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VINKO GLOBOKAR'S ATEMSTUDIE FOR SOLO OBOE:
ANALYSIS AND PERFORMANCE GUIDE

BY

DAVID JOHN CYZAK

THESIS

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ABSTRACT

This thesis provides an analysis and performance guide to Vinko Globokar's solo oboe work *Atemstudie*. As both of Globokar's oboe works—*Discours III* for five oboes (1969) and *Atemstudie* for solo oboe (1971)—were written for Heinz Holliger, and composed in close proximity, I will elucidate their relationship with an overview of *Discours III*. While current scholarship provides analyses of some of Globokar's works, as well as his thoughts on improvisation, no such analysis exists for *Atemstudie* or its treatment of the oboe. My interviews with Globokar regarding these topics will expand upon the currently available scholarship contributing otherwise unwritten experiences and performance expectations. With a greater understanding of Vinko Globokar and the historical context of these works, the intent and spirit of his compositions can be more fully realized.

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To the C.F. Peters Corporation I am grateful for their permission to include excerpts from Vinko Globokar's compositions in this study. *Discours III, Copyright © (1972) & Atemstudie, Copyright © (1972) by Henry Litolf's Verlag. All Rights Reserved. Used by permission of C.F. Peters Corporation.*

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CHAPTER 1: INTRODUCTION AND BRIEF BIOGRAPHY

Vinko Globokar was born on July 7th, 1934 to Slovenian parents, in the Lorraine mining region of Anderny, France. Growing up in a village of Slovenian emigrants, he was exposed to Slovenian folk music from an early age. In this community, Slovenian language instruction was provided along with music lessons. Such lessons enabled Globokar to play music in a children's theatre and sing with a small choir.¹ His early formal schooling also introduced Globokar to French language and culture.² In 1947, at the age of 13, his family returned to Ljubljana, Slovenia (Yugoslavia at the time). There he made his debut as a jazz trombonist and attended secondary school at DIC³ in Ljubljana, Slovenia completing his diploma in 1954.⁴ In 1955, with the help of a scholarship, he returned to France to study trombone at the Paris Conservatory of Music (Conservatoire de Paris)^{5,6} with André Lafosse and Gabriel Masson. His training was further enhanced by extensive experience performing and recording symphonic, jazz, and commercial music with numerous ensembles throughout Paris.^{7,8}

¹ Vinko Globokar, interviews and forum discussions during residency at University of Illinois Urbana-Champaign, interviews conducted and/or documented by author, October 7–15, 2014.

² Michael Kurtz, "Vinko Globokar - Biogramm," *MUNZINGER*, www.munzinger.de/search/kdg/Vinko+Globokar/193.html (accessed July 7, 2016).

³ "DIC" refers to the secondary school Dijaški dom Ivana Cankarja.

⁴ John Warnaby, "Vinko Globokar: Revaluing A Phenomenon," *Tempo* Volume 61, no. 240 (2007): 2.

⁵ Vinko Globokar, "Composer/Trombonist Vinko Globokar: A Conversation with Bruce Duffie," Interview by Bruce Duffie, recorded on November 20, 2000, <http://www.bruceduffie.com/globokar.html> (accessed October 5, 2014).

⁶ IRCAM, "Vinko Globokar," *Institut de Recherche et Coordination Acoustique/Musique*, <http://brahms.ircam.fr/vinko-globokar#bio> (accessed September 4, 2016).

⁷ Erik Lund, "The Discours of Vinko Globokar: to speak ↔ to play," DMA thesis, University of Illinois Urbana-Champaign, 1988, 2.

⁸ Globokar's recounts his early introduction to Jazz noting the following: "Then when I came to 13 year, in boarding school in Slovenia, it was a small band, for dancing. And started, and I was 17 years old when I was engaged as a trombone player in the radio's big band... In the Adriatic sea, after the war, was an American propaganda boat, for Russian thing. And from 11 in the evening to midnight it was each day a Jazz emission. So that called, I forget the name now. And In the orchestra was a pianist who had very fine ear, and he recorded all this, Stan Kenton, Billy Mae, Woody Herman, all this things very modern, and transcribed it so that the big band of Radio Ljubljana played all this thing in the 50's. And when I came to Paris I started to earn

While attending the Paris Conservatory, Globokar attained first prizes for trombone and chamber music in 1959.⁹ Despite Globokar's success, he was dissatisfied with his lack of knowledge regarding aspects involved in the formal construction and composition of music. He wanted to go beyond the mere skills of performing on his instrument. At 26, Globokar felt himself too old to go back to school for harmony and counterpoint training. Upon expressing this to his conductor friend Diego Masson, Diego noted that his father, André Masson, "played chess with a Polish guy' who might be able to help."¹⁰ The man in question was none other than René Leibowitz; an important influence on post-Viennese avant-garde composers such as Pierre Boulez, Leibowitz was one of the principle disciples of Arnold Schoenberg. With the money Globokar gained from a burgeoning performance career, he began private lessons with Leibowitz.¹¹ The education provided by Leibowitz from 1960–1963 grounded Globokar in core principles of compositional technique and some of the latest aesthetic developments of music in Europe at the time.¹² Further lessons in counterpoint and harmony were with André Hodeir.^{13,14}

Leibowitz embraced the work of Arnold Schoenberg and his school of twelve-tone composition insisting in 1946 that Schoenberg and his pupils, Anton Webern and Alban

money as a freelance musician playing, in that time there were still American soldiers in France, and we played for dancing ect. and after that, in the Conservatory I started to start to know classical music, etc. I did not do everything at the same time, chronological[ly] (sic):" Globokar, UIUC residency interviews.

⁹ Globokar, "Composer/Trombonist Vinko Globokar: A Conversation with Bruce Duffie."

¹⁰ Robert Everett-Green, "The games that Vinko Globokar's musicians play," *The Globe and Mail*, Dec. 7, 2011, www.theglobeandmail.com/arts/music/the-games-that-vinko-globokars-musicians-play/article4180354/ (accessed February 20, 2016).

¹¹ Globokar, UIUC residency interviews.

¹² Kurtz, "Vinko Globokar - Biogramm."

¹³ André Hodeir was a French Jazz musician, composer and writer. He attended the Paris Conservatory from 1942–1948. There he attended Messiaen's analysis class and won *premiers prix* in harmony, counterpoint and fugue, and music history. From 1954–1960 he was the musical director of the Jazz Group of Paris: Christiana Spiethh-Weissenbacher, "Hodeir, André," *Grove Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/13119> (accessed September 4, 2016).

¹⁴ Warnaby, 2.

Berg, were “the only musical geniuses of our time.”¹⁵ The tenants of twelve-tone composition, as defined by Leibowitz, involve the use of the following:

1) the total resources of chromaticism, 2) a disciplined organization of this material, 3) devices which enable this discipline to engender certain sound-forms, or idioms, that—quite aside from individual differences in talent and temperament—belong to the common syntax of composition.¹⁶

While Leibowitz was clearly partial to the aforementioned composers and their developments, he was still willing to consider a driving force that enabled both past and future music—“all laws which we have been able to formulate up till now are derived from a single supreme law, the law of perpetual variation.”¹⁷

During his studies with Leibowitz, Globokar attended a concert organized by Boulez that featured new works by composers such as Karlheinz Stockhausen, Luciano Berio, Mauricio Kagel, and Luigi Nono.^{18,19} Upon hearing this music Globokar realized he did not understand the concept behind the music, the “sense” behind this new sound, as it were. Leibowitz explained that this kind of music was conceived in a deliberate effort to alter the traditional parameters used for composing music. Globokar later noted that he came to understand this music (which he heard in Boulez’s concerts) as a post-World War II, avant-garde music defined by four parameters of sound—pitch, duration, dynamics and timbre—where every element is treated equally.²⁰

¹⁵ René Leibowitz, *Schoenberg & His School*, Translated by Dika Newlin (New York: Da Capo Press, 1949), xiv-xvi.

¹⁶ Leibowitz, 266.

¹⁷ *Ibid.*, 269.

¹⁸ Globokar, UIUC residency interviews.

¹⁹ The concert was most likely part of the *Le Domaine Musical* concert society Boulez established in Paris, which was active between 1954–1973.

²⁰ Globokar, UIUC residency interviews.

The concert experience awakened within Globokar a profound desire to find his own voice as a composer, as well as a master of new music to guide him.²¹ Leibowitz's own words speak poignantly to the process of musicians/composers finding their compositional voice:

Now, those who become composers begin (just like those who do *not* become composers) by *making* music or composing. But at one time or another there comes to them what some would call a revelation, and what I like to call a *sudden consciousness* of the true meaning of the language of music. From that day forward, if the activity of composing or of making music is carried on with the intention of solving those profound problems which have confronted the consciousness of the individual, that individual has a chance to become a composer, a true musician.

In the case of the composer, this sudden consciousness comes at the moment when, in the work of a contemporary musician, he discovers what seems to him to be the language of his epoch, the language which he himself wants to speak. Up to that point, he may have assimilated, in more or less accurate fashion, the language of the past; he may have believed that he has profited from certain excursions into a style which seems to him to furnish fresh possibilities. But his real consciousness of *being a composer* cannot be foursquare and unshakable until some master of our time brings him the assurance, the irrefutable evidence of the necessity and the authenticity of his personal language.²²

Globokar found the master of his time in Luciano Berio, to whom he had been introduced by Jean-Pierre Drouet in 1964. Globokar's desire to study with Berio came to fruition in 1964 when Berio received a grant from the Ford Foundation to work in Berlin and asked Globokar to be his assistant.²³ Erik Lund notes that "during the six month stay in Berlin, Globokar did not study much with regard to the technical and formal aspects of composition with Berio. Instead, they spoke informally about musical aesthetics and

²¹ This experience eventually led to his study with Berio, triggering his decision to leave his freelance-performing career and to commit to pursuing "new forms of [unexplored] artistic expression:" Lund, 2.

²² Leibowitz, x-xi.

²³ Lund, 5.

various types of compositional thought processes.”²⁴ Lund further notes of Berio’s influence on Globokar: “Berio’s most significant contribution to Globokar’s development as a composer was in proposing that he find stimuli/ models/ problems outside of music which could then be used to dictate musical elements.”²⁵ Globokar recounted this influence saying that after only a few lessons Berio asked, “What now? It’s up to you to invent something.”²⁶

While in Berlin, Berio was composing *Traces* (1964) for soprano, mezzo-soprano, two choruses and two actors. At this time, Globokar had begun to write his first vocal work, *Voie Drei Chöre und Orchester*, based on Vladimir Maiakovsky’s *Poém d’Octobre* (1927). Lund notes of Globokar’s compositional process that the text “was translated into three languages: Russian, Slovene, and French. Globokar then analyzed each language and formed compositional systems making use of the linguistic characteristics of each one.”²⁷ The use of similar compositional systems based on language is evident in Globokar’s ensuing works *Discours II* (1967/68) and *Discours III* (1969) which also use a central selected text.

The collaborative relationship between Berio and Globokar had an impact on Berio’s *Sequenza V* for trombone; the work was influenced by Globokar’s instrumental virtuosity and capability to embrace advanced concepts of respiration and vocalization. Such collaboration, in combination with the diversity of Globokar’s formative experiences, served as a precursor to the diverse technical and compositional developments which later evolved through collaborations with other composers, artists, and performers. Erik Lund

²⁴ Ibid.

²⁵ Ibid., 6.

²⁶ Globokar, UIUC residency interviews.

²⁷ Lund, 6.

explores the specific influences of Karlheinz Stockhausen, Mauricio Kagel, and Theodor Adorno on Globokar in his study of Globokar's *Discours*.²⁸ Globokar's interactions with composers resulted in notable works dedicated to, premiered, or first recorded by Globokar, including the following:

René Leibowitz: *Quatre Bagatelles* pour Trombone et Piano (1963)
Karlheinz Stockhausen: *Solo* für Melodie-Instrument mit Rückkopplung (1965-1966)
Luciano Berio: *Sequenza V* for trombone solo (1966)
Carlos Alsina: *Consecuencia* for Trombone solo (1966)
Mauricio Kagel: *Atem* für einen Bläser (1969-1970)
Thomas Kessler: *Smog* for trombone and orchestra (1971)
Toru Takemitsu: *Gémeaux* for oboe solo, trombone solo, two orchestras and two conductors (1971-1986)

Globokar also became involved in group improvisation experiences. His early-life experience in improvising through jazz prefigured his later involvement in free improvisation. This experience in free-improvisation led Globokar to co-found the free improvisation group *New Phonic Art* with pianist Carlos Roqué Alsina, percussionist Jean-Pierre Drouet, and clarinetist Michel Portal in 1969. Paul Griffiths summarizes Globokar's article "Ils improvisent... improvisez... improvisons" in which his views on why performers should engage in such free improvisation begin:

...with 'a need for liberation', followed by 'a search for a new musical aesthetic, a provocation, a wish to work collectively, to develop their instruments, to amuse themselves, a political or social engagement, the wish to belong to an élite capable of improvising, a way of evaluating themselves, a way of expressing themselves not only through sounds but through physical comportment, [perhaps because musicians improvising can feel more completely that their instruments are extensions of their bodies, since there is no need to keep track of a score], a need to create a contact (and the most direct possible) with the audience, a need to give free rein to his imagination

²⁸ Ibid., 7.

(without being obliged to spend hours of reflection at a worktable), and many other things (sic).'²⁹

Globokar was also involved with Stockhausen's *ensemble* for three to four years.³⁰

Paul Griffiths notes that conflict existed between the views Stockhausen and Globokar had on realizing free improvisation performances. This conflict was apparent in the 1973 performance and recording of *Aus den sieben Tagen* (1968) which also involved the *New Phonic Art* players:

Where improvisation, in Globokar's terms, is about self-discovery and self-assertion, Stockhausen's stated concern was with finding music outside the self: it is the difference between autobiography and prayer. His action therefore, in overseeing and authorizing performances of *Aus den sieben Tagen*—in claiming ownership not only of the prayer text but of the praying—was bound to cause difficulties.³¹

Globokar's thoughts on improvisation³² clearly show the challenge he posed to Stockhausen's authority within the ensemble:

I consider improvisation a kind of total freedom. To truly improvise, it means that you chose the pitches *and* you chose the rhythm, all the other parameters are free. When I improvise on the trombone my voice is equal to all the other musicians involved. That said, when I write a piece, I have the authority to say what is right and what is wrong (sic).³³

Globokar left Stockhausen's ensemble citing irrevocable differences on how to handle performer creativity and interpretation of instructions.³⁴ Globokar's progressive developments in combining vocal, instrumental, and percussive techniques in works such

²⁹ Translation and summary of Globokar's article by Griffiths: [1] Paul Griffiths, *Modern Music and After* (New York: Oxford University Press, 2010), 225–226, [2] Vinko Globokar, "Ils improvisent...improvisiez... improvisons," *Musique en jeu: Ethnomusicologie*, 6 (1972), 14.

³⁰ Lund, 7.

³¹ Griffiths, 226.

³² During Globokar's 2014 UIUC residency he expressed his views on improvisation: Globokar, UIUC residency interviews.

³³ *Ibid.*

³⁴ Lund cites his interviews with Globokar in which Globokar noted he "departed because of the moral aspects of how he [Stockhausen] was handling the creativity of people:" Lund, 7.

as *Voie* (1966), *Accord* (1966), *Discours III* (1969), and *Atemstudie* (1971) led to his appointment to IRCAM. There he ran the department of instrumental and vocal research from 1973–1979.³⁵

Globokar's compositional output of over 120 works³⁶ cover a wide variety of ensembles of various sizes and an immense range of notational and technical innovations. His efforts to instruct and interact with new generations of musicians and composers is evident in his compositions and his teachings. He has taught at the Musikhochschule in Köln (Cologne) (1967–1976) and worked as a conductor of 20th century repertoire with the Orchestra Giovanile Italiana based in Florence (1983–1999).^{37,38} His work as composer, performer, conductor, improviser, and author was recognized in 2003 with an honorary membership in the International Society of Contemporary Music (ISCM). Although he has attested that his performing and lecturing has slowed with age, he continues to travel internationally to lecture, conduct, perform, and teach. For example, during his 2014 residency at the University of Illinois Urbana-Champaign, he gave numerous lectures, private composition lessons, led rehearsals and performances of his works, presented master classes, and even took the time to speak with young students at in-house cultural institutes and intimate dormitory gatherings.

³⁵ IRCAM, the Institute for Research and Coordination in Acoustic/Music, was founded by Pierre Boulez and dedicated to the creation, research, and transmission of musical expression and scientific research: IRCAM, "Who are we?," *Institut de Recherche et Coordination Acoustique/Musique*, <http://www.ircam.fr/ircam.html?&L=1> (accessed September 4, 2016).

³⁶ Published by Peters and Ricordi.

³⁷ Goethe-Institut, "Vinko Globokar, Slovenia," *Where from? Where to?: Myths–Nation–Identities*, <http://www.goethe.de/ins/cz/prj/myt/mit/en9618101.htm> (accessed February 2, 2016).

³⁸ IRCAM, "Vinko Globokar."

CHAPTER 2: BACKGROUND AND OVERVIEW OF DISCOURS III

Both Vinko Globokar and oboist Heinz Holliger (b. 1939) are seminal figures in the virtuosic advancement of their respective instruments. Holliger is noteworthy for his extensive performance and recording of classical and contemporary oboe works. As with Globokar, Holliger shares an affinity for performing, conducting, and composing.³⁹ Their admiration for each other grew as they shared the stage while improvising and conducting each other's concerto performances; they also exchanged compositions and analyses.⁴⁰

Not long after Holliger began teaching at the Freiburg Musikhochschule, he requested a piece from Globokar to play with his oboe studio. Globokar obliged the request by writing *Discours III* for five oboes in Cologne in 1969. The premier took place in August 1969 in Darmstadt; Holliger performed the work with four of his students. An alternate presentation of the piece can be performed with a live soloist and the four remaining parts represented by a pre-recorded tape.^{41,42} In 1983, a recording of *Discours III* was released with Holliger overdubbing all five parts. It is unknown if any prominent oboe work by Globokar would have been written without Holliger's request or their mutual friendship; the composer notes, "[b]efore I knew him [Holliger], I had no idea about [the] oboe and had no interest in [the] oboe."⁴³

To better understand *Discours III*, it is important to first consider the rapid developments in instrumental and vocal technique occurring in the 1960's and 1970's. A harbinger of this period was Stockhausen's 1960 article "Music and Speech." In the article,

³⁹ Holliger studied composition with Boulez and Kagel.

⁴⁰ Globokar, UIUC residency interviews.

⁴¹ Lund, 66.

⁴² Performance note: Vinko Globokar, *Discours III* Für Fünf Oboen (Frankfurt: Henry Litolf's Verlag/ C. F. Peters, 1972).

⁴³ Globokar, UIUC residency interviews.

Stockhausen analyzed his own work *Gesang der Jünglinge*. He also analyzed Boulez's *Le marteau sans maître* and Luigi Nono's *Il canto sospeso*. The article proposed that words could be altered beyond their comprehensibility and the process of their manipulation could then become a compositional tool. Numerous other composers contributed to the discussion of such manipulations, including Pierre Boulez, Milton Babbitt, Witold Lutosławski, and George Crumb. These composers reimaged the human voice as capable of delivering a static text in a fluid manner while alternatively being able to convey emotion without a text.

Important characteristics of this movement of "New Vocalism"⁴⁴ included the use of large and difficult intervals, an isolation of single words and phonetic sounds, and the use of human expression such as laughing, whispering or clicking the tongue. New Vocalism was further defined by the avoidance of electronic manipulation of the voice and the use of significant literary works as texts.⁴⁵

The movement towards reevaluating expression and sound also influenced the development of instrumental writing. Luciano Berio's series of 14 *Sequenzas* are a seminal example of the developments that led to a "New Virtuosity"⁴⁶ of instrumental writing.

Glenn Watkins notes the following:

Berio's belief that the true virtuoso is one capable of performing within a wide historical spectrum and his knowledge that most instruments have changed very little in the past 200 years or more led him to a consideration of how the performer's technique could be extended without resort to the invention of new instruments. Berio has stated that all of his *Sequenzas* for solo instruments were intended as melodic developments of essentially harmonic ideas and to prompt thereby a polyphonic type of listening to a

⁴⁴ Glenn Watkins, *Soundings: Music in the Twentieth Century* (New York: Schirmer Books, 1987), 605.

⁴⁵ Watkins, 605–607.

⁴⁶ *Ibid.*, 630.

'latent, implicit counterpoint' whose ideal model is found in the 'polyphonic melodies' of Bach.⁴⁷

Each *Sequenza* was written for a different solo instrument and had its composition influenced by knowledgeable performers. Watkins explains that *Sequenzas I, III, V, and VII* are influenced by the "knowledge and skill of individual artists,"⁴⁸ specifying that "numbers *III, V, and VII*... led Berio to fashion pieces that were as much dramatic vehicles as musical ones."⁴⁹ Griffiths highlights these same works noting the specific performers that influenced the evolution of the *Sequenza* series:

If later members of the series tend to withdraw from these new sounds, that is partly because music as a whole has done so, and partly because Berio grew more concerned with the histories of instruments than with their practicalities. Another difference is that the earlier members of the series were written for a rather narrow band of new-music practitioners, including Severino Gazzelloni (*Sequenza I* for flute, 1958), Cathy Berberian (*Sequenza III*), Vinko Globokar (*Sequenza V*), and Heinz Holliger (*Sequenza VII* for oboe, 1969), whereas the later pieces have entered a world far more densely populated with ready performers (sic).⁵⁰

With *Sequenza I*, written for flutist Severino Gazzelloni, Berio uses extended techniques to expand the work's expressive range. Watkins summarizes the function of these techniques:

In an attempt to create a polyphonic illusion with the flute in *Sequenza I*, Berio regulated the temporal, dynamic, pitch, and morphological dimensions according to predefined notions of maximum, medium, and minimum levels. In the temporal realm, for example, the maximum level is achieved by moments of maximum speed in articulation and moments of maximum duration of sounds; the medium level by more neutral sets of articulation and durations; and the minimum level through silence or a tendency to silence. In the morphological dimension he achieved maximum tension through transformations of its persona by more drastic alterations including flutter tones (the furthest extension of rapid articulation), key clicks (the furthest

⁴⁷ Ibid.

⁴⁸ Ibid., 631.

⁴⁹ Ibid.

⁵⁰ Griffiths, 211.

extension of progressive move toward noise), and double stops (multiphonics), which represent his 'desperate search for polyphony with the most monadic instrument in history.'^{51,52}

The expressive range of the flute moved beyond historical precedents as the extended techniques of *Sequenza I* were featured as a natural outgrowth of standard technique rather than as oddities or abnormal sounds.

Sequenza III for female voice was written for vocalist Cathy Berberian. The work features a text by Markus Kutter that is manipulated through the delivery of isolated words and sounds—hallmarks of the New Vocalism. While these isolated sounds can detract from the verbal meaning of the words, the cues in the score indicating to perform in a “nervous” or “tense” manner provide effective psychological impact. Similarly, novel vocal techniques create their own drama and meaning. Paul Griffiths observes that “*Sequenza III* is not a song with new vocal techniques, but new vocal techniques that make a song.”⁵³ *Sequenza III* is the only non-instrumental work in the series. It provides a parallel between the non-verbal, dramatic results possible in vocal and instrumental extended techniques.

⁵¹ Watkins, 631.

⁵² Watkins draws on: Luciano Berio, *Two Interviews*, with R. Dalmonte and B.A. Varga, trans. D. Osmond-Smith (New York: Marion Boyars, 1985), 97.

⁵³ Griffiths, 211.

Sequenza V, commissioned by Stuart Dempster, contains a combination of the developments in New Virtuosity and New Vocalism.^{54,55} The virtuoso soloist role is redefined in *Sequenza V* as the trombonist combines instrumental and vocal virtuosities in novel ways; for example, by singing and playing, singing while inhaling, and using a plunger mute to approximate phoneme sounds. Berio's own description of the work relates the treatment of the trombone in *Sequenza V* to the vocal techniques found in *Sequenza III* and describes the underlying dramatic theme of the work:

Sequenza V for trombone can be considered as an essay in the superimposition of musical gestures and actions: the performer combines and transforms both the sound of his voice and the proper sound of the instrument. In other words, he must perform two functions simultaneously: playing and singing. It's not easy to get the coordination of the two elements exactly right, and the sense and efficacy of the piece depends on scrupulously respecting the intervals between voice and instrument: only in this way it is possible to attain the required level of transformation (vocalization of the instrument and "instrumentalization" of the voice), and to provide material suitable for further simultaneous transformations.

As in *Sequenza III* for voice, also in *Sequenza V* I tried to develop a musical commentary between the virtuoso and his instrument, by disassociating various types of behaviour and then putting them together again,

⁵⁴ The following two sources clarify the commissioning of *Sequenza V* by Stuart Dempster and the influence Globokar had on the work: [1] Stuart Dempster, *The Modern Trombone: A Definition of Its Idioms* (Berkeley: University of California Press, 1979), 76–78, [2] Niels Christian Hansen, "Luciano Berio's *Sequenza V* Analyzed along the Lines of Four Analytical Dimensions Proposed by the Composer," *JMM: The Journal of Music and Meaning* 9 (Winter, 2010): 19–20.

⁵⁵ Globokar's recounts his interaction with performing early versions of *Sequenza V*: "Berio, we were very friends. And at that time, he told me, because he was in Mills College in America, that he knew a trombone player, Stuart Dempster, and that he needed write *Sequenza V* for the trombone... and I asked him when, because Stuart Dempster made the commission for him. So I asked when the commission would be open, then I would play [the work]. And he said, yes, but you have time. And then I was one year in Buffalo, and they did a small festival about Berio. And I proposed to do a direction that they should do a small piece for trombone by Berio. And I went to Boston where he was, and in three days he wrote his *Cinq* for trombone, the small part. And I played this in Carnegie hall, the creation, in the small hall. Then later, I got a letter saying that in London, it will be three *Sequenzas*, the number one for flute, three for voice, and the creation of the *Sequenza V*. And he sends me this *Sequenza V*, and I had 14 days to prepare it. But, the piece, is say for trombone, was the second part where the soloist is sitting, so I had to learn only the first part, the theatrical part. A little later, the Deutsche Grammophon, a firm for records, asked to do the recording of this, so I did it. Then I got a letter from a man who said, 'how you dare do the recording of this, I paid this commission.' It was Dempster. Then later he came to the thing and voilà. We were very friends at the time (sic):" Globokar, UIUC residency interviews.

transformed, as musical unities. Thus *Sequenza V* can also be heard and seen as a theatre of vocal and instrumental gestures.

Behind *Sequenza V* lurks the memory of Grock (Adriano Wettach), the last great clown. Grock was my neighbour in Oneglia. He lived in a strange and complicated villa up the hill, surrounded by a kind of Oriental garden with small pagodas, streams, bridges and willow trees. Many times, with my schoolmates, I climbed a high iron fence to steal oranges and tangerines from his garden. During my childhood, the closeness, the excessive familiarity with his name and the indifference of the adults around me, prevented me from realizing his genius. It was only later, when I was perhaps eleven, that I saw him perform on the stage of the Teatro Cavour in Porto Maurizio, and understood him. Once during the evening, while performing, he stopped suddenly and, staring at the audience with a disarming look, asked: “warum?” (“why?”). Like everyone else, I didn’t know whether I should laugh or cry and I wanted to do both. After that experience, I stole no more oranges from his garden.

Sequenza V, written in 1966 for Stuart Dempster, is a tribute to Grock and his metaphysical why, which is the generating cell of the piece (sic).⁵⁶

In *Sequenza VII* (1969), written for Holliger, the virtuosity of the work is defined by explorations of harmonics with timbre fingerings, multiphonics, overblown notes, double trills, and micro-interval trills. Berio describes the work and the use of a prolonged tone to provide harmonic relationships:

My *Sequenzas* for monodic instruments (flute, trombone, oboe, clarinet, trumpet, bassoon) call for a polyphonic listening, partly based on a fast transition between different characters and on their simultaneous interaction.

In *Sequenza VII* for oboe I carry on the research of a latent polyphony putting into perspective the complex sound structures of the instrument with an ever-present “tonic”: a B natural that can be played pianissimo by any other instrument, behind the stage or in the audience. It is a harmonic perspective that contributes to a subtler analytic insight of the various stages of transformation of the solo part.⁵⁷

⁵⁶ Luciano Berio, “Sequenza V (author’s note),” <http://www.lucianoberio.org/node/1466?771092909=1> (accessed August 15, 2016).

⁵⁷ Luciano Berio, “Sequenza VII (author’s note),” <http://www.lucianoberio.org/node/1476?1634385075=1> (accessed August 15, 2016).

It has been established that knowledgeable performers influenced the *Sequenzas* outlined above. As a performer, Globokar influenced *Sequenza V*'s use of vocalization on a wind instrument, not to be confused with *Sequenza III* (1965) which uses vocalization and no wind instrument. While both Berio and Globokar composed oboe works for Heinz Holliger, *Sequenza VII* (1969) by Berio, *Discours III* (1969) and *Atemstudie* (1971) by Globokar, it was Globokar who continued the compositional thread of vocalization on a wind instrument. Berio's *Sequenza VII* is not about vocalization; although, it does utilize a continuation of sound by producing a B-natural from an external sound-source. This idea of a continuous sound is also a feature of *Atemstudie*. In the end, vocalization on the oboe is something that Berio did not employ but Globokar did.⁵⁸

Globokar's contributions to *Sequenza V* came after his time as a student of Berio where Globokar was encouraged to find stimuli, models, and problems outside of music which could then be used to dictate musical elements.⁵⁹ Though Globokar's works developed the performer's technique as Berio did with the *Sequenza* series, Globokar's outlook on such development and variation in technique was conceived not as a continuation of tradition but rather as a break from it. His desire to challenge convention and search for new stimuli and models led him to create the *Discours* series. These works continued to explore developments in New Vocalism and New Virtuosity. The defining features of the series include expanded ensembles of like instruments and each work

⁵⁸ Globokar voiced his familiarity with the use of such vocal/phonetic techniques as they had already been established: "At the time I knew that singing and playing still existed, because we had Carl Maria von Weber (1786-1826), horn projecting the voice, but tonal voices, it's clear, and then also in the [instrumental] methods (sic)....The jazz musician's invented these different mutes, and the plunger before, was only [Globokar demonstrates an open and then closed sound with the mute] etcetera....And then, because the brass instrument[s] were developed by Jazz, you have for instance at the beginning of the century already the plunger, the Jazz musician starting to speak with this imitation of speech with the plunger (sic):" Globokar, UIUC residency interviews.

⁵⁹ Lund, 6.

having a discourse text integrated through the process of “playing as you would speak and speaking as you would play.”⁶⁰

Discours I for solo trombone and pre-recorded tape (discarded)
Discours II for trombone quintet
Discours III for oboe quintet
Discours IV for clarinet trio
Discours V for saxophone quartet
Discours VI for string quartet
Discours VII for brass quintet
Discours VIII for woodwind quintet
Discours IX for two pianos

The series started with *Discours I*, written for a trombone soloist and pre-recorded tape.⁶¹ After performing *Discours I* several times, Globokar became dissatisfied with the results and discarded it using its developments to write a piece for five trombones, which became *Discours II*.⁶² After becoming a professor at the Musikhochschule in Cologne in 1967, Globokar taught four students to play the new work. The relationship of teacher and student performers continued in *Discours III*. The “solo” player designated in *Discours II* and *Discours III* reflects the pedagogical nature of the teacher leading a group of students, an idea Globokar confirmed in the 2014 UIUC interviews.⁶³

As the solo *Sequenzas* were later expanded by Berio into new works for larger ensembles entitled *Chemins*, Globokar’s development from a solo work in *Discours I* can be seen expanding to larger forces of like instruments in *Discours II-IX*. Though the solo *Discours I* was discarded, the designation of a “solo” performer in *Discours II* and *Discours*

⁶⁰ Lund, 33.

⁶¹ The use of pre-recorded tape in *Discours I* carried over to *Discours II* and *Discours III* in the optional performance of the work with live solo performer and four pre-recorded parts. It is this method of multi-track recording that Globokar and Holliger used when making the premier recordings of the two works. While group recordings of *Discours II* have subsequently been published, *Discours III*’s only recording is by Holliger.

⁶² Globokar, UIUC residency interviews.

⁶³ Ibid.

III reinforce the vestige of this solo performer role. The role of the solo performer recalls the solo instrumentalist featured in each of the *Sequenzas*. Globokar notes the relationship of the *Discours* series to Berio's *Sequenza* series:

Discours III [came about as] I [had] started to know Holliger and he asked me, because I started a series, [if I would write him a work]. So, [as] Berio had a kind of interest to do *Sequenzas*—he did [14] *Sequenzas* for [14] different instruments—so to try to do the same was nonsense. So I decided to do the series of *Discours*, with the idea to play as you would speak and to speak as you would play. Why I stopped this series? Because the two pianos are the far[thest] away from the human voice, voilà....This period [is] of a kind of style [that] tried to involve all what is possible to be done. To be more expressive (sic).⁶⁴

The instrumentation of *Discours II* for five trombones and *Discours III* for five oboes explores many aspects of the stimuli, models, and problems that define these two works. In *Discours II*, Globokar uses his virtuosic familiarity of the instrument to pursue and perfect specific sounds represented by the work's central text, notation, and instructions. In *Discours III*, Globokar—being less familiar with the capabilities of the oboe—utilized a catalogue of extended techniques, provided by Holliger, to aid in the composition process. The change in instrumentation led *Discours III* away from specific sounds to a more prominent use of player invention stimulated through such means as a textual instruction.

Holliger's catalogue of techniques was integral to the composition of *Discours III*, especially as Globokar noted he was unaware of widely published guides with oboe techniques available at the time.⁶⁵ An excerpt of this catalogue of techniques is included in Angela Schmid's work "An Analysis Of The Unaccompanied Solo Oboe Works of Heinz

⁶⁴ Ibid.

⁶⁵ Ibid.

Holliger: A Virtuoso's Contributions To Oboe Repertoire." ⁶⁶ Globokar notes that a second table of techniques was presented to him; no evidence of this potential second table of techniques has yet been discovered.⁶⁷

The texts featured in *Discours II* and *Discours III* evoke very different compositional results. *Discours II*'s text is technical in nature, describing the relationship between trombone and vocal sounds, and was written by Globokar:

Il existe de nombreux points communs entre le langage parlé et le jeu du trombone. Il y a tout d'abord une grande ressemblance entre la couleur de certains sons vocaux et les sonorités du trombone. Mais il y a aussi une analogie dans la façon de prononcer ces sons instrumentaux et vocaux. A l'aide de certaines sourdines, dont le son peut être modulé avec la main, l'on obtient des sonorités se rapprochant des voyelles. Les consonnes, elles, sont reproduites par des effets de soufflé, de coups de langue, sans l'emploi du son normal de l'instrument (sic).⁶⁸

There exist a number of similarities between the spoken language and the playing of the trombone. There is, at first, a great resemblance between the color of certain sounds and the sonorities of the trombone. But there is also an analogy between the manner of pronunciation of the instrumental and vocal sounds. With the aid of certain mutes, the sounds of which can be modified with the hand, one obtains the sounds which approach the vowel sounds. The consonants reproduce the effects of breathing, the language, without employing the normal sound of the instrument (sic).⁶⁹

The chosen text for *Discours III*, a poem by Baudelaire, specifically references the oboe and the concept of call and response:⁷⁰

La nature est un temple où de vivants piliers
Laisser parfois sortir de confuses paroles;
L'homme y passe à travers des forêts de symboles

⁶⁶ Excerpt from the *Tabelle Neuer Spielmöglichkeiten der Oboe* (New Chart of Possible Alternative Sounds for the Oboe): Angela Schmid. "An Analysis of the Unaccompanied Solo Oboe Works of Heinz Holliger: A Virtuoso's Contributions to Oboe Repertoire," DMA thesis, University of Illinois Urbana-Champaign, 2014, 8-9.

⁶⁷ Globokar, UIUC residency interviews.

⁶⁸ Vinko Globokar, *Discours II Für Fünf Posaunen* (Frankfurt: Henry Litolf's Verlag/ C. F. Peters, 1969), 11-14.

⁶⁹ Translation by Erik Lund and Lawrence Gushee: Lund, 38-39.

⁷⁰ In his thesis on the *Discours* series, Lund discusses the origins and relationship between the texts of *Discours II* and *Discours III* in greater detail; *Ibid.*, 66-68.

Et les sons se répondent doux comme les hautbois,
Qui chantent les transports de l'esprit et de sense.

Nature is a temple where the living pillars
are sometimes expressed in confused words;
Man passes there through forests of symbols

And the sounds answer one another, sweet like the oboes
that melodiously sing of the ecstasy of the spirit and the senses.⁷¹

Of all the *Discours*, only *Discours II* and *Discours III* feature a full presentation of their text in what is referred to as the “central discourse.” Each of the texts is transformed through the use of extended techniques via the theme of the *Discours* series, “to speak ⇔ to play.”

Globokar notes the difference in the internal aspects of these two works:

Discours III is a little different [from] *Discours II* in the fact that it deals with performer invention. In *Discours II* you have nothing to invent. You have to follow what is written. In *Discours III* there are sections where improvisation on a given material is asked [for]. ...the way how I approach this *Discours* is different. In *Discours II* I develop it, with all the details written down. Here [*Discours III*] it is already a kind of more freedom. And [there arose] notions. Like physical notions, like to go over the physical possibilities. ... The physical aspect of the performer is included (sic).⁷²

While finding the right sounds is integral to *Discours II*, the performer invention and dramatic recitation in *Discours III* provides the stimuli leading to more freely interpreted mixtures of vocalization and instrumental technique. Examples of this include freely reciting isolated phonemes into the oboe and using extended techniques to reproduce the sounds of a free phonetic reordering of a given text. Lund addresses the impact the free parameters of player choice have on *Discours III* noting that “the essence of *Discours III* lies in perceiving the ‘ecstasy of spirit’ of the text through largely indeterminate performance

⁷¹ Translation by Lund and Gushee: Ibid., 67–68.

⁷² Lund interviews with Vinko Globokar: Ibid., 66–67.

tasks.”⁷³ The central discourse occurs at Rehearsal G with a complete delivery of *Discours III*'s text. It is delivered as if through a vocal recitation and is represented by specified oboe techniques that imitate the text's pacing and phoneme sounds.

The form of *Discours III* develops to, and from, the central solo discourse, where a musical transformation of the Baudelaire text takes place. Lund provides the seven-part form of *Discours III* as explained by Globokar:

part 1 WARM-UP beginning up to letter B
(musical and mental exercises, and Tristan excerpt
first introduced in solo part)

part 2 GROUP DEPENDENCY ON SOLOIST
Letter B up to letter D

part 3 TRANSITION letter D
(introduction of phonetic reading of text)

part 4 PITCH SOUND TO NOISE letter E up to letter G
(introduction of extended techniques used in section 5)

part 5 SOLO DISCOURSE letter G
(musical transformation of complete text)

part 6 FULL ENSEMBLE TEXT TREATMENT letter H

part 7 DEGENERATION OF SOUND TO NOTHING letter I to end
(commentary on text and musical excerpt from
Wagner's Tristan und Isolde)⁷⁴

The role of the performers in *Discours III* is to go beyond the act of executing notation; they are encouraged to respond and invent based on stimuli creating both musical and psychological outcomes. Through the combination of the score's elements, Globokar seeks

⁷³ Ibid., 68.

⁷⁴ Ibid., 68–69.

to create a performance where dramatic recitation and personal developments interact to create a distinct and palpable “human energy.”^{75,76}

A survey of the extended techniques is provided here to help organize and clarify their execution in *Discours III*. The information provided in this study seeks to focus on material not extensively covered in other valuable resources.⁷⁷ The order of techniques covered here will be the following: text transformed through the oboe, variants of speaking and playing, and player choice. In order to organize and abbreviate the extensive variety of techniques contained in the work, variants of speaking and playing will be presented based on the degree of involvement of vocal, instrumental, unpitched, and percussive sounds. An overview of player choice will be followed by further discussion of simultaneous singing and playing, aspirated tone, and *alla tromba* technique.

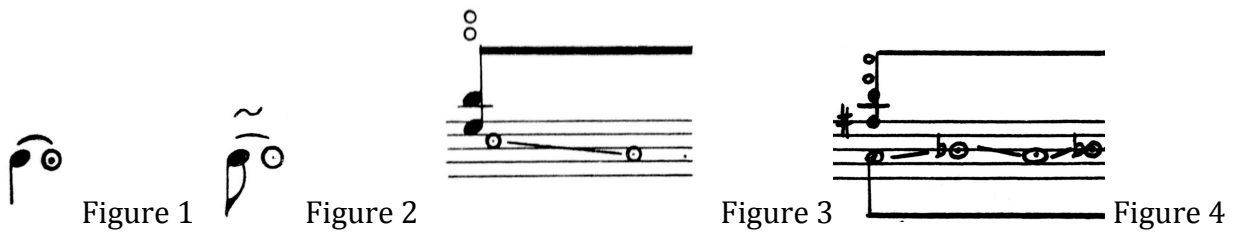
In *Discours III*, the performer is required to play while simultaneously singing. Two types of singing are featured in the work. In the first, the vocal tone is sung in the throat (Figure 1, below), while the second uses a “nasal tone” (see Figure 2). The notation of this technique must be carefully observed to avoid misinterpretation. In Figure 1 and Figure 2 the horizontal succession of note heads indicates simultaneous performance. Figure 3 presents another example of unaligned note heads that require simultaneous performance in spite of the non-vertical alignment. Greater complexity is added to this technique as both pitch and duration are indicated independently. Figure 4 shows Globokar’s use of lines to

⁷⁵ Ibid., 69–70, 92–93.

⁷⁶ Lund draws on: Globokar, “Der Kreative Interpret,” *Melos/Neue Zeitschrift für Musik*, February, 1976.

⁷⁷ Essential for any performer interpreting this work, or any contemporary oboe work, is *The Techniques of Oboe Playing* by Peter-Veale et al., and Libby Van Cleve’s *Oboe Unbound: Contemporary Techniques*. The detailed fingering charts and range of topics covered is infinitely valuable: [1] Peter Veale, Claus-Steffen Mahnkopf, Wolfgang Motz, and Thomas Hummel, *The Techniques of Oboe Playing: A Compendium with Additional Remarks on the Oboe D’amore and the Cor Anglais* (Kassel: Bärenreiter, 1994), [2] Libby Van Cleve, *Oboe Unbound: Contemporary Techniques* (Lanham: Roman & Littlefield, 2014).

link changing pitches while the sung and played pitches each receive a stem and beam to indicate the duration of the notes. The complexity of the score must not interfere with the performer's ability to sustain the duration of sung or played pitches indicated by the prolonged beaming.

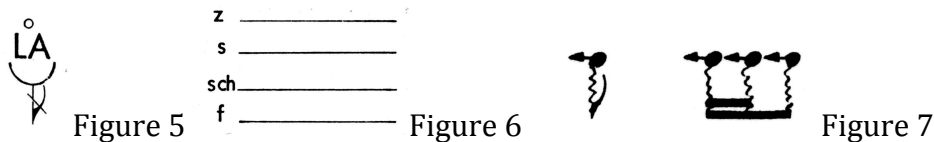


Figures 1-3: *Discours III*, from the Explanation of Symbols/ Figure 4: *Discours III*, Score, p. 5

Simultaneously singing and playing in the throat is challenging, as the backpressure caused when sounding the oboe or english horn impedes vocalization. Two potential solutions ease the process of vibrating both the double reed and the vocal folds. The first solution involves leaking air out of the side of the embouchure enabling the vocal folds to sound freely as the reed also receives the necessary amount of air to vibrate. A similar outcome can be achieved by cushioning the reed in the lower lip allowing it to be supported as air is expelled over the reed. The second solution centers around an exercise used to identify the minimal amount of air needed to vibrate the vocal chords. To perform this exercise, the player must seal the nose and mouth then vibrate the vocal folds. With the nose and mouth sealed, the vocal folds create a unique vibration that is more conducive to simultaneous singing and playing.

The vocalization of phoneme sounds into the reed, or through the reed with an open mouth, use the oboe as a filter to transform what would otherwise be unimpeded phoneme vocalizations. Examples of these vocalizations and their filtering through the oboe include

the production of the syllable “La,” produced in a falsetto voice outside of the reed (see Figure 5). Figure 6 shows the indicated consonant to be whispered into the instrument:



Figures 5-7: *Discours III*, from the Explanation of Symbols

Aspirated tone (see Figure 7, above) is a technique where air is taken into the lungs, between the reed, in a way that causes the reed to vibrate. This inspiration of air, when combined with a vibrating reed, creates an ingressive sound. The opposite of an inspired sound is an egressive sound which is created by pushing/expiring air out of the body. The short, inspired tones called for in Figure 7 are created by an oral cavity ingression. A simplification could be described as a “kissing” sound made with the reed placed between the lips. The sound associated with kissing is what is meant to occur when performing an “aspirated tone, as if [inhaled] hissing”⁷⁸ (represented by Figure 7, above).

It is important that the description of the aspirated tone not be confused with the onomatopoeia sound associated with a snake’s hiss. The hissing sound created by a snake would be considered an egressive expulsion of air. Heinz Holliger provides a simple and clear description of the proper technique for the aspirated tone. He notes of the technique that one should “suck air in through the reed with tightly pressed lip.”⁷⁹

The final melody of the work is performed “*sans embout*” (without mouthpiece) (see Figure 8, below). Current scholarship commonly refers to this technique as “*alla tromba*,”

⁷⁸ Globokar, *Discours III*, Explanation of Symbols.

⁷⁹ Heinz Holliger, *Pro Musica Nova: Studies for Playing Avant-garde Music* (Wiesbaden: Breitkopf & Härtel, 1980), Appendix, 6.

where a trumpet like embouchure is used to buzz tones into the oboe's reedless aperture.⁸⁰ For those unable to produce the buzzed tone, Globokar expressed being open to the mixing between normal oboe tone and the "alla tromba" technique.

sans embout

Figure 8: *Discours III*, Score, p. 22

In Holliger's recording of *Discours III*, this technique is also applied at Rehearsal B, p. 3 though no marking indicates its use.⁸¹ Globokar confirmed his support of this change and proposed the possibility of using the "alla tromba" technique in the "warm up" section at the opening of the work at Action 1.^{82,83}

The use of toneless consonants to strike the reed (Figure 9, below) amplifies the resonant, percussive sound through the oboe. Through the use of the tongue and air pressure, Globokar's instruction to pronounce a parched sound into the oboe as "resembling a faint beat of a bongo"⁸⁴ can be fulfilled (see Figure 10, below). To increase the impact and volume of the percussive sound, the player can finger the lowest note possible which will maximize the amplification of the technique in Figure 10, below. The specification of a rolled "dental sound"⁸⁵ against the reed as being "toneless"⁸⁶ (see Figure 11, below) designates this technique as more percussive in nature than the toned, flutter-tongue found in the work. Other percussive actions do not expressly involve the use of the

⁸⁰ [1] Van Cleve, 75, [2] Peter-Veale, 137.

⁸¹ Vinko Globokar, *Discours III*, Heinz Holliger, KOCH International GmbH Schwann 3-1063-2, 1992 (originally recorded in 1985), CD.

⁸² In *Discours III*, numbers are found throughout the score that are associated with various instructions called "Actions". Each number is associated with a specific Action. The Actions are detailed in French in the score, while translations in German and English are provided in an accompanying document to the score entitled "Translation of the Actions."

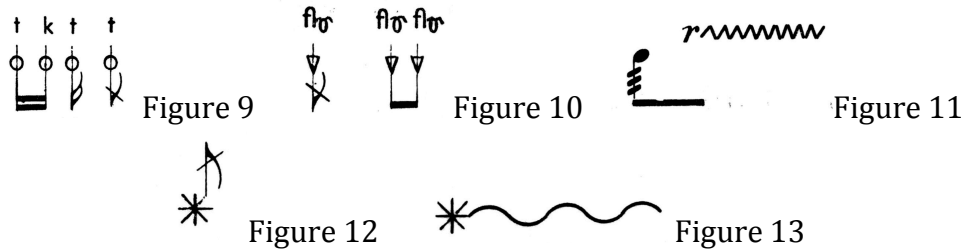
⁸³ Globokar, UIUC residency interviews.

⁸⁴ Globokar, *Discours III*, Explanation of Symbols.

⁸⁵ Ibid.

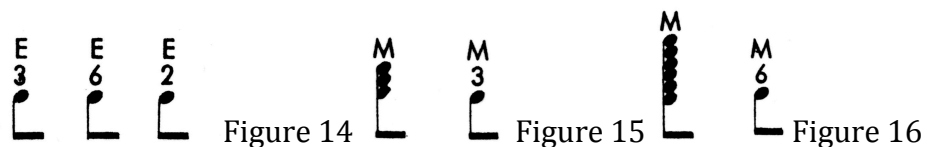
⁸⁶ Ibid.

oboe, such as artfully knocking the foot (Figure 12) and gliding the foot as if resembling a respiratory sound (Figure 13):



Figures 9-13: *Discours III*, from the Explanation of Symbols

The research and publication of extensive fingering charts and resultant sounds for multiphonics and timbre fingers was not readily available at the time Holliger provided Globokar with a technique catalogue for *Discours III*. To overcome this lack of information and the difficulty in providing specific fingerings that result in the same sounds across all makes of oboes, Globokar implemented the novel solution of writing degrees of complexity or tone color by using a number system to indicate gradations of change (see Figure 14 below). By not specifying the exact fingerings or sounds accompanying these gradations, Globokar empowered the performer to choose the best sound to represent the accompanying degree of the enharmonic tone-color⁸⁷ (Figure 14) or multiphonic complexity (Figure 15). The numbering associated with the complexity of multiphonics is alternatively notated by vertically placed note heads (Figure 15, Figure 16):



Figures 14-16: *Discours III*, from the Explanation of Symbols

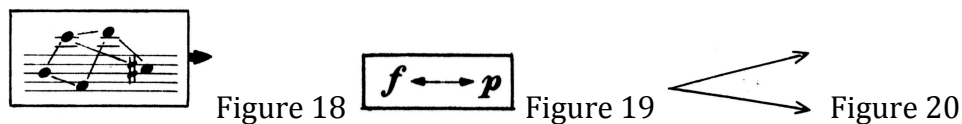
⁸⁷ The alternation between various degrees of enharmonic tones functions similarly to using various timbre fingerings on a single note. Globokar provides an example of the range in quality based on the numbering system: “6 = very bright, 2 = markedly somber (sic):” Ibid.

This same sense of relative gradation is applied to the varied degrees of fermatas in the work (see Figure 17, below). Further player choice involving rests is explained in Action 16, where Globokar instructs the performer to “vary the character of each ‘pattern’; separate by introducing rests:”⁸⁸

△ short, ▢ medium, ◡ long Figure 17

Figure 17: *Discours III*, from the Explanation of Symbols

Similar to the aforementioned gradations of player choice, Globokar provides specific pitches in a box with a line indicating options to alternate between said notes (see Figure 18, below). Other examples of player choice include “volume optional”⁸⁹ (see Figure 19) and “select one of the two possibilities”⁹⁰ (see Figure 20):



Figures 18-20: *Discours III*, from the Explanation of Symbols

The above material provides information necessary to interpret the markings and produce the sounds found in *Discours III*. For essential details of *Discours III*'s formal divisions, compositional systems, and instrumental techniques see Erik Lund's Thesis on the *Discours* series.⁹¹ By incorporating the key points of interest in this and Lund's study, the performer can realize the composer's intentions more fully.

⁸⁸ Globokar, *Discours III*, Translation of Actions.
⁸⁹ Globokar, *Discours III*, Explanation of Symbols.
⁹⁰ Ibid.
⁹¹ Lund, 66–93.

CHAPTER 3: ATEMSTUDIE

1.1 Genesis

After the composition of *Discours III*, Globokar received a letter from Heinz Holliger requesting a piece for a new oboe method book on technical playing. Holliger also contacted several additional composers to write works that would each focus on a specific technical parameter or theme relating to the oboe. Globokar recounts his theme as, “breath, to breathe, to take air;”⁹² this piece was also to incorporate continuous playing through circular breathing.⁹³ It is fitting then that this work is titled *Atemstudie* (1971), literally “breathing-study.” In addition to providing the theme for the work, Holliger “sent a kind of catalogue of the [technical] possibilities”⁹⁴ for the oboe which Globokar then used to compose *Atemstudie*.⁹⁵

Holliger’s collection, comprising twelve works, came together in the publication *Pro Musica Nova: Studies for Playing Avant-garde Music*.⁹⁶ The stated goal of the collection was not simply to catalogue and present new technical capabilities, but to explore the oboe’s technical capabilities as seen through the perspective of other composers. Holliger described this collection in his forward to the publication:

In view of the almost inestimable number of compositions which require new performance techniques even from the oboe, until recently considered conservative and unchangeable, I think that the following *Collection of Studies for Playing Avant-garde Music* fulfills an urgent need of all oboists. These contributions from twelve different composers offer a survey of the most important technical and musical problems as well as of the new methods of notation, which confront the soloists, students and orchestral musicians of today. Although each composition is based on very precise technical

⁹² Globokar, UIUC residency interviews.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Holliger, *Pro Musica Nova: Studies for Playing Avant-garde Music*.

problems, no pieces are offered which exploit the currently popular instrumental “tricks.” Rather, each composer proposed to treat technical problems together with compositional problems, and to show that the expansion of instrumental technique is a result not of soloistic exhibitionism, but of logical musical thought.⁹⁷

The composers and compositions featured in this collection are the following:

1. Jürg Wyttenbach, „...und läuft und läuft*...“ (1961/72)
2. Makoto Shinohara, *Réflexion* (1970)
3. Luciana Berio, *Studie zu Sequenza VII* (1969)
4. Edion Denissow, *Solo* (1971)
5. Hans Ulrich Lehmann, *Kadenz* (1970)
6. Franco Donatoni, *Studie* (1971)
7. Jacques Wildberger, *Pour les neuf doigts* (1971)
8. Amy Gilbert, *Répons* (1970)
9. Hans Ulrich Engelmann, *Mobili** (1971)
10. Heinz Holliger, *Studie über Mehrklänge* (1971)
11. Vinko Globokar, *Atemstudie* (1971)
12. Gunther Becker, „HZ“ (1970)

Holliger included an Appendix with “remarks and explanation of signs,” indicating how to properly interpret symbols not in common use at the time. It also included “preparatory exercises”⁹⁸ with suggestions on how to prepare and properly execute the techniques. Holliger’s detailed explanations on how to achieve potentially unfamiliar sounds/effects reinforce the pedagogical nature of this collection. Based on Globokar’s description, the additional explanations and preparatory exercises were compiled and created by Holliger following the completion of *Atemstudie*.⁹⁹

Globokar was emphatic that *Atemstudie*, rather than being a rearrangement of proposed techniques, used Holliger’s catalogue of possibilities “as a kind of stimulation to

⁹⁷ Holliger, Foreword, 3–4.

⁹⁸ Holliger, Appendix, 1.

⁹⁹ Without the original commission communications from each composer, it is difficult to ascertain exactly how the composers implemented or augmented the techniques and concepts originally suggested by Holliger.

invent something new and completely his own.”¹⁰⁰ Globokar has indicated *Atemstudie* is to be thought of as an avant-garde composition with *risk* featured as an integral element of its performance.¹⁰¹ This risk was present in the composition process of *Atemstudie*; as Globokar notes, “[t]here are ideas covered in the work where even I don’t know if they are completely possible.”¹⁰² Other inspiration, along with additional risk, came from his application of trombone technique to *Atemstudie*. “I am not an oboist, so I calculated what is possible, or not, through my technique of trombone [playing].”¹⁰³ Globokar summarized *Atemstudie* and its underlying theme:

In this piece for an oboist the sound is uninterrupted, it behaves like an arrow, propelled by the intention of rendering apparent the “physical energy” deployed in playing it. This energy is liberated by means of the process of circular breathing (which consists in expelling the air accumulated in the mouth while simultaneously breathing in through the nose in order to keep the lungs filled), or during the moments when the soloist sings or plays while breathing (sic).¹⁰⁴

The physical and mental effort needed to maintain the continuous tone of the work while navigating techniques seldom encountered by concert oboe players creates a dramatic display. This drama is apparent to anyone who performs or observes *Atemstudie*’s combinations of seemingly contradictory elements; one such example is the performance of a tone on the oboe through exhalation while a twelve-tone row is simultaneously sung through inhalation (as found in Structure 11). Globokar outlines the psychological perception of this drama:

It’s clear that if you use material from outside the realm of normal oboe playing this creates a dramatic result. Though somebody might find such [a]

¹⁰⁰ Globokar, UIUC residency interviews.

¹⁰¹ Ibid.

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ Vinko Globokar, *Atemstudie*, Heinz Holliger, Harmonia Mundi HMC 90933, 1994, CD. Liner Notes, 9.

work ridiculous, another one might start to think, what is this?, and begin to force the body to do these proposed things. This is what creates the drama of such playing (sic).¹⁰⁵

At times the performer must approximate score instructions where dramatic and technical difficulties make a literal rendering impossible. Globokar addressed this issue saying, “you should decide, by yourself, what is possible. If it is not possible, then change [it]; it’s a score where you adapt based on your personal capability.”¹⁰⁶ An example of this adaptation occurs in Structure 10 of *Atemstudie* (see Figure 21, below).¹⁰⁷ The Structure ends on an inhalation of the “h” phoneme, followed by a simultaneous exhalation of a *ppp* multiphonic. As no technique enables the mouth to simultaneously inhale and exhale, alternative means must be used to best represent the passage.

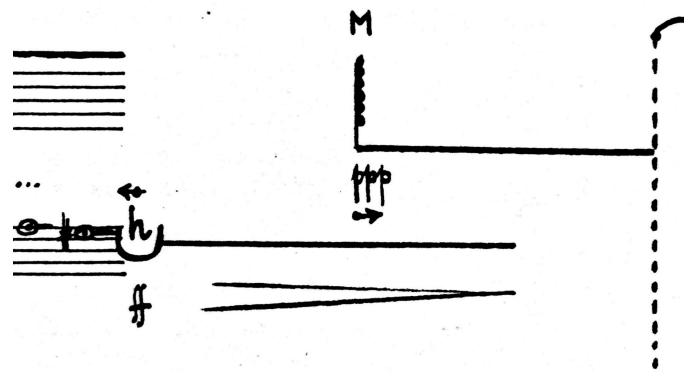


Figure 21: *Atemstudie*, Structure 10

Important works to consider when evaluating the aesthetics of *Atemstudie* are Mauricio Kagel’s *Atem für einen Bläser* (1969/70)—which was written for Globokar “who performe[d] the work regularly”^{108,109}—and Luciano Berio’s *Sequenza* series. *Atem*,

¹⁰⁵ Globokar, UIUC residency interviews.

¹⁰⁶ Ibid.

¹⁰⁷ Each of the twelve structures in *Atemstudie*, which will be discussed along with the form of the work below, will be ordered based on their successive appearance in the score, from the top of the second page to the bottom of third page.

¹⁰⁸ Lund, 8.

¹⁰⁹ Maricio Kagel’s *Atem für einen Bläser* contains the instruction “in einem Atemzung” (in one breath) which may have been influential in writing a piece where one continuous tone is maintained for the entirety of the

Atemstudie, and the *Sequenza* series share in the elevation of technique beyond past traditional capabilities. While Berio elevated virtuosic technique in consideration of past developments, Kagel and Globokar often sought to break from traditional technique in spite of past traditions. Globokar speaks of his opposition to the influence of tradition when he addresses the influence of an instrument's historical context on a composer or performer:

The problem is, I [do] not have any kind of respect to a piece of metal [(referring to the trombone)]. A violinist, if he has a Stradivarius, he is thinking through this history, it's a kind of slave of this instrument... a trombone, the most expensive trombone is \$4,000. So I destroyed at least four [or] five trombone[s] in my life, and the more you respect your instrument, the more you are [cautious and tentative], so, [the instrument], it is only a tool (sic).¹¹⁰

Griffiths notes, "there are composers who, like Berio, relish artistry, and others who, like Kagel, want to look behind at mechanics and motivations, at the psychological [and] physiological."¹¹¹ Griffiths continues, "Kagel turns virtuosity against itself, either by asking players to take part in musical situations that inevitably deflate the strenuous efforts they demand, or by asking them to devote their skills to quite unaccustomed activities."¹¹² In the case of Globokar, a balance is struck between the expansion of technique as a natural progression of an instrumentalist's technical capabilities while those same mechanical motivations and activities result in psychological and physiological drama.

Both *Discours III* and *Atemstudie* share a pedagogical underpinning. *Discours III* was composed for Heinz Holliger to perform with students in his university oboe studio. When

work as if it were played in one breath: Maricio Kagel, *Atem für einen Bläser*, (London: Universal Edition, 1976), Score, 5.

¹¹⁰ Globokar, UIUC residency interviews.

¹¹¹ Griffiths, 215.

¹¹² Ibid.

asked if he viewed *Discours III* as having a pedagogical or teaching aspect to it, Globokar responded: “Absolutely, yes.”¹¹³ *Atemstudie* was composed as part of a collection of works sharing the purpose of providing artful studies for performers to learn and perform avant-garde music. In this context, similarly to *Discours III*, a pedagogical impetus led to the creation of *Atemstudie*.

A progression of extended instrumental and respiratory techniques is apparent from *Discours III* (1969) to *Atemstudie* (1971). An absence of certain techniques found in *Discours III*, but not applied to *Atemstudie*, include flutter tongue, double trill, normal-harmonic tone, and *sans embout / sans anche (alla tromba)*.¹¹⁴ This change in techniques is not addressed in Holliger’s *Pro Musica Nova* or the initial publication of *Atemstudie*.^{115,116} In 2014, Globokar addressed the use of different techniques from *Discours III* to *Atemstudie* as being due to a different catalogue of techniques being presented to him by Holliger for the creation of *Atemstudie*: “It’s clear that Holliger gave me a catalogue. So I did not try to enlarge this catalogue. What was on this sheet of paper, I used it. But there were no trills, so I did not use trills (sic).”¹¹⁷ Globokar made no known reference to the “catalogue” used for *Atemstudie* before these discussions.

Atemstudie was composed in 1971¹¹⁸ and first recorded in October of 1972 in Bâle (Basel), Switzerland.¹¹⁹ The 1972 recording appears in subsequent reissues of Globokar’s

¹¹³ Globokar further noted of *Discours III*, “I was interested in the educational aspect as it related to the relationship between the five oboes and their behavior toward language. You have a leader in *Discours III*, and there is a, it’s a discourse, mixed on vowels, etcetera (sic):” Globokar, UIUC residency interviews.

¹¹⁴ A portion of the catalogue used for *Discours III* was published in Angela Schmid’s thesis, *An Analysis of the Unaccompanied Solo Oboe Works of Heinz Holliger: A Virtuoso’s Contributions to Oboe Repertoire*: Schmid, 8–9.

¹¹⁵ Vinko Globokar, *Atemstudie* für Oboe (Frankfurt: H. Litolf’s Verlag / C. F. Peters, 1972).

¹¹⁶ Unless otherwise noted, the C.F. Peters edition of *Atemstudie* is the score referred to in this document: Ibid.

¹¹⁷ Globokar, UIUC residency interviews.

¹¹⁸ No premier date is available as *Atemstudie* was composed as a study and not necessarily meant for concert performance.

works are listed in the Discography; no other known studio recording of this work currently exists. Globokar recounted that the 1972 recording session started with Holliger first performing the piece without any input or influence from Globokar himself. Globokar entrusted Holliger with the responsibility of devising solutions to the instructions and notations in the score:¹²⁰

The recording was [...] done in an afternoon. Twice he played through [the work.] So, I accepted everything of him, because he's [(Holliger)] a very serious person and I was sure that this, what he's doing, is on the limit of what he can (sic).¹²¹

Globokar also noted that with his input, revisions of the twelve Structures occurred during the recording process:

As I remember, he took all the sequence[s], so he played for time to time this sequence, three [or] four times, and then, we heard this note, this note, yeah this, etcetera (sic).¹²²

With this knowledge, it can be surmised that the studio recording is the result of an edited compilation of these performance takes.

¹¹⁹ Globokar, *Atemstudie*, Harmonia Mundi, 1994 CD. Liner Notes, 16.

¹²⁰ Globokar, UIUC residency interviews.

¹²¹ Ibid.

¹²² Ibid.

1.2 Form

Atemstudie has a three-part form defined here as A, B, C. Globokar explains this three-part division when discussing the framework of the piece:

At the beginning is a kind of continuous sound, then you have twelve Structures [that are] different, which you can choose the order to put this thing, and on the end is again [a] kind of a breathing piece, voilà (sic).¹²³

Part A consists entirely of an extended circular breathing passage and is followed by Part B which consists of twelve Structures whose order is decided by the performer. Following the twelve Structures, Part C consists of four linear systems; this passage explores new and previously unused combinations of techniques. Though freely ordered in performance, the twelve Structures in the B section of *Atemstudie* will be here numerically ordered for ease of reference. Based on their successive chronological appearance in the score (p. 2-3) the Structures will be numbered from 1-12.

¹²³ Globokar, UIUC residency interviews.

1.3 Parameters in Composition

Four parameters help clarify *Atemstudie*'s compositional components:

- 1) Proportional notation/ Time-line (time-space) notation
- 2) Vocal and Phonetic parameters
- 3) Extended techniques
- 4) Parameters of Sound

Durations are indicated in four places in *Atemstudie*'s opening and closing materials—two minutes (2'), one minute (1'), thirty seconds (30"), fifteen seconds (15"). However, no specific durational indications are provided for the rest of the work. Globokar indicates that "duration is left to the player"¹²⁴ in the score. Holliger further adds, "the order and the duration of the Structures are free."¹²⁵ These instructions do not encourage complete freedom of duration. Instead, they allow durational fluctuation based on each performer having to adjust the pacing of each section based on their ability and inclinations. This way, variations in speed may occur while the pacing of systems and Structures is maintained. While discussing performance expectations for *Atemstudie*, Globokar notes *Discours III*'s temporal indication—"1 cm = 1' [second]"—as a point of reference as no such indication is in *Atemstudie*.¹²⁶ Another example of such a balance between flexibility and pacing can be found in the performance notes for Kagel's *Atem für einen Bläser*:

(2) Time Articulation: The duration of the individual tones and rests depends on the total duration of the page, which the player must establish; the total duration should remain as constant as possible, and should fluctuate only slightly from page to page.

(2.1) If, however, the performer feels that it is necessary to *substantially* shorten or lengthen the prescribed duration of a tone or a rest, he may disrupt the rigid scheme of time-line notation (sic).¹²⁷

¹²⁴ Globokar, *Atemstudie*, Score.

¹²⁵ Holliger, Appendix, 6.

¹²⁶ In conversation with Globokar, he preferred to discuss the work in relation to the indication provided in *Discours III* where approximately 1 cm = 1 second: Globokar, UIUC residency interviews.

¹²⁷ Kagel, *Atem*, Comments, 4.

Kagel provides no specific durational indications here; instead, he allows the performer the freedom to establish a framework. Once established, the performer is then to maintain the pacing unless it is deemed necessary to do otherwise. Kagel's performance notes reflect on Globokar's description of the framework of *Atemstudie*, where flexibility in tempo should not overtly disturb the general pacing of each section.¹²⁸

Vocalization used when speaking in any language is most commonly understood as a pulmonic-egressive activity. This act of expelling air from the lungs to vibrate the vocal folds is challenged in *Atemstudie* as the performer is instructed to vocalize through both egressive and ingressive respiratory activity.¹²⁹ The technique of ingressive singing is challenging and may be unfamiliar to most performers. In the Figure 22, the horizontal arrows indicate inhalation (arrow pointing left) and exhalation (arrow pointing right):

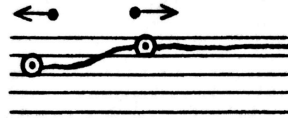


Figure 22: *Atemstudie*, from the Explanation of Signs: inhalation/exhalation while singing
The control of vocalization in *Atemstudie* is further specified by indications for vocalized tone in “Normal voice” (“V.N. = voix normale”) or “Head voice” (“V.T. = voix de tête.”)¹³⁰
Materials devised for careful practice of the specific vocal techniques used in *Atemstudie* can be found in the exercises to Holliger's *Pro Music Nova*.^{131,132}

¹²⁸ Globokar's objective is for each performer to find the medium where the technical demands of the work and their abilities meet.

¹²⁹ Egressive breathing: air expelled out the body; ingressive breathing: air drawn into the body.

¹³⁰ Globokar, *Atemstudie*, Explanation of Signs.

¹³¹ Holliger, Appendix, 6–7.

¹³² Christopher Redgate compiled video demonstrations of simultaneous singing/playing and various other contemporary techniques: Christopher Redgate, “Video Demonstrations,” *21st Century Oboe: Christopher Redgate & the Howarth-Redgate Oboe*, <http://21stcenturyoboe.com/Video-Demonstrations.php> (accessed September 12, 2016).

Adding to the respiratory and vocal challenges in *Atemstudie* is its use of the “two broad groups of sounds [that] make up speech: vowels—produced without any obstruction or blockage—and consonants—made using various forms of inhibition.”¹³³ These sounds are called for in combination with, or independent of, the oboe. A table with all vowels in *Atemstudie* is provided below along with a “key word”¹³⁴ to assist with proper pronunciation:

Vowels in <i>Atemstudie</i>	Key Word
i	bee
e	hey
a	ah
o	oh
u	booth

Table 1: *Atemstudie* vowel descriptions¹³⁵

Due to the specialized terminology needed to discuss the variety of consonants in *Atemstudie*, a list of relevant terminology is provided below:

Affricate: combination of a stop followed by a fricative.

Alveolar: related to the dental ridge at the front of the roof of the mouth.

Bilabial: two lips.

Continuant: a consonant that can be prolonged without a change in quality.

Dental: related to the teeth.

Fricative: having a buzzing or hissing quality.

Glottal: related to the glottis.

Labial: related to the lips.

Lateral: consonants formed with the tip of the tongue in contact with the roof of the mouth, so that air flows around the sides of the tongue.

Lingual: related to the tongue.

Nasal: resonating in the nasal cavity.

¹³³ Robert Barton and Rocco Dal Vera, *Voice: Onstage and Off* (Belmont: Thomson Custom Publishing, 2003), 106.

¹³⁴ “Key words are used to give a reference for the sounds. This is problematic because there isn’t always a consensus on the precise pronunciation of a word. For some, the phrase ‘Paul wants calm’ will have three different vowel sounds, some will say two, and others will insist it is all the same. However, this is still the clearest way to present the sounds, as long as you are on guard against any possible confusion.” Ibid., 104.

¹³⁵ The key words provided are based on Globokar’s own vocalization of these vowels and Lund’s analysis of Globokar’s use of such vowels in other works: [1] Globokar, UIUC residency interviews, [2] Lund, personal communication to author, September 7, 2016.

Palatal: related to the front of the roof of the mouth.
 Plosive: having a popping quality.
 Stop: a consonant which abruptly cuts off the flow of sound.
 Velar: related to the soft palate or velum at the back of the roof of the mouth.¹³⁶

To support the proper pronunciation of consonants in *Atemstudie* they are presented below, accompanied by a description of their articulators, function, and a key word:

<i>Atemstudie</i> Consonant ¹³⁷	Key Word	Articulators ¹³⁸	Function
p	p lead	bilabial, voiceless	stop-plosive
d	d id	lingua-alveolar, voiced	stop-plosive
t	t ree	lingua-alveolar, voiceless	stop-plosive
g	g rog	lingua-velar, voiced	stop-plosive
k	k lass	lingua-velar, voiceless	stop-plosive
m	m ime	bilabial, voiced	nasal continuant
n	n one	lingua-alveolar, voiced	nasal continuant
l	l ily	lingua-alveolar, voiced	lateral continuant
f	f luff	labio-dental, voiceless	fricative continuant
z	z ooms	lingua-alveolar, voiced	fricative continuant
sch	sch ush	lingua-palatal, voiceless	fricative continuant
h	h ouse	glottal, voiceless	fricative continuant
tʃ	ch urch	lingua-palatal, voiceless	affricate
pf	pf ennig	labio-dental, voiceless	affricate

Table 2: *Atemstudie* consonant descriptions^{139,140}

Further description of these speech sounds will be classified as either vowel or consonant to avoid repetitive listing of their detailed qualities.

¹³⁶ Barton, 110–112.

¹³⁷ *Atemstudie*'s consonant symbols generally correspond to the IPA sound of the same spelling, except in the case of "sch." The IPA symbol for the "Sch" sound would be "ʃ": Ibid., 104.

¹³⁸ "On some sounds your vocal folds vibrate [voiced], and on others they don't [voiceless]:" Ibid., 106.

¹³⁹ Ibid., 111–114

¹⁴⁰ Reference used for the consonant sounds "sch", "tʃ", "pf", and "h": Paul Joyce, *Paul Joyce German Course: A Guide to German Pronunciation*, University of Portsmouth, <http://joycep.myweb.port.ac.uk/pronounce/index.html> (accessed August 14, 2016).

The standard notation of sung pitches in *Atemstudie* covers a large vocal range—B-flat² (Figure 23, below) to F⁵ (Figure 24). The highest sung pitch is indicated following a *glissando* above the treble staff (Figure 25).¹⁴¹ The practicality of singing such a wide tessitura vocal range, for those not physically equipped to do so, calls for novel solutions. Trombonist Stuart Dempster, who commissioned Berio's *Sequenza V*, proposes potential solutions to such vocal range issues, including octave displacement and straining the voice to reach a note outside of one's register despite the quality of sound produced.¹⁴²



Figure 23: *Atemstudie*, p. 1, System 5

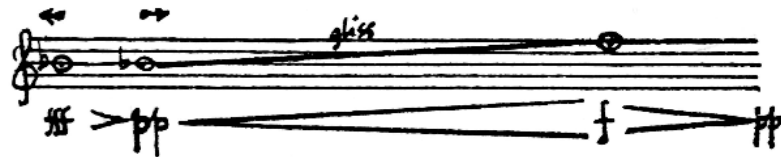


Figure 24: *Atemstudie*, Structure 5



Figure 25: *Atemstudie*, Structure 3

Globokar's exhaustive use of a combined singing and playing in *Atemstudie* challenges the player to the limits in maintaining a sung pitch while playing the oboe. For those not equipped with a strong relative or "perfect" pitch, the intervallic relation between notes played on the oboe and sung can be a helpful tool in producing the correct pitch. If the performer is unable to hear the correct interval before singing the desired note, they

¹⁴¹ The player can use a technique to facilitate playing the highest possible notes by placing the teeth on the reed. The use of the teeth is similarly to how a violinist creates an artificial harmonic. While the violinist uses a finger to divide the string for a harmonic tone, the oboist lightly places the teeth on the reed to achieve the same affect, resulting in an extremely high tone. This marking, commonly indicated by a "Z", should not be confused with the consonant "Z" found in *Atemstudie* p. 1, System 5 of the score.

¹⁴² Dempster, 6–8.

can (in performance) sing the note currently being played on the oboe and then find the appropriate pitch intervallically.

To better understand the challenges and unique treatment of the extended techniques posed by *Atemstudie*, it is important to discuss them individually. Producing a continuous sound for a prolonged duration through circular breathing is a necessity in *Atemstudie* and occurs in three stages. First, air trapped in the oral cavity is used to vibrate the reed. Second, air is exhaled from, or inhaled into, the lungs through the nose. Third, before the oral cavity air is depleted, the lungs replenish the air supply to the reed completing the circular breath. The alternation between pulmonic and lingual activity provides the constant supply of air needed to sustain the continuous tones. These prolonged tones, maintained through circular breathing, are also affected by vowels formed sans vocalization that create shifts in timbre. Alternately, vocalized consonants are interjected or juxtaposed with normal playing in a phonetic/normal oboe tone interplay. Percussive key actuations (“noises effected by actuating the keys”¹⁴³) function similarly in their ability to be interspersed with normal tone.

The technique of “suck[ing] air in through the reed with tightly pressed lips,”¹⁴⁴ is defined in *Discours III* as an “aspirated tone, as if hissing” (see Figure 26, below). This tone is characterized in *Atemstudie* as a “screeching-noise” (see Figure 27).



Figure 26: *Discours III*,
from the Explanation of Symbols



Figure 27: *Atemstudie*,
from the Explanations of Signs

¹⁴³ Globokar, *Atemstudie*, Explanation of Signs.

¹⁴⁴ Holliger, Appendix, 6.

Though the fundamental concept behind the techniques is the same in both pieces, the expansion in duration and dynamic range from *Discours III* to *Atemstudie* necessitates the use of two types of inhalation. The first uses pressurized oral cavity inhalation to allow a rapid production of strong dynamics (bilabial-lingual-ingression) (see Figure 28, below). The second uses the lungs to maintain air pressure for prolonged notes (bilabial-pulmonic-ingression) (see Figure 29, below). Simply put, the lingual ingressive sound is akin to a “kissing” sound while pulmonic ingression is pulling air into the lungs.¹⁴⁵

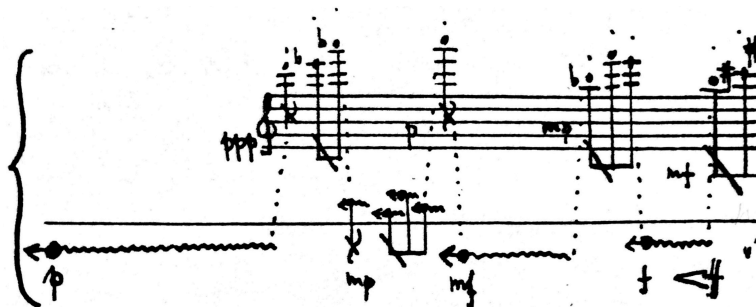


Figure 28: *Atemstudie*, Structure 8

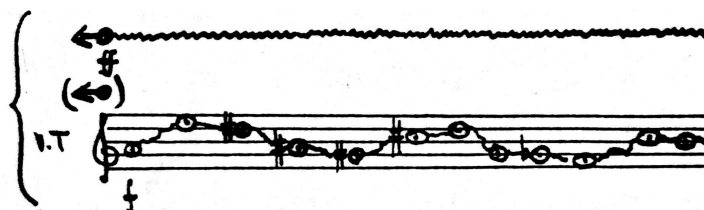


Figure 29: *Atemstudie*, Structure 11

¹⁴⁵ The lingual ingressive breathing can be performed while circular breathing.

1.4 Analysis

When discussing the influence of twelve-tone pitch technique on *Atemstudie*'s pitch content, particularly in Structure 11 (see Figure 29, above), Globokar was unable to recall any specific application of the technique in his composition process.¹⁴⁶ Further analysis of the work, however, reveals a recurring appearance of successive trichord interval class sets with prime forms [015], [016], and [025]. They permeate the twelve Structures that comprise Section B. Table 3 outlines the appearance of these interval class sets in the twelve Structures:

a					b				
Structure 1	[016]	[025]	[015]	[016]	Structure 7	[016]	[015]	[025]	
Structure 2	[016]	[025]	[015]	[016]	Structure 8	[016]	[015]	[025]	[016]
Structure 3	[016]	[015]	[025]	[016]	Structure 9				[016]
a					a				
Structure 4	[016]	[025]	[015]	[016]	Structure 10	[016]	[025]	[015]	[016]
Structure 5	[016]	[025]	[015]	[016]	Structure 11	[016]	[025]	[015]	[016]
Structure 6	[016]	[015]	[025]	[016]	Structure 12	[016]	[015]	[025]	[016]

Table 3: Successive trichord interval class sets of *Atemstudie*'s twelve Structures

The exclusive appearance of these prime forms in the twelve Structures of Section B, and the clear twelve-tone implications present in Structures 1 and 11, prompted the construction of a twelve-tone matrix (see Table 4, below):

¹⁴⁶ In assessing *Atemstudie*'s construction Globokar discussed the work in terms of four parameters of sound; pitch, duration, dynamics, and timbre: "You have four parameters; one is handling notes, from one to twelve notes. Then you have the second one, rhythm and the time. The third is the dynamic. And the fourth is the morphology of sound. It means all qualities of instrumental sounds, and then you have noise. So, with these categories, it's clear that [no matter] if you have the most complex activity, it is [essentially a] mix between all these qualities (sic):" Globokar, UIUC residency interviews.

	I ₀	I ₇	I ₆	I ₁	I ₁₁	I ₄	I ₅	I ₁₀	I ₉	I ₈	I ₃	I ₂	
P ₀	B	F#	F	C	A#	D#	E	A	G#	G	D	C#	R ₀
P ₅	E	B	A#	F	D#	G#	A	D	C#	C	G	F#	R ₅
P ₆	F	C	B	F#	E	A	A#	D#	D	C#	G#	G	R ₆
P ₁₁	A#	F	E	B	A	D	D#	G#	G	F#	C#	C	R ₁₁
P ₁	C	G	F#	C#	B	E	F	A#	A	G#	D#	D	R ₁
P ₈	G	D	C#	G#	F#	B	C	F	E	D#	A#	A	R ₈
P ₇	F#	C#	C	G	F	A#	B	E	D#	D	A	G#	R ₇
P ₂	C#	G#	G	D	C	F	F#	B	A#	A	E	D#	R ₂
P ₃	D	A	G#	D#	C#	F#	G	C	B	A#	F	E	R ₃
P ₄	D#	A#	A	E	D	G	G#	C#	C	B	F#	F	R ₄
P ₉	G#	D#	D	A	G	C	C#	F#	F	E	B	A#	R ₉
P ₁₀	A	E	D#	A#	G#	C#	D	G	F#	F	C	B	R ₁₀
	RI ₀	RI ₇	RI ₆	RI ₁	RI ₁₁	RI ₄	RI ₅	RI ₁₀	RI ₉	RI ₈	RI ₃	RI ₂	

Table 4: Twelve-tone matrix with Structure 1 as prime form¹⁴⁷

By delineating the prime row (P₀) with Structure 1, the pitch material in the entire work can then be accounted for based on permutations of the matrix rows. As explained below, while the interval class sets derived from the prime forms discussed here are central to the construction of the work, they are not always strictly followed. These compositional systems, like the extension of oboe technique in *Atemstudie*, serve as stimuli for the construction of the work. Globokar creates formal divisions and variation by avoiding a narrow application of prime rows and strict twelve-tone technique. Leibowitz's dictum that "all laws which we have been able to formulate up till now are derived from a single supreme law, the law of perpetual variation,"¹⁴⁸ seems integral to *Atemstudie*. The natural extension of this idea is that all future variations will emanate from the formulated laws of the past.

¹⁴⁷ Pitches identified in this twelve-tone matrix may be enharmonic equivalents to those appearing in *Atemstudie*.

¹⁴⁸ Leibowitz, 269.

The variation in *Atemstudie* is present even in the application of the oboe. The traditionally monophonic instrument would usually limit a twelve-tone row to be presented melodically (horizontally). The use of vocal and extended techniques in *Atemstudie* allows for polyphony which significantly expands the possibilities for a row's presentation. The application of these techniques also allows for vertical pitch relations to disrupt the normal contour or register of the clear succession of pitches in the twelve-tone row. This pointillistic treatment of the twelve-tone row in *Atemstudie* also appears in the successive ordering of pitches across a sung or played line before the row continues in another line. This is evident in Structures 4 and 5 (discussed below). In such cases, the row is still apparent, though not necessarily evident, in the audible succession of pitches.

With this unique treatment of the row now accounted for, the successive pitch material contained in the twelve Structures (see Figure 30, below) can be considered in the context of the twelve-tone matrix (see Table 4, above) as derived from Structure 1. Table 5 identifies the row form used in each of the twelve Structures:

Structure	1	2	3	4	5	6	7	8	9	10	11	12
Row Form	P ₀	I ₁₁	RI ₁₀	I ₁	P ₉	RI ₇	R ₄	R ₁	R ₄	I ₂	P ₁₀	RI ₉

Table 5: Row forms used in each of the twelve Structures

While nine of the Structures contain the exact twelve-tone row as found in the matrix, alterations occur in the presentations of the row in three Structures. Structure 7 opens with R₄ but does not complete the row; instead, the row is taken up and completed by Structure 9 (see Figure 30, below).

Figure 30: Pitch content of the twelve Structures
(Accidentals presented here only apply to the note they precede)

The third instance occurs in Structure 12 with an alternation of the final pitch of the RI_9 row. Rather than a G-sharp appearing, as would be expected if following the order of row RI_9 (see Table 4, above), a G-natural is written—which has already appeared in the row (see Figure 30, Structure 12, above). While this G-natural does not fit the twelve-tone row¹⁴⁹ the change from G-sharp to G-natural does fit the pattern of interval class sets previously maintained (see Table 3, above). In this way, Structures 1–3, 4–6, and 10–12 contain the same pattern of interval class sets and can be similarly classified as “a” (see Table 6, below).

¹⁴⁹ It is possible that the use of G-natural, which breaks from the row, is a mistake in the score.

<i>Atemstudie's</i> Three-Part Form	A	B (Twelve Structures)				C
Interval Class Set Divisions in Part B		a	a	b	a	
<i>Atemstudie</i> Structures		1-3	4-6	7-9	10-12	

Table 6: *Atemstudie* three part form and internal divisions of Part B

Structures 7–9 present the retrograde of this interval class set and can be classified as “b.” This results in a set grouping which is classified here as “aaba.” In Figure 30 (above), it can be observed that if Structure 12 were to contain a G-sharp for the final pitch of the row, the first and only appearance of interval class [017] would occur. By retaining G-natural, Globokar maintains the consistent use of [016] in the first and last tri-chords of every Structure. While Globokar breaks from the twelve-tone scheme here, it results in establishing the aforementioned grouping of interval class sets found in the twelve Structures. In the variations from the twelve-tone technique, Globokar can be seen as having procured the formal ordering of the Structures through succession of trichord interval class sets. This analysis of the twelve Structures’ divisions (“aaba”)—as seen in Table 3, above—is supported by the relationship between this material and the closing material (Part C) of *Atemstudie*.

The closing pitch material of Part C adheres to the row permutations found in the same matrix used for Part B, which appear in the third, fourth, and fifth systems of the score’s first page. Table 7 identifies the specific permutations of the matrix found in Part C:

Score Page 1, System	3	4	5
Row Permutations	RI ₁₁	I ₇	R ₁₀

Table 7: *Atemstudie* row permutations used in Part C

As with Part B's twelve Structures, the closing material (Part C) adheres to specific rows found in the same matrix (see Table 4, above); therefore, the pitch content of Part C—the third, fourth, and fifth systems of the first page of the score—can be viewed as vestiges of Part B. With this information, a relationship of shared rows—in opposite directions—can be seen between Part B's Structures and Part C's Systems:

Part B		Part C	
Structure	Row Permutation	Page 1, System	Row Permutation
2	I ₁₁	3	RI ₁₁
6	R ₁₇	4	I ₇
-	-	-	-
11	P ₁₀	5	R ₁₀

Table 8: *Atemstudie* row permutation comparison between Parts B and C

This relation coincides with “a” divisions in Part B, which reinforces the formal ordering implied by the trichord interval class sets evident in Table 3 (above). Part B's “b” division has no relation to rows in Part C, which supports division “b” as the outlier in the otherwise homogeneous “a” divisions in Part B (“aaba”) (see Table 9):

Part B		
Interval Class Set Divisions in Part B	Structures Contained in Each Division	Part B Structure Related to a Row in Part C
a	1–3	2
a	4–6	6
b	7–9	-
a	10–12	11

Table 9: *Atemstudie* relationship between Part B interval class set divisions and Part C rows

Based on this analysis, there are only three pitches unaccounted for in *Atemstudie*: Part A’s prolonged F-sharp and the first two pitches of Part C—A-natural and B-flat. These three pitches play a unique role as they enclose the twelve Structures and have the longest duration of any other notes in the work. That said, they show no apparent relationship to the surrounding material in the context of the twelve-tone matrix used in the rest of the work. This collection of pitches is not related to the twelve-tone matrix. Instead, it is related to the three interval class sets that comprise the entirety of the work [025], [015], [016] (see Table 10, below):

[025]	F-sharp	A-natural	B-natural
[015]	F-sharp	B-flat	B-natural
[016]	E-natural	B-flat	B-natural

Table 10: *Atemstudie* interval class set relations

As seen above, the pitches comprising trichord interval class sets [025] and [015] are the pitches with the longest indicated durations in the work (see Figures 31–33, below): F-sharp (2’), A-natural (1’), B-flat (1’), and B-natural (30’).¹⁵⁰ Of the four specified pitch durations in *Atemstudie* (see Figures 31–34, below), only one oscillates between two pitches—the 1’ duration moves between A-natural and B-flat (see Figure 32, below). In this way, the greatest specified durations create two trichord interval class sets by alternating A-natural and B-flat.

¹⁵⁰ The opening F-sharp is further related to the B-flat and B-natural that form [015], as B-natural is the first note of Structure 1 and B-flat is the first note of Structure 2.

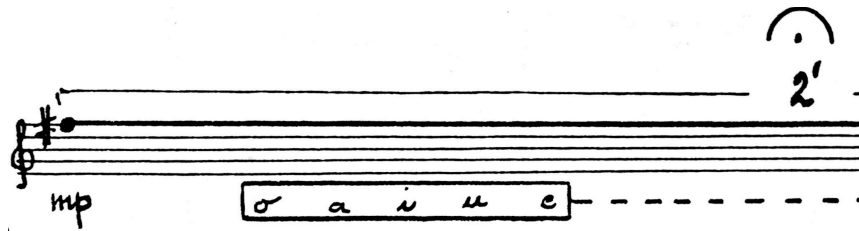


Figure 31: *Atemstudie*, p. 1, System 1, F-sharp⁵

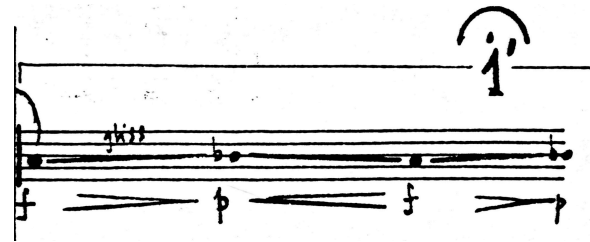


Figure 32: *Atemstudie*, p. 1, System 2, A-natural⁴ and B-flat⁴

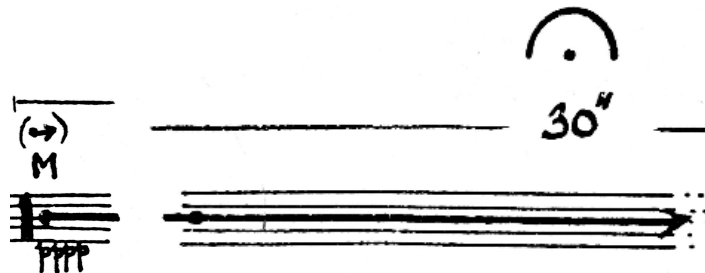


Figure 33: *Atemstudie*, p. 1, End of System 3/Beginning of System 4, B-natural⁴

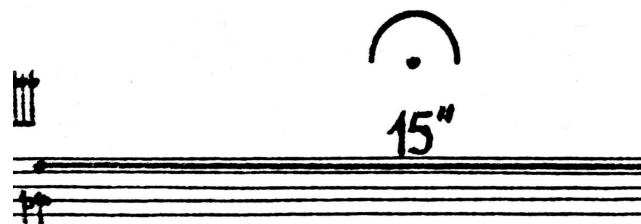


Figure 34: *Atemstudie*, p. 1, System 5, E-natural⁵

The remaining specified duration, E-natural (15'') (see Figure 34, above), also plays an important role as it combines with the other pitches of shortest indicated duration to form

interval class set [016] (See table 10, above).¹⁵¹ By correlating this pitch material with the same trichord interval class sets exclusively found in the rest of the work, all the pitch material in *Atemstudie* is accounted for based on three trichord interval classes and a twelve-tone matrix.

¹⁵¹ A correlation between increased duration and elevated dynamic can be observed through the association of A-natural and B-flat to their respective trichord interval class sets. The note of greatest specified duration, **mp** F-sharp (2'), is combined with the **f** A-natural to form [025], while the note of shortest duration, **pp** E-natural (15'), is combined with the **p** B-flat to form [016].

1.5 Defining Characteristics

A discussion of the defining characteristics of the work in its entirety here will allow for a more detailed study of the techniques outlined above. Following a brief description of each Part, a discussion of particular characteristics will be presented as they appear throughout the work; further detailed discussion of reappearing features will occur as needed.

Part A begins on p.1, System 1 and ends on p.1, System 2 before the twelve Structures begin. It consists of a sustained F-sharp⁵ for two minutes (2') inflected by the vowels "o, a, i, u, e." *Atemstudie's* Explanation of Signs describes the technique being accomplished by "pronounce[ing] vowels with the tongue while playing."¹⁵² Globokar indicated that he conceived of this technique in the context of how a trombonist would perform the vowel inflections.¹⁵³ Stuart Dempster explores the way a trombonist alters vowel sounds in *The Modern Trombone*. In it, he notes that "these sounds are produced by altering the shape of the mouth cavity and by changing the placement of the tongue."¹⁵⁴ When applying this technique to the oboe, however, the manipulation of the tongue results in minimal change in the timbre of the F-sharp; the oboist can attain more effective results by exaggerating the vowel changes using the tongue, air, and embouchure. With this exaggerated positioning of the tongue, using slight crescendos to pulse the air, and manipulating the embouchure to imitate the vowel sounds, the performer can delineate the

¹⁵² Globokar, *Atemstudie*, Explanation of Signs.

¹⁵³ Globokar, UIUC residency interviews.

¹⁵⁴ Dempster, 13.

vowels effectively. Globokar also noted that he conceived of the changes between vowel sounds in this opening passage as having a relatively quick “periodicity.”¹⁵⁵

When discussing the opening of *Atemstudie*, Globokar indicated that the prolonged F-sharp was not originally conceived for public performance. Rather, the two-minute duration was meant to push the limits of the performer for the purpose of technical advancement. Globokar has indicated his approval of a shorter duration of this opening passage for public performances; in 2014 he indicated a one-minute duration was satisfactory.¹⁵⁶

Part B contains the twelve Structures on p. 2–3 of the score. In **Structure 1** (see Figure 35, below), the opening eight notes are played as rapidly as possible (*ppp*). They are followed by a sustained *subito ff* G-sharp⁶. The final three notes return to the opening dynamic with a *subito ppp*. As in *Discours III*, the indication to perform as rapidly as possible should not preclude one’s capability of clearly rendering all notes and dynamics. Globokar is emphatic that merely giving an impression of the written notes is not acceptable; the passage under this marking must be performed as if it were a classical phrase:

[Though] this is [a] crossed line... you [should] do [it]... at the speed you can control each note, [and] not [as] a gesture. This is a kind of bad habit, that when you have a lot of notes that you only hear the first and the last one. [It should be played] much more clear (sic)!¹⁵⁷

¹⁵⁵ Globokar, UIUC residency interviews.

¹⁵⁶ This shorter duration can greatly diminish the fatigue in both player and audience in a public performance.

¹⁵⁷ Globokar, UIUC residency interviews.

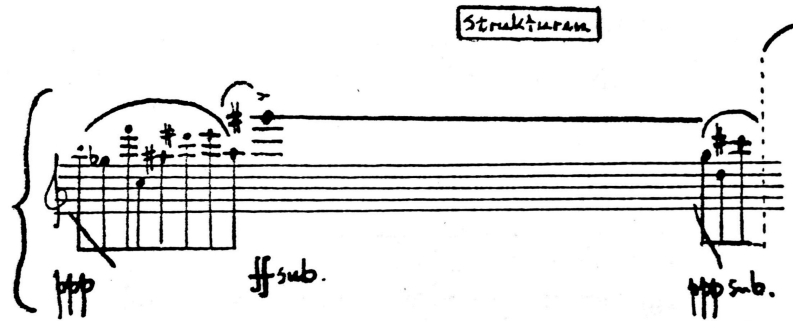


Figure 35: *Atemstudie*, Structure 1

In **Structure 2** (see Figure 36, below), “normal voice”¹⁵⁸ sung notes are held until they blend into a multiphonic.

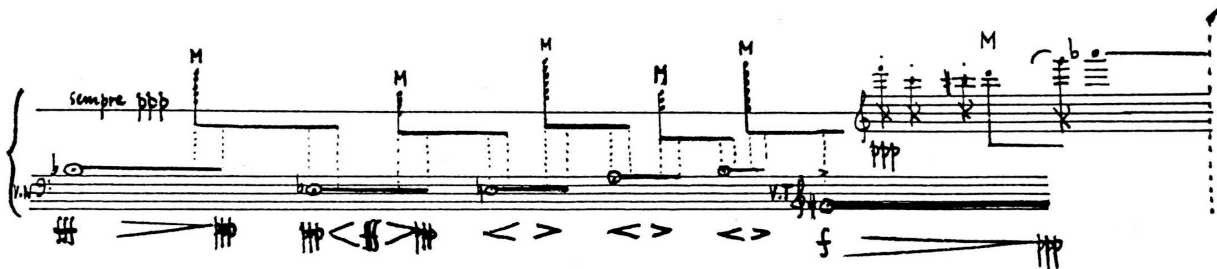


Figure 36: *Atemstudie*, Structure 2

A periodic alternation between sung tones and multiphonics is achieved by sustaining the vocal tone into the multiphonic and then sustaining the multiphonic into the next sung tone. An F-sharp⁴, sung in “head voice,”¹⁵⁹ breaks the sung tone/multiphonic pattern with added staccato eighth notes and a D-natural⁶ multiphonic. It then concludes with a sustained A-flat⁶. As with *Discours III*, *Atemstudie* does not indicate the use of specific multiphonics.¹⁶⁰ Rather, the composer provides a grouping of multiphonics from which the performer is to choose according to the indicated level of complexity; the number of vertically stacked note heads indicates the complexity of a multiphonic. Figure 37 (below)

¹⁵⁸ Globokar, *Atemstudie*, Explanation of Signs.

¹⁵⁹ Ibid.

¹⁶⁰ In the closing section of *Atemstudie* a specific multiphonic fingering and its specific resulting sound is notated.

shows a succession of multiphonics notated with stacked note heads on a horizontal plane implying a relative vertical pitch relation.

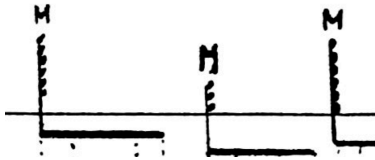


Figure 37: *Atemstudie*, Structure 2



Figure 38: *Atemstudie*, Structure 2

As the middle multiphonic contains three note heads, it is less complex than the surrounding multiphonics that have six note heads. Containing only one note head, the least complex multiphonic occurs in Structure 2 (Figure 38, above). The pitch of this less complex multiphonic texture, unlike the previous multiphonics in Structure 2, is specifically notated as D-natural⁶.

Structure 3 (see Figure 39, below) opens with an alternation between brief oboe tones treated with *glissandi*, interjected by *fff ingressive* “screeching noise[s].”¹⁶¹ Following this, a prolonged ingressive screeching-noise ascends in pitch while ingressive vocal tones mirror the *glissando* treatment of the opening oboe tones. Simultaneously, the screeching-noise is accompanied by an increasing number of key actuations. As the key actuations dissipate, an egressive sung tone ascends over four equal complexities of multiphonic concluding on the highest note possible.

¹⁶¹ A harsh Screeching noise/ Knirschendes Geräusch/ Grincement ressemblant à un cri: Globokar, *Atemstudie*, Explanation of Signs.

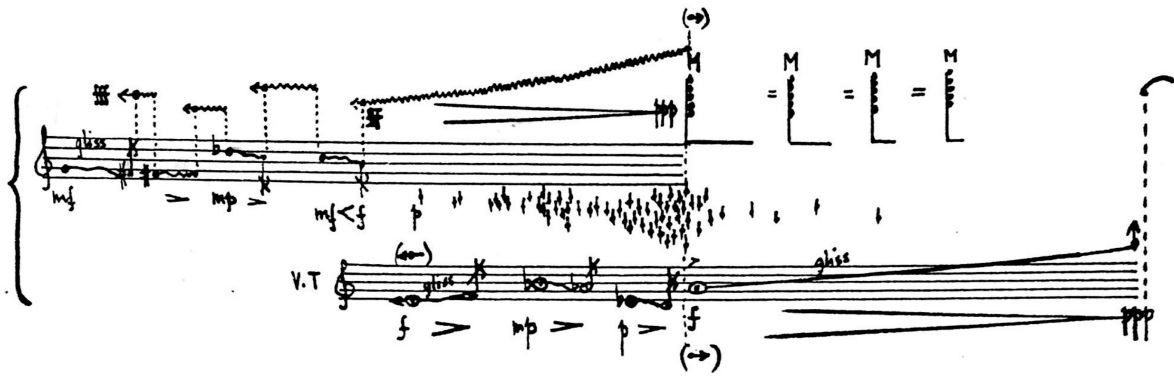


Figure 39: *Atemstudie*, Structure 3

The *fff* dynamic and short duration of the first three screeching-noises imply the use of a lingual air intake to achieve the rapidly elevated dynamic level. The fourth screeching-noise has a prolonged duration and demands further control of the dynamic levels. Though this effect could be achieved more easily through pulmonic ingressive breathing, the need to perform ingressive singing in combination with the screeching-noise supports the use of lingual-ingressive breathing. Efforts must be made to maximize the limited amount of air that is possible to take into the oral cavity, as the volume of air intake is determined by the oral cavity's maximum capacity before it is filled. Limiting the rate of airflow for the screeching-noise greatly improves one's sustaining power. Globokar recommended moving through the passage more quickly to avoid retaking air and breaking the continuity of the passage.¹⁶²

The "=" signs that separate the multiphonics in the second half of Structure 3 (Figure 39, above) indicate equality of multiphonic complexity, not the equality of pitch content. This is the only instance of a succession of equally complex multiphonics in *Atemstudie*. Globokar indicates in his Explanation of Signs that "[e]ach time they enter, [a]

¹⁶² Globokar, UIUC residency interviews.

different fingering is to be employed.”¹⁶³ In this case, Globokar clarified that the quality of the multiphonics is free as no further indication in the score is provided.¹⁶⁴

While key actuations do not prominently affect ingressive screeching-noise or sung notes, they can have a detrimental impact on the sustain of a multiphonic. The performer should decide if an interruption of the multiphonic by key actuations is acceptable. If it is not deemed acceptable, certain key actuations can be employed that avoid any break in the sustained tone. Multiphonics are easily altered or interrupted by changes in fingering. The key actuations will either interrupt the multiphonic or, with carefully selected key actuations, modify the tone without breaking its continuity.

Structure 4 (see Figure 40, below) opens with alternations between “p”-consonants and double harmonics¹⁶⁵ appearing here for the first time in the work. Following an ingressive sung G-natural³, double harmonics sound together with an egressive sung tone. The ascending vocal tone concludes Structure 4 with an inhaled B-flat³.

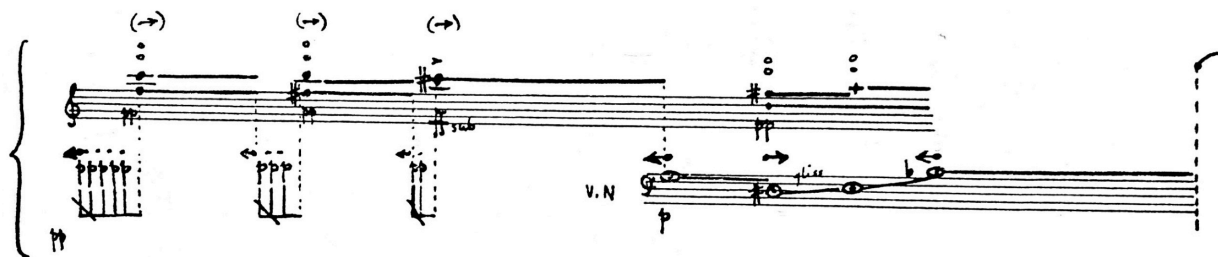


Figure 40: *Atemstudie*, Structure 4

The double harmonic technique in Structure 4 requires a reduced dynamic level and ample time to properly speak. This technique, which is difficult to produce even in ideal circumstances, is made more difficult by its combination with vocalization. *The Techniques*

¹⁶³ Globokar, *Atemstudie*, Explanation of Signs.

¹⁶⁴ Globokar, UIUC residency interviews.

¹⁶⁵ Two small circles placed above a note head indicate a double harmonic. This technique occurs four times in Figure 40.

of *Oboe Playing* by Peter Veale, et. al, contains a useful fingering chart for double harmonics along with insights into successfully executing the technique. “Double harmonics cannot be used in rapid passages as they need time to speak and the embouchure must be changed in order to ‘underblow’.”¹⁶⁶

Structure 5 (Figure 41, below) opens with an A-flat⁵ harmonic which then proceeds to two double-harmonics, the first being approached by an E-flat⁵ grace note. Screeching-noise follows and is quickly joined by an inhaled vocalization. Next, an ascending vocalization coincides with the return of double harmonics. The ascending vocalization reaches F-natural⁵, the highest specified sung pitch in the work, which coincides with the oboe playing an F-natural⁵. The Structure concludes with a *glissando* ascent to B-natural⁵.



Figure 41: *Atemstudie*, Structure 5

To better maintain a continuous sound in the opening of Structure 5, a timbre-fingering can be used with the harmonic A-flat⁵ to achieve the E-flat⁵ grace which proceeds the double harmonics. Double harmonics, though difficult to produce quickly, can “[...] combine well with underblown timbre fingerings”¹⁶⁷ to produce additional tones without significantly altering the primary fingering used for the double harmonic. Using similar fingerings can help smooth the transition between each double harmonic. No matter the difficulty of combining ingressive/egressive playing and singing with double harmonics,

¹⁶⁶ Veale, 124.

¹⁶⁷ Ibid.

consistently maintaining the vibration of the reed/vocal folds is essential. Though the utmost effort must be made to follow the composer's instructions concerning pitch, volume, and timbre, neither these nor the quality of sound produced should interfere with the fundamental tenant of the work, continuous sound.

Structure 6 (Figure 42, below) maintains a reduced dynamic level, where insistent *p* vocalizations alternate between exhalation and inhalation ornamented by *ppp* staccato slashed-eighth notes.



Figure 42: *Atemstudie*, Structure 6

Structure 7 (Figure 43, below) combines a *glissando* ascent in the oboe ornamented by two accented slashed-eighth notes with four *fff* egressive vocal tones.

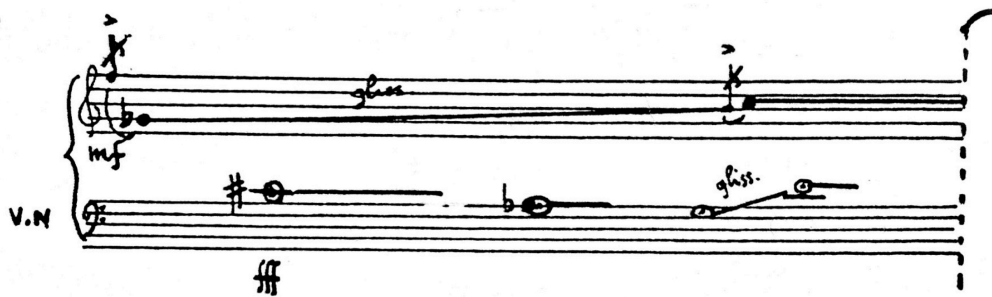


Figure 43: *Atemstudie*, Structure 7

Structure 8 (Figure 44, below) alternates between screeching-noise and rapid staccato slashed-eighth notes. The second half of Structure 8 contains egressive and ingressive vocalizations treated with the consonants “sch” and “f.” The duration of the sustained consonant sounds are determined by the length of the time-space line.



Figure 44: *Atemstudie*, Structure 8

The beaming of eighth note groupings is significant. Globokar notes that the beam connecting eighth notes signifies a grouping that should be reflected in performance.¹⁶⁸ In Structure 8, the oboe's first eighth note must be clearly articulated and heard as being divided from the preceding beamed dyad. Immediately following this, a single ingressive screeching-noise eighth note is similarly separated from a grouping of beamed screeching-noises.

Structure 9 (see Figure 45, below) opens with a vocalized E-natural⁴ combined with consonants; the consecutive oboe tone, A-natural⁶, is ornamented by key-noise actuations. The Structure concludes as the vocal tone B-flat³ gives way to the oboe's E-flat⁴.¹⁶⁹ In order to sustain the continuous tone in *Atemstudie*, the chosen key noise actuations for Structure 9 should not interrupt the sustained A-natural⁶.

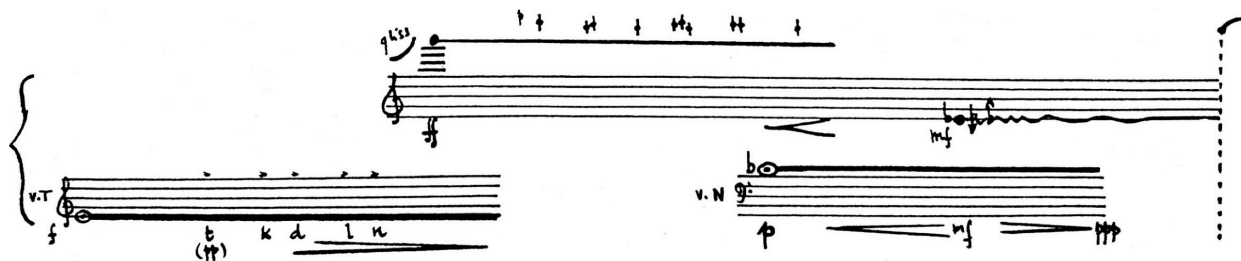


Figure 45: *Atemstudie*, Structure 9

¹⁶⁸ Globokar, UIUC residency interviews.

¹⁶⁹ Following the E-flat⁴ in Structure 9 is an accidental marking defined as a "five eighth-tone lower:" Veale, 12.

In **Structure 10** (see Figure 46, below), rapid alternations occur between oboe tones and vocalized consonants. The oboe then sustains a B-natural⁵ combined with sung tones. An inhaled “h” consonant is combined with a *ppp* multiphonic to close the Structure.

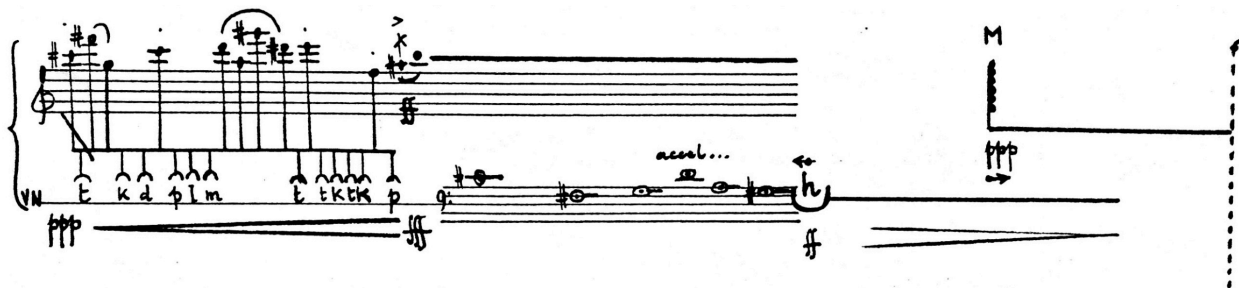


Figure 46: *Atemstudie*, Structure 10

Globokar encourages the performer to strive for solutions that best represent his instructions. When speaking about this piece, he notes it as being “on the edge of impossibility.”¹⁷⁰ This ‘edge’ is visible in the inhaled “h”-consonant at the close of Structure 10. Here, a simultaneous inhalation of an “h”-consonant is combined with an exhalation of a multiphonic on the oboe; Globokar confirms that this is his intention for the instruction written.^{171,172} The exact reproduction of this instruction is a physical impossibility since air can not be inhaled *and* simultaneously exhaled through the mouth. While circular breathing enables the oral cavity and lungs to independently inhale or exhale, it does not enable simultaneous inhalation/exhalation from one orifice at a time.

In **Structure 11** (see Figure 47, below), a prolonged screeching-noise coincides with inhaled vocal tones. In the second half of the Structure, the oboe’s highest note is interspersed with percussive key-noise actuations.

¹⁷⁰ Globokar, UIUC residency interviews.

¹⁷¹ Ibid.

¹⁷² While Globokar supports this interpretation an alternative view is: if the exhalation of the multiphonic also extends to the “h”-consonant, there would be no dispute that this result would then be capable of being produced.

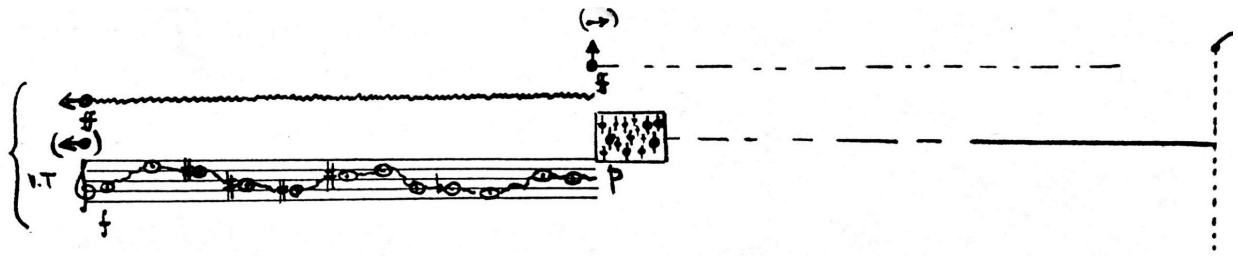


Figure 47: *Atemstudie*, Structure 11

Globokar instructs that, while the quality of the upper register note in the second half of Structure 11 should remain the same for its duration, the boxed key-noise actuations indicate that the quality of key-noises is free and can vary throughout the Structure.¹⁷³ He further notes that each key actuation should punctuate the time-space line: “the [key] noises here should alternate between the pauses [of the oboe tone].”¹⁷⁴ The time-space line notation consistently maintains key-noises or oboe tone whether alone or simultaneously. When sounding together, the key actuations can potentially interrupt the otherwise continuous oboe tone. The choice of a stable upper note allows for a continuous tone uninterrupted by the added key-noise actuations.

While box notation is a common device, Globokar specifically uses it in Structure 11 to support the free choice of key noises.¹⁷⁵ While the notation implies that the free choice extends to the quality and frequency of key-noises, Globokar prefers the simple texture of a single key-noise actuation interrupting the otherwise continuous oboe tone.¹⁷⁶

The key-noises in the second half of the Structure are intermittent (see Figure 47, above); the time-line notation contains observable gaps where both textures are

¹⁷³ Globokar, UIUC residency interviews.

¹⁷⁴ Ibid.

¹⁷⁵ In *Discours III*, a box surrounding various pitches, according to the score’s “Translation of the Actions”, indicates that a performer should “choose freely from the given notes.” In the body of the work, the oboe quintet’s instructions for Actions 3–7 are enclosed in boxes; a time-space line extending from the boxes prolongs the influence of the instructions. The context of *Discours III*’s boxed notation supports the free choice and continued variation in the boxed key-noises of *Atemstudie*’s Structure 11.

¹⁷⁶ Globokar, UIUC residency interviews.

suspended. This contradicts the score’s performance note that requires the study to be played “without any interruption whatever, a continuous emission of sound being the result.”^{177,178} The graphic presentation of the score here contains minute gaps that are not significant enough to necessitate a break from the work’s theme of continuous sound.

Structure 12 (see figure 12, below) maintains a *mf* dynamic and a *vibrato* treatment of the line as the oboe tones are approached by a *glissando* motion.

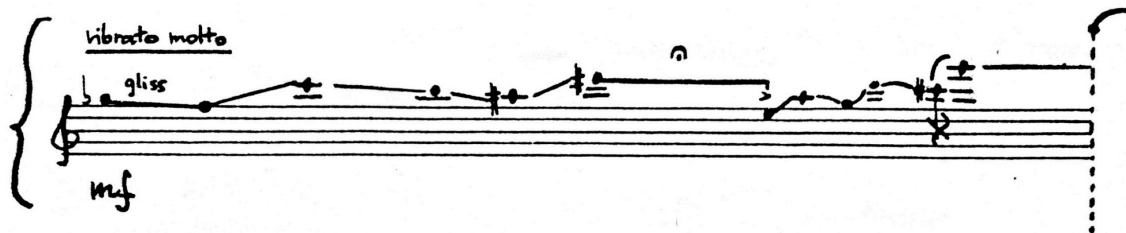


Figure 48: *Atemstudie*, Structure 12

In order to sustain the *mf* dynamic, the *glissando* transitions between notes must occur in a smooth manner. That said, Globokar indicates a slight emphasis should be placed on the D-sharp⁶ at mid-bar to impart a sense of cadence before the sudden accented E⁵. This serves as the dividing point between the second half’s durational diminutions. Globokar indicates that only the slashed-eighth note in Structure 12, a C-sharp⁶, should receive an intense emphasis. To accomplish this, the C-sharp can be played with a strong-tongued articulation that does not break the line or through the use a combination of strong key actuation and air-attack. In Globokar’s description of this passage, he indicates that the clear emphasis is placed on the articulation of the slashed-eighth followed by a slight drop in intensity in the concluding G-natural⁶.

Each Structure in Part B contains a specific row from the twelve-tone matrix (see Table 5, above). While the System delineations of the score’s first page primarily contain

¹⁷⁷ Globokar, *Atemstudie*, Score.

¹⁷⁸ This discrepancy is not remedied in Holliger’s *Pro Musica Nova* printing of *Atemstudie*: Holliger, 47b.

the rows of Part C, each System does not necessarily include the complete contents of each row. For this reason, the discussion of each System in Part C will extend to other systems as necessary.

Following the twelve Structures, Part C begins on the second half of p.1, System 2 (see Figure 49, below). There, for a one-minute duration (1'), a *glissando* oscillation between A-natural⁴ and B-flat⁴ continues into the beginning of System 3 (see Figure 50):

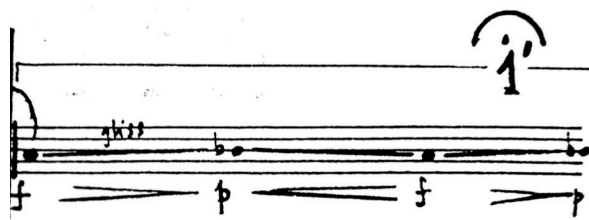


Figure 49: *Atemstudie*, p. 1, System 2, following the twelve Structures

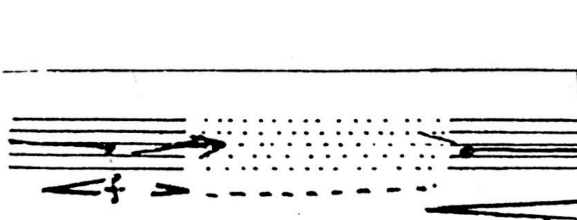


Figure 50: *Atemstudie*, opening of System 3

Globokar encouraged the smoothest *glissando* possible between A-natural⁴ and B-flat⁴ to avoid any decisive arrival between either note of the dyad. Similar to the vowels in the opening of the work, the timing between the notes should maintain a relatively quick periodicity.¹⁷⁹

Following the one-minute (1') oscillation between A-natural⁴ and B-flat⁴ on p.1, System 3, a vocalization tone combines with a *pfeifen* (whistle) D-natural⁶ (See Figure 51, below). The whistle-tone ends as the oboe sounds a D-flat⁴, which then combines with a *sprechen* (spoken) vocalization.¹⁸⁰ This is joined by key-noise actuations in a specific multiphonic. This is the only instance in the work where a specific fingering is provided; it

¹⁷⁹ Globokar, UIUC residency interviews.

¹⁸⁰ The indication *sprechen* (speak) coincides with playing a D-flat⁴. This challenging combination of speaking and playing is especially reminiscent of *Discours III*'s theme, to play as to speak and to speak as to play (speak ⇔ play). The necessity of holding the reed in the mouth to sound the D-flat⁴ reduces the ability to vibrate the vocal folds to 'speak'. Though speaking into the oboe while maintaining the reed's vibration is possible, it is imperative that the effort to speak does not interrupt the continuous pitch produced by the oboe.

is also the only occurrence of a multiphonic with more than one specified pitch. Key actuations then ornament this multiphonic moving to a double harmonic. The vocal tone A-natural⁴ is interrupted by a *glissando* ascent to B-flat⁵, which precedes ingressive “d” and “g”-consonants (unvoiced) that conclude at the double bar line.¹⁸¹

Figure 51: *Atemstudie*, p. 1, System 3

Next comes a B-natural⁴ multiphonic (see final pitch in Figure 51, above). This is the beginning of row I₇, which continues from the end of p.1, System 3 (see Figure 51, above) into p.1, System 4 (see Figure 52, below). This 30” *pppp* multiphonic increases in complexity before being combined with a B-natural⁴ vocal tone. The oboe then sounds an F-sharp⁶ before alternating between screeching-noises and ingressive vocal-tones. Egressive oboe tones then precede a C-sharp⁶, which coincides with *regelmässig* (periodic) key-noise actuations and the consonants “tʃ” and “pʃ”, followed by vocalized tones.

¹⁸¹ The *Pro Musica Nova* edition of *Atemstudie* clarifies the marking preceding the D-sharp 5 *gliss.* to B-flat 5. It clearly shows an E-natural⁵ note head slurs to D-sharp⁵: Holliger, 47b.

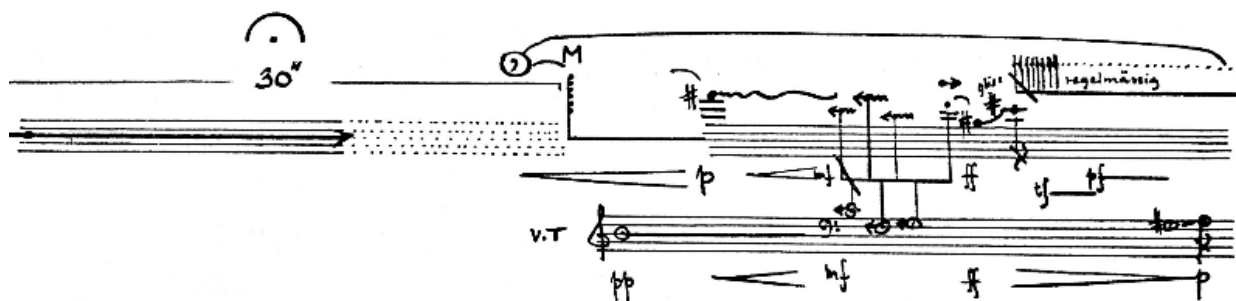


Figure 52: *Atemstudie*, p. 1, System 4

The row I₇ is then completed on p.1, System 5 (see Figure 53, below). System 4's vocal tones and *regelmässig* key-noise actuations lead to the prolonged (15") E-natural⁵ in System 5.

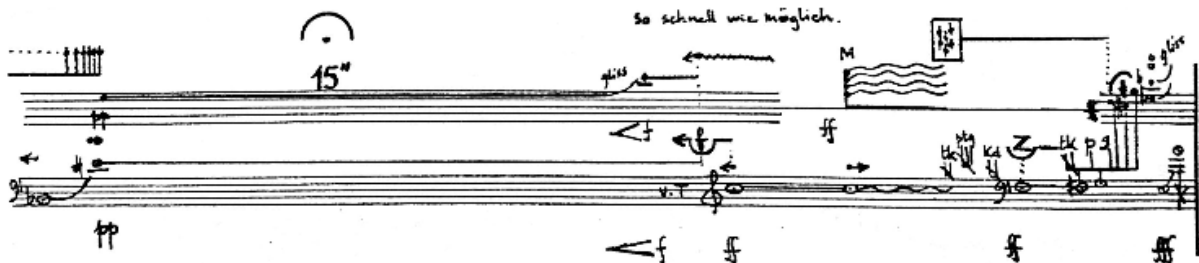


Figure 53: *Atemstudie*, p. 1, System 5

On p.1, System 5 (see Figure 53, above), an ascending *glissando* to a B-natural⁵ coincides with the instruction "*So schnell wie möglich*" (as fast as possible). Following the B-natural⁵, an ingressive screeching-noise is combined with the ingressive consonant "f." The consonant ends as an ingressive vocal tone (C-natural⁵) appears. The sung tone, alternating from ingressive to egressive, coincides with a *glissando*, wave-like undulation of both vocal tone and an oboe multiphonic. Key-noise actuations follow along with voiced and unvoiced consonants combining-and-alternating with vocal tones. Rapid oboe tones then lead to a double harmonic which then ascends via a *glissando*. A rapidly ascending *fff* vocalized dyad, between E-natural³ and A-natural⁴, concludes the work.

In System 5, four topics require further discussion: projecting unvoiced consonants, performing the “Z” indication, performing the double harmonic *glissando*, and elevating the intensity of the work’s concluding material. In Structure 5’s concluding material, the projection of unvoiced consonants with clear diction aids in maintaining the intense **ff** dynamic level. Though unvoiced consonants are indicated, vocalization may be needed to aid in their projection.¹⁸² The “Z” in System 5 (see Figure 53, above) indicates a consonant and must not be confused with alternative definitions of the marking—alternate definitions include irregular vibrato/bowing or the use of the teeth on the reed to create a tone or multiphonic.¹⁸³ If the double harmonic in System 5 is performed as written, the dynamics and pacing of this passage are adversely affected, greatly detracting from the intensity of the final gesture. Globokar encourages the performer to develop an alternative technique here that can support the **ff** dynamic level with an immediacy of response.¹⁸⁴ The technique selected should be flexible enough to achieve the *glissando* ascent following the notated double harmonic. Occurring only in the final System of the work, the instruction “*So schnell wie möglich*” further heightens the intense physicality and drama in *Atemstudie*.¹⁸⁵ This indication, combined with the wide vocal tessitura and **fff** dynamics, allows the last sung dyad to bring the work to a close on a final, exclamatory ‘scream.’

¹⁸² Globokar supported this solution to vocalize the otherwise unvoiced consonants to fulfill the written dynamic and the accompanying intensity of the closing material in the work: Globokar, UIUC residency interviews.

¹⁸³ Veale, 12.

¹⁸⁴ Globokar, UIUC residency interviews.

¹⁸⁵ There are only two other instances of tempo/pacing shifts notated in *Atemstudie*. An *accel.* occurs in Structure 8 and Structure 10: Globokar, *Atemstudie*, Score.

1.6 Assembly

In *Atemstudie*, the ordering of the twelve Structures is to be freely chosen by the performer. The score's explicit instruction is that "[t]he order in which they are played as well as their duration is left to the player."¹⁸⁶ While the ordering is indicated to be free in performance, Table 3 (above) provides evidence that the Structures appear in the score in an order based on compositional parameters. Chapter 3's analysis utilizes a twelve-tone matrix created from the rows present in the twelve Structures and resulting trichord interval class set relationships to provide another layer of analysis to consider when freely ordering the Structures.

The task of performing the twelve Structures is complicated by the requirement to sing and play pitches that are difficult to reproduce without extensive practice. Compounding this difficulty is the need to choose the order of the Structures freely. Unforeseen problems and difficult transitions may occur when freely choosing the ordering while performing. The score instruction that "[t]here is to be no break between the phases"¹⁸⁷ further adds to the challenge. Heinz Holliger provides his perspective on how best to prepare for freely ordering the twelve Structures and overcome these difficulties saying:

Once all the sections have been studied well, arrange the 12 structures into a sequence, and practice these structures one after another.... With time, you will be able to arrange the 12 structures in new sequences more spontaneously.¹⁸⁸

From this information three stages of preparation are derived: (1) practice the Structures in the sequence provided in the score, (2) devise and practice an ordering of the Structures that facilitates helpful relationships to ease transitions, and (3) practice spontaneous sequencing of the Structures. By arranging more accessible interval

¹⁸⁶ Globokar, *Atemstudie*, Score.

¹⁸⁷ Ibid.

¹⁸⁸ Holliger, Appendix, 7.

relations—a unison, minor third, or perfect fifth—the transitions between Structures and their opening and closing pitch (or unpitched) material can become more reliable and accurately performed. The pitch relationships between and within the Structures can also be supported by choosing a multiphonic that produces a helpful pitch. For example, in Structure 10, the freely chosen pitch of the multiphonic can sound an A-natural providing the ear the necessary pitch to perform Structure 11’s sung A-natural⁴. For those without ‘perfect’ pitch, this interval relation and pitch/noise approach can aid in accurate performance of the specified vocalized pitch material. A potential ordering for the Structures using the parameters outlined above to promote helpful relationships is provided in Table 11:

Structure Ordering	12	9	2	5	1	7	6	3	8	4	10	11
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Table 11: Potential ordering of the twelve Structures of *Atemstudie* using helpful pitch relationships

Table 12 provides the Structure ordering Holliger used in his recording of *Atemstudie*:

Structure Ordering	7	8	9	11	10	12	2	4	3	1	5	6
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Table 12: Heinz Holliger’s ordering of the twelve Structures in his recording of *Atemstudie*

While studying the ordering of other performers can be beneficial in terms of creating an overall framework/sequence, mastering the physical and mental focus to securely execute the Structures, in any order, is paramount.

CHAPTER 4: CONCLUSION

This study serves as a historical document of Globokar's 2014 UIUC residency, provides an overview of *Discours III*, and includes an analysis and performance guide to *Atemstudie*. The dissemination of this information through performances, lecture recitals, and master classes can engage instrumentalists, composers, and the public at large. With a greater understanding of the content and various novel applications of instrument and voice in *Discours III* and *Atemstudie*, these works can not only be made more accessible, but also inspire new systems of interpretation and input.

Discours III (1969) and *Atemstudie* (1971) encapsulate Vinko Globokar's compositions commissioned by Heinz Holliger for oboe. *Atemstudie* provides a unique example of a solo oboe work expanding virtuosic instrumental writing and serves as an example of the compositional influences René Leibowitz and Luciano Berio had on Globokar. The evidence of a twelve-tone matrix and trichord interval class relations in the work point to the influence of René Leibowitz, a disciple of Arnold Schoenberg and the twelve-tone technique, whom Globokar studied with from 1960–1963. Globokar's 1964 studies with Berio are also evident in *Atemstudie*, where Berio encouraged Globokar to find "stimuli/ models/ [and] problems outside of music which could then be used to dictate musical elements."¹⁸⁹ In *Atemstudie*, the stimuli of circular breathing maintains the continuous tone. The opportunity for problems outside of music occurs as the solo instrumentalist maintains a continuous oboe tone while simultaneously singing and incorporating various additional techniques to create a polyphony of instrumental sound, speech, and noise. The models present in *Atemstudie* include the applications of twelve-

¹⁸⁹ Lund, 6.

tone technique mentioned above. While *Discours III* and *Atemstudie* were created in proximity to each other and both written for Heinz Holliger, Globokar managed to continue exploring new sounds and techniques for application with the oboe.

A core value of this study lies in its efforts to provide context and insight into the creation and performance practice of *Discours III* and *Atemstudie*. A noteworthy development in the performance practice of *Atemstudie* occurred in 2014 with saxophonist Jacob Kopcienski who contacted Globokar to discuss performing *Atemstudie* on the soprano saxophone. Globokar approved the saxophone transcription, and referred him to David Cyzak (the author of this study) to discuss the work and how it would apply to the saxophone.^{190,191}

Further work remains in analyzing the development and evolution of extended techniques and notation practices used in the works of Globokar and his contemporaries. Also, the application of the twelve-tone technique and its formal implications in *Atemstudie* warrants further analysis of potential relationships between works by Berio from this period, such as the *Sequenza* series. Finally, comparable pitch relationships in Globokar's other works should be explored.

Globokar, when overseeing the recording of *Atemstudie*, accepted Holliger's performance valuing the performer's input: "I accepted everything of him because he's a

¹⁹⁰ Personal communication between the author and Jacob Kopcienski, December 14, 2014.

¹⁹¹ Kopcienski notes of his work: "The version for soprano saxophone will render the same effects as the version for oboe with adaptations of certain double reed techniques that are not possible or practical on soprano saxophone. My transcription for soprano saxophone is being guided by my previous and continuing work with the composer (Vinko Globokar) and American Oboist David Cyzak (a DMA candidate at the University of Illinois Urbana Champaign, United States) who is currently writing his doctoral dissertation on the version for oboe:" Jacob Kopcienski, "Voice within a Voice: Unaccompanied Works for Saxophone using Contemporary Vocal Techniques," *SaxOpen*, <http://webtv.saxopen.com/event/voice-within-a-voice-unaccompanied-works-for-saxophone-using-contemporary-vocal-techniques/> (accessed September 1, 2016).

very serious person. I was sure that this, what he's doing, is on the limit of what he can."¹⁹²

His acceptance of the serious performer rendering an interpretation of this work also reflects a dictum for the artist seeking the means to express themselves: "So, it's the same for you. You have a task, and you adapt to your capacities."¹⁹³ Better understanding of Globokar's works, spirit of innovation, and search for new realms of expression can allow composers and performers to push back the 'edge of impossibility' and be inspired to reach as-yet-undefined heights of expression.

¹⁹² Globokar, UIUC residency interviews.

¹⁹³ Ibid.

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