓓ – Timing (tempo)

Proportional notation is used in which absolute durations and rhythmic values are not given precisely but are suggested by relative durations. One bar should last about 4 1/2 seconds.

- ⤵ Very long pause.
- ⏏ Short pause.
- ∨ Short breath.
- ↗ Accelerando.
- ↖ Ritardando.

Toru TAKEMITSU

BIBLIOGRAPHY

Books

- Arnott, Peter. *The Theatres of Japan*. London: Macmillan, 1969.
- Bartolozzi, Bruno. *New Sounds for Woodwind*. Translated and edited by Reginald Smith Brindle. New York: Oxford University Press, 1967.
- Brockett, Oscar G. *History of the Theatre*. 6th ed. Boston: Allyn and Bacon, 1991.
- Burt, Peter. *The Music of Tōru Takemitsu*. Cambridge: Cambridge University Press, 2001.
- Cott, Jonathan. *Stockhausen: Conversations with the Composer*. New York: Simon and Schuster, 1973.
- De Ferranti, Hugh. *Japanese Musical Instruments*. New York: Oxford University Press, 2000.
- Dick, Robert. *The Other Flute. A Performance Manual of Contemporary Techniques*, 2nd ed. New York: Multiple Breath, 1989.
- Fitzgibbon, Henry M. *The Story of the Flute. History of the Flute and Everything Connected With It*. London: William Reeves, 1914.
- Gammond, Peter. "Jethro Tull." *The Oxford Companion to Popular Music*. New York: Oxford University Press, 1991.
- Haar, Francis. *Japanese Theatre in Highlight. A Pictorial Commentary*. Westport, CT: Greenwood Press, 1971.
- Hartnoll, Phyllis. *The Theatre. A Concise History*. Revised and extended by Enoch Brater. London: Thames & Hudson, 2012.
- Howell, Thomas. *The Avant-Garde Flute. A Handbook for Composers and Flutists*. Los Angeles: University of California Press, 1974.
- Inoura, Yoshinobu and Toshio Kawatake. *The Traditional Theater of Japan*. Tokyo: Japan Foundation, 1981.

- Jordan, Peter. *The Venetian Origins of the Commedia Dell'Arte*. London: Routledge, 2014.
- Kishibe, Shigeo. *The Traditional Music of Japan*. Tokyo: Japan Cultural Society, 1969.
- Krell, John C. *Kincaidiana. A Flute Player's Notebook*. 2nd ed. Santa Clarita: National Flute Association, 1973.
- Kurtz, Michael. *Stockhausen: A Biography*. Translated by Richard Toop. Great Britain: Faber and Faber, 1992.
- Maconie, Robin. *Other Planets. The Music of Karlheinz Stockhausen*. Lanham, MD: Scarecrow Press, 2005.
- . *The Works of Karlheinz Stockhausen*. London: Oxford University Press, 1976.
- Nicolet, Aurèle. *Pro musica nova: Studien zum Spielen neuer Musik*. Cologne: Hans Gerig, 1974.
- Nicoll, Allardyce. *The Theatre and Dramatic Theory*. London: George G. Harrap, 1962.
- Ohtake, Noriko. *Creative Sources for the Music of Tōru Takemitsu*. England: Scolar Press, 1993.
- Peacock, Ronald. *The Art of Drama*. New York: Macmillan, 1957.
- Pound, Ezra and Ernest Fenollosa. *The Classic Noh Theatre of Japan*. New York: New Directions, 1959.
- Powell, Ardal. *The Flute*. New Haven: Yale University Press, 2002.
- Randel, Don Michael. "Africa." *The Harvard Dictionary of Music*. 2nd ed. Cambridge, Massachusetts: Belknap Press of Harvard University Press, 2003.
- Reiter, Seymour. *World Theater: The Structure and Meaning of Drama*. New York: Horizon Press, 1973.
- Shigeo, Kishibe. *The Traditional Music of Japan*. Tokyo: Japan Foundation, 1982.
- Siddons, James. *Toru Takemitsu. A Bio-Bibliography*. Westport, CT: Greenwood Press, 2001.
- Stephens, Walter. *Demon Lovers: Witchcraft, Sex, and the Crisis of Belief*. Chicago: University of Chicago Press, 2002.

- Straus, Joseph N. *Introduction to Post-Tonal Theory*. 3rd ed. Upper Saddle River, New Jersey: Prentice Hall, 2005.
- Stockhausen, Karlheinz. *Stockhausen on Music: Lectures and Interviews Compiled by Robin Maconie*. London: Marion Boyars, 1989.
- Takemitsu, Tōru. *Confronting Silence: Selected Writings*. Translated and edited by Yoshiko Kakudo and Glenn Glasow. Berkeley: Fallen Leaf Press, 1995.
- Toff, Nancy. *The Flute Book. A Complete Guide for Students and Performers*. Oxford: University Press, 1996.
- . *The Development of the Modern Flute*. New York: Taplinger, 1979.
- Tuttle, Charles E. *The Noh Drama: Ten Plays From the Japanese*. Selected and Translated by the Special Noh Committee, Japanese Classics Translation Committee, Nippon Gakujutsu Shinkokai. Tokyo: Charles E. Tuttle, 1955.
- Vester, Frans. *Flute Repertoire Catalogue*. London: Musica Rara, 1967.
- Wörner, Karl H. *Stockhausen: Life and Work*. Introduced, translated, and edited by Bill Hopkins, London: Faber and Faber, 1973.

Websites

- Bélis, Annie. "Aulos." Grove Music Online (accessed February 18, 2015).
- "Brannen Brothers Flutemakers, Inc."
<http://www.brannenflutes.com/kingma.html>. 2003 (accessed January 15, 2014).
- Burton, Anthony. "Takemitsu, Tōru." Grove Music Online (accessed July 8, 2014).
- DeChiazza, Mark. "eighth blackbird: Pierrot Lunaire." Video.
<https://vimeo.com/20252277>. 2016 (accessed April 18, 2016).
- Dick, Robert. Video interview.
<http://www.artistshousemusic.org/videos/flutist+robert+dick+demonstrates+the+glissando+headjoint>. 2005 (accessed January 15, 2014).
- "eighth blackbird." <http://www.eighthblackbird.org/ensemble/> (accessed April 15, 2016).
- "International Contemporary Ensemble." <http://iceorg.org/> (accessed April 15, 2016).

- Krantz, Larry. "Robert Dick: Composer and Flutist." <http://www.larrykrantz.com/rdick.htm>. 2007 (accessed December 3, 2013).
- Kernfeld, Barry. "Kirk, (Rahsaan) Roland." Grove Music Online (accessed October 5, 2014).
- Narazaki, Yoko with Masakata Kanazawa. "Takemitsu, Tōru." Grove Music Online (accessed July 8, 2014).
- Offermans, Wil. "For the Contemporary Flutist." <http://www.forthethecontemporaryflutist.com/etude/etude-07.html>. 2012 (accessed January 15, 2014).
- Powell, Ardal. "FluteHistory.com." <http://www.flutehistory.com/>. 2000 (accessed December 3, 2013).
- "The Fourth Wall: Hybrid Arts Ensemble." <http://www.thefourthwallensemble.com/about> (accessed April 15, 2016).
- Toop, Richard. "Stockhausen, Karlheinz." Grove Music Online (accessed October 12, 2014).

Articles

- Arai, Asako. "Transcending Traditional Cultural Concepts." *The Flutist Quarterly* 22, no. 4 (Summer 1997): 38–43.
- Fearn, Raymond. "Bruno Maderna: From the Café Pedrocchi to Darmstadt" *Tempo* New Series, no. 155 (December 1985): 8–14.
- Heiss, John C. "For the Flute: A List of Double-Stops, Triple-Stops, Quadruple Stops, and Shakes." *Perspectives of New Music* 5, no. 1 (Autumn-Winter 1966): 139–141.
- . "Some Multiple-Sonorities for Flute, Oboe, Clarinet, and Bassoon." *Perspectives of New Music* 7, no. 1 (Autumn-Winter 1968): 136–142.
- Koozin, Timothy. "Tōru Takemitsu and the Unity of Opposites." *College Music Symposium* 30, no. 1 (Spring 1990): 34–44.
- Muller, Theo and Luciano Berio. "Music is Not a Solitary Act: Conversation with Luciano Berio." *Tempo* New Series, no. 199 (January 1997): 16–20.
- Price, Kirsten Jan. "Debussy's *Syrinx*: Mystery, Myth, and a Manuscript." *The Flutist Quarterly* 34, no. 1 (Fall 2008): 17–24.

Reynolds, Roger and Tōru Takemitsu. "Roger Reynolds and Tōru Takemitsu: A Conversation." *The Musical Quarterly* 80, no.1 (Spring 1990): 61–76.

Takemitsu, Tōru, Tania Cronin and Hilary Tann. "Afterword." *Perspectives of New Music* 27, no. 2 (Summer 1989): 205–214.

Thomas, Helen C. "Morphologies of Time in Stockhausen's *Licht*." *Tempo* 62, no. 245 (July 2008): 2–16.

Dissertations/Theses

Edwards, Patti Y. *Luciano Berio's Sequenza III: The Use of Vocal Gesture and the Genre of the Mad Scene*. DMA diss., University of North Texas, 2004.

Howland, Patricia. *Formal Processes in Post-Tonal Music: A Study of Selected Works by Babbitt, Stockhausen, and Carter*. PhD diss., The City University of New York, 2010.

Kim, In-Sung. *Use of East Asian Traditional Flute Technique in Works by Chou Wen-chung, Isang Yun, and Toru Takemitsu*. DMA diss., University of California, Los Angeles, 2003.

Robinson, Elizabeth A. *Voice, Itinerant, and Air: A Performance and Analytical Guide to the Solo Flute Works of Tōru Takemitsu*. DA diss., Ball State University, 2011.

Sakamoto, Mikiko. *Takemitsu and the Influence of "Cage Shock": Transforming the Japanese Ideology into Music*. DMA diss., University of Nebraska at Lincoln, 2010.

Wilson, Dana R. *The Role of Texture in Selected Works of Toru Takemitsu*. PhD diss., University of Rochester, Eastman School of Music, 1982.

Musical Reviews

Harss, Marina. "A Dancer's Dream: *Le Baiser de la Fée*, Excerpts from *Neige*, *Petrushka*." *Dance Tabs*, 29 June 2013.

Ramey, Corinne. "Berlin Philharmonic Performs 'St. Matthew Passion' at the Park Avenue Armory." *The Wall Street Journal*, 7 October 2014.

Tommasini, Anthony. "Everyone's a Dancer at the Philharmonic. 'A Dancer's Dream' Includes Orchestra in Stravinsky Ballets." *The New York Times*, 28 June 2013.

Woolfe, Zachary. "A Second Bout of 'Passion,' Rarer: Berlin Philharmonic Performs a New 'St. John Passion.'" *The New York Times*, 27 February 2014.

Musical Scores

Berio, Luciano. *Sequenza I for flute solo*. Vienna: Universal Edition, 1958.

———. *Sequenza V for trombone solo*. Vienna: Universal Edition, 1966.

Crumb, George. *Vox Balaenae*. New York: C.F. Peters, 1971.

Davies, Peter Maxwell. *Eight Songs for a Mad King*. London: Boosey & Hawkes, 1969.

———. *Miss Donnithorne's Maggot*. London: Boosey & Hawkes, 1974.

Debussy, Claude. *Syrinx for flute solo*. München: G. Henle Verlag, 1913.

Martino, Donald. *Augenmusik: A Mixed Mediocritique*. Boston: E.C. Schirmer, 1974.

Stockhausen, Karlheinz. *Zungenspitzenanz for solo piccolo*. 1st ed. Kürten: Stockhausen-Verlag, 1990.

Takemitsu, Tōru. *Voice pour flute solo*. Paris: Salabert, 1971.