

Reduce, Reuse, Recycle

by

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Biographical Sketch

Here is the biography.

Acknowledgements

Here are the acknowledgements.

Abstract

Here is the abstract.

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Introduction

Danish composer Hans Abrahamsen's piece for large ensemble, *Wald* (2009), is a "series of variations" building on the opening of his earlier piece for woodwind quintet entitled *Walden* (1978). *Wald* offers many insights into Abrahamsen's compositional development, as it not only comes from his second period but also engages with a work from his first period. Abrahamsen's second period began in 1999 when he returned to composing new works after experiencing debilitating writer's block for nearly 10 years. During this time, he was "paralyzed by the white paper" and "felt that his music had become so complex that he no longer had the tools to create what he tried to imagine."¹ While he slowed in producing new compositions, he did not stop working. Throughout this period, which he calls the "fermata"² of his compositional life, Abrahamsen found inspiration in arranging and orchestrating other composers' works as well as his own earlier pieces. This period of reflection and contemplation provided the necessary catalyst for a new stylistic period, one built upon the foundations of his first period but extended beyond it to new territory.

A precocious composer, Abrahamsen had written a well-received body of work by age 27 (1979) and he was a prominent figure associated with the Danish "New Simplicity" movement. This movement, largely a reaction against Darmstadt serialism, sought to "establish a perceptible sense of form and to evolve a new relationship with past musical styles and objects."³ Abrahamsen's pieces of this first period, including *Ten Preludes for String Quartet* (1973), *Stratifications* (1975), *Winternacht* (1976-78), and *Walden* (1978), blended the clarity of expression and economy of musical materials associated with "New Simplicity" along with elements of neo-classicism,

¹Robin, "Hans Abrahamsen: Fame and Snow Falling on a Composer."

²Molleson, "A Composer for the Season."

³Ernste, "Hans Abrahamsen's *Winternacht*: Reflections on an Etching by M.C. Escher," 8.

neo-romanticism, and collage-like polystylism. **Ten Preludes as example of New Simplicity**

Later first period works, like *Six Pieces* (1984) for horn, violin, and piano, and *Märchenbilder* (1984), and *Lied in Fall* (1987) show a greater sense of chromaticism and denser, more granular textures, perhaps revealing the influence of his teacher György Ligeti. **more on later first period works and how they are not like New Simplicity**

The musical style of Abrahamsen's second period is deeply informed by the groundwork he laid during the period of his "fermata." He returned to his older works and reorchestrated them for alternate ensembles; for instance, Abrahamsen created a reed quintet version of the woodwind quintet *Walden* in 1995. He arranged and orchestrated works by Charles Ives, Carl Nielsen, Per Nørgård, and Maurice Ravel for ensembles ranging in size from woodwind quintet to chamber orchestra. Most importantly, Abrahamsen found inspiration in a set of canons by J.S. Bach [BWV 1072-1078.] that he arranged with a distinctly Minimalist aesthetic. These canons would have a significant impact on several post-fermata works.

Abrahamsen's "fermata" ended with the *Concerto for Piano and Orchestra* (1999-2000); this piece initiated a fertile period of artistic synthesis that combined the practice of returning to previous works (and referencing other composers' works) with new innovations in compositional technique. In this second period, Abrahamsen returned to previous works in two ways: first, arranging earlier works for larger ensembles, and second, expanding upon a germinal motive from an earlier work. For instance, in *Four Pieces for Orchestra* (2004), Abrahamsen recasts the first four movements of his *Ten Studies for Piano* (1984-98) for orchestral forces, while the final movement of the *Piano Concerto* is an arrangement of the eighth movement of *Ten Studies*. *Air*

(2006), for solo accordion, is a reworking and development of material from his first piece for accordion, *Canzone* (1978), and *Air* further serves as a point of departure for the *String Quartet No. 3* (2008).⁴

Ten Sinfonias (2010) program note:

Over the years I have found a way of working where I again and again return to my previous works and sketches to see if there are hidden opportunities and ways as I did not see then or for that matter, could develop into new works.

Beginning with *Schnee* (2006-08) and *Wald* (2008-09), Abrahamsen's style crystallized into one based on tightly constrained musical materials, microtonal sonorities, repeating material delineated by repeat signs, frequent changes of meter, tempo modulations, and complex polyrhythms. The two works are drastically different in scope and instrumentation: *Schnee* lasts an hour and is scored for nine musicians, while *Wald* lasts eighteen minutes and is scored for fifteen musicians. Abrahamsen has nonetheless indicated that *Wald* is a "twin piece" to *Schnee*,⁵ and indeed they share not only the aforementioned characteristics but also clearly articulated forms and symmetrical ensemble seating plans.

While *Schnee* has gained greater notoriety, due in part to its dramatic hour-long length, *Wald* better exemplifies the synthesis of Abrahamsen's second period, where previous materials are recast and further developed within the context of these new compositional resources. It consists of seven variations based on the beginning of his woodwind quintet *Walden* (1978), and Abrahamsen has indicated there are additional connections to Robert Schumann's *Waldszenen*.⁶ The thematic material appearing in

⁴Abrahamsen, "*String Quartet No. 3*" Program note.

⁵Abrahamsen, "*Wald*" Program note.

⁶Ibid. Program note.

both *Walden* and *Wald* is a rising perfect fourth horn call that elicits responses from other instruments.⁷ The horn call repeats but has a slower periodicity than the other responses leading to a gradual change in the order of call and response. The passing of material around the instruments of the ensemble figures prominently throughout the work, and Abrahamsen controls this feature through the symmetrical arrangement of the ensemble into six groups. With these characteristics in mind, *Wald* represents an excellent case study to discuss the features of Abrahamsen's second period.

Abrahamsen and the Horn

It is important to note that the horn has a special significance for Abrahamsen. He was born with cerebral palsy which affects the right side of his body.⁸ He walks with an uneven gait and has only two functional fingers on his right hand, which left him unable to pursue most instruments with professional proficiency.⁹ Since the French horn can be played with only the left hand, it became his principle instrument early on and inspired some of his first compositions. In the first ever public performance of his own music in 1969, Abrahamsen performed a piece called *October* on horn and piano using both instruments with his left hand and played "natural harmonics of the horn directly into the open strings of the grand piano to create resonance" while the pedal was held down by an assistant.¹⁰

Beyond *Walden* and *Wald*, Abrahamsen has featured the horn in other works. Most notable is his *Six Pieces* (1984), for horn, violin, and piano, which he wrote as a companion piece to accompany the Danish premiere of Ligeti's *Horn Trio*.¹¹ *Six*

⁷Ibid. Program note.

⁸Robin, "Hans Abrahamsen: Fame and Snow Falling on a Composer."

⁹Ibid.

¹⁰Abrahamsen, "*Left, Alone*" Program note.

¹¹Abrahamsen, "*Six Pieces*" Program note.

Pieces revisits six movements from the piano work *Ten Studies* where Abrahamsen “tried to ‘conjure up’ instrumental parts inside the piano movement.”¹²

Beyond Abrahamsen’s personal and musical relationship with the horn, the instrument has historical and referential aspects connect it to his music and heritage. **more on horn’s connection to German/Danish culture, German romanticism, and hunting**

Part 1: Historical Context

Part 2: An Analysis of *Walden*

Background and Instrumentation

Abrahamsen composed *Walden* in 1978 on a commission from the Funen Wind Quintet. This original version is scored for a standard woodwind quintet of flute, clarinet in A, oboe, French horn, and bassoon. In 1995, Abrahamsen created an arrangement of the piece for the Calefax Reed Quintet scored for oboe d’amore, clarinet in A, bass clarinet in Bb, bassoon, and alto saxophone. The reed quintet arrangement has some notable differences from the original, including tempi adjustments, new descriptive markings, re-metered movements, and changes in orchestration. The changes in orchestration will be discussed in greater detail below, but the majority of changes involve Abrahamsen’s reassignment of instrumental lines. For instance, while both versions have a clarinet in A, the 1995 version clarinet performs the flute material from the 1978 woodwind quintet, while the alto saxophone in reed quintet

¹²Ibid.

performs the clarinet material from the original version. **too broad, there are several reassignments throughout** Table 1 gives an overview of the instrumental reassignments between these two versions. In the following discussions of *Walden*, the score for the original woodwind quintet will be the referenced version except where noted.

Table 1: *Walden* instrumental reassignment between versions.

Wind Quintet		Reed Quintet I.	Reed Quintet II.	Reed Quintet III.	Reed Quintet IV.
Flute	→	Clarinet in A	A. Sax	Clar. in Eb	Clar. in Eb
Oboe	→	Oboe d'amore	Oboe	Oboe	Oboe
Clarinet in A	→	Alto Saxophone	Clar. in A	Bs. Clar. & Bsn. & A. Sax	A. Sax
Horn in F	→	Bass Clarinet	Bs. Clar.	A. Sax & Bs. Clar.	Bsn.
Bassoon	→	Bassoon	Bsn.	Bsn. & Bs. Clar.	Bs. Clar.

Abrahamsen's first period works are often inspired by or make references to art, literature, poetry, or other music.¹³ For instance, the first and fourth movements of *Winternacht* (1976-78) are dedicated to Austrian poet Georg Trakl, while the second is inspired by Dutch graphic artist M.C. Escher, and the third, the most neo-classical in nature, is dedicated to Igor Stravinsky. *Walden* is deeply inspired by nature and also connected to the literary work of the same name by Henry David Thoreau. [^Abrahamsen has borrowed titles for other compositions, including *Märchenbilder* (1984) from the viola and piano duo by Robert Schumann and *let me*

¹³Ernste, "Hans Abrahamsen's *Winternacht*: Reflections on an Etching by M.C. Escher."

tell you (2014) from the novel by Paul Griffiths.] **this para might go better in Introduction**

These references and allusions provide lenses through which to view Abrahamsen's compositional methods and aesthetic **statements**. *Walden's* program note touches on some of these references, including the connection between Thoreau and the kinds of musical material found in the piece:

The title is taken from the American philosopher and poet Henry David Thoreau's novel from 1854 about living in the woods, which Thoreau did for two years. His stay there was an experiment, an attempt to strip away all the artificial needs imposed by society and rediscover man's lost unity with nature. In that particular sense his novel is a documentation of social inadequacy and a work of poetry (Utopia) as well.

All thought Thoreau himself never completed any actual social analysis he was way ahead of his own time in his perception of the economy and cyclic character of Nature, today known as ecology. His ideas are particularly relevant now that pollution caused by society has reached alarming proportions.

Walden was written in a style of re-cycling and "new simplicity." A lot of superfluous material has been peeled away in order to give space to different qualities such as identity and clarity. Various layers are encountered in the quintet such as the organic (growth, flowering, decay), concretism (mechanical patterns) and finally the descriptive (distant horn calls and other ghost-like music of the past enter our consciousness like a dream). *Walden* consist of four movements.

In a 1985 interview with musicologist Erling Kullberg,¹⁴ Abrahamsen noted that he found the title of *Walden* after he had completed the piece, which is true for many of his works.¹⁵ Nevertheless, the connection between Thoreau's rejection of excess and Abrahamsen's compositional processes in this piece is a fitting one. Abrahamsen's

¹⁴Kullberg, "Konstruktion, Intuition Og Betydning I Hans Abrahamsens Musik."

¹⁵Abrahamsen, "*Ten Studies*" Program Note.

use of limited harmonic collections, recurring musical gestures, and interconnected movements exemplify these aspects of stripping away and recycling, which not only encourages cohesion but also imparts a strong sense of identity and distinguishability to musical elements.

The qualities of organicism, concretism, and descriptive reflect how the material unfolds in each movement. Organicism is central to the first and second movements where motives develop gradually through additive processes like melodic expansion and rhythmic augmentation and diminution. Concretism^[^This is a somewhat confusing connection for Abrahamsen to make. Theo van Doesburg, founder of Art Concret, describes in his 1930 manifesto “The Basis of Concrete Art” a desire to reject “nature’s formal properties,” “sentimentality,” “lyricism, dramaticism, symbolism, etc.” Concretism, with its emphasis on abstraction, seems at odds with the nature-inspired *Walden*.] perhaps applies most easily to the third movement for its use of “mechanical patterns” via heterophonic polyrhythms and slow legato oscillating patterns that compress in speed, ascend in register, and coalesce into an interlocking sixteenth-note texture. The description, “ghost-like music of the past,” is relevant to both the horn calls in the first and third movements as well as the contrapuntal texture in the fourth movement, which is stylistically reminiscent of Baroque music.

Form

Walden consists of four movements without titles that differ in duration, tempo, and character. Unlike much of Abrahamsen’s other music, the score for *Walden* contains remarkably little interpretative markings beyond isolated instances of descriptions like *lontano*, *giocoso*, or *calmo*. The 1995 reed quintet version includes

additional tempo markings like “Moderato fluente” (first movement), “Alla marcia” (second movement), “Andante” (third movement), and “Allegretto giocoso” (fourth movement). The lack of textual description underscores the strong vein of classicism that runs throughout Abrahamsen’s first period works.

Abrahamsen’s compositional process begins with structure, as he believes in order to “make a piece that hangs together as music” one must have a “strong structure that makes it stick together in time.”¹⁶ *Walden*’s structure is in part shaped by the proportions between movements which successively decrease in duration, a technique he has used in both first and second period works.[^For instance, the movements or sections of *Winternacht*, *Schnee*, and *Wald* also decrease in duration over time, while the sections of *Märchenbilder* expand over time.] Table 2 shows this proportional relationship and lists the tempo and movement timings present in the score as well as the timings found in 1994 recording of the Scandinavian Wind Quintet.¹⁷

Table 2: *Walden* movement proportions.

Movement	Tempo	Duration in Score	Duration on Recording
I.	$\text{♩} = 63\text{-}66$	3:35	2:57
II.	$\text{♩} = 76$	3:10	2:51
III.	$\text{♩} = 52$	2:30	2:33
IV.	$\text{♩} = 112$	1:00	1:04

The form of each movement is largely fluid and continuous and does not correspond to traditional, classic formal patterns. The through-composed forms can, however, be parsed into several sections delineated by changes in texture, harmonic collection, or compositional technique.

¹⁶Kullberg, “Konstruktion, Intuition Og Betydning I Hans Abrahamsens Musik.”

¹⁷Abrahamsen, *Wind Quintets*.

The first movement of *Walden* contains three different dichotomies that play out over the course of the movement: 1) harmonic ambiguity to harmonic clarity, 2) heterophony to homophony, and 3) ensemble as soloists to ensemble as subsets. The beginning features the quintet performing music that is harmonically ambiguous and articulated heterophonically, but by the end the quintet is performing harmonically clear and homophonic musical material. The form of the first movement unfolds over four sections. The first features a call and response pattern that gradually transforms over four phrases via a process of rhythmic displacement. The second section consists of a legato three-voice heterophonic canon, while the third section presents another altered heterophonic canon paired with a periodic interjection of a staccato minor third in the horn and bassoon. Finally, the fourth section introduces a homophonic three-octave melody paired with the increasingly insistent staccato gesture before abruptly transitioning into a tutti repeated D major chord.

The second movement is a kind of variation on the first movement. Abrahamsen recasts the first movement's three-octave melody, the oboe's primary melodic motive, and the horn and bassoon staccato punctuation in a precise cyclical configuration using retrograde procedures. Over the course of three cycles, the music unfolds seamlessly, but with each cycle, Abrahamsen filters specific elements from the texture in accordance with a strict process. In contrast to the first movement's focus on development and organic growth, the second movement is about transformation through decay and subtraction.

The third movement can be segmented into two principle sections with a short "coda" that crossfades seamlessly out of the second section. The two primary sections both employ calculated rhythmic procedures of augmentation and diminution or compression. The polyrhythmic and heterophonic opening first section, quite similar to

the opening of the eighth movement of Ligeti's *Ten Pieces for Wind Quintet* (1968)¹⁸, gradually slows down over ten measures, while the second section accelerates over sixteen measures. The concluding “coda” is characterized by a muted, triadic horn call evoking allusions to hunting.

Walden's fleeting minute-long, polytonal finale features a composite texture of a duo for flute and bassoon in $\frac{3}{4}$ and a trio for oboe, clarinet, and horn in $\frac{6}{8}$. The two subsets begin in distant tonal key centers (C# minor in the duo, Eb major in the trio) but modulate toward one another and join in D major by the end. Despite their harmonic arrival, the duo and trio retain a sensation of occupying different worlds. Their clear and balanced classical phrasing never quite coincides, they remain in separate meters, and the movement ends abruptly, mid-phrase “like a music box cutting out.”¹⁹

Figure 1 gives a diagram overview of each movement including significant sectional divisions and characteristic features.

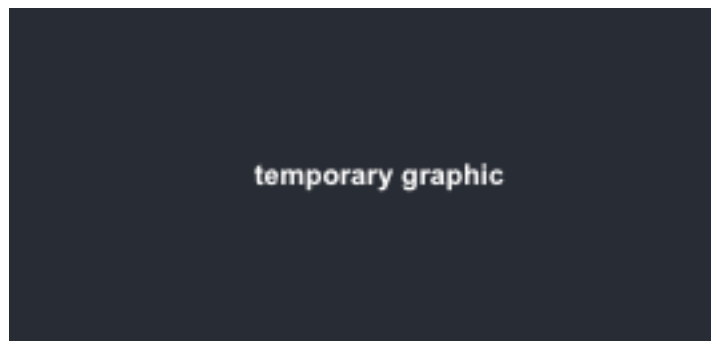


Figure 1: Formal overview of *Walden*

Concluding statement preparing the next section's focus on the way processes and materials are recast from movement one to two

¹⁸Thomas, “Something Amiss with the Fairies. Gavin Thomas on the Elusive Music of Hans Abrahamsen,” 272.

¹⁹Ibid., 268.

Process and Recycling

Abrahamsen's use of strict processes, limited musical materials, and inter-movement relationships are defining characteristics of *Walden*. These processes and compositional techniques pertain to the domains of rhythm (displacement, augmentation, diminution/compression, consistency in subdivision), pitch (limited harmonic collections, canons, retrograde, permutation), and orchestration (texture, subsets, layers, phrasing). An examination of these aspects will illustrate the economy of musical materials associated with Abrahamsen's work in general but will additionally provide a foundation from which to make comparisons to *Wald*.

Augmentation, Diminution, Canon, and Retrograde

Abrahamsen's use of augmentation, diminution, canon, and retrograde often simultaneously contribute to the clarity of expression and economy of material associated with his music. Three examples from the first three movements will illustrate these techniques and also demonstrate how Abrahamsen uses them in tandem with canon and retrograde techniques.

Abrahamsen constructs the second and third sections of the first movement with prolation canons. The first passage, from measures 21-38, has the canon in the trio of flute, clarinet, and bassoon, while the second passage, from measures 42-56, substitutes the oboe for the bassoon. Both passages consist of fourteen instances of three motives separated by short rests: 1) a two-note legato ascending or descending interval (minor 2nd, major 2nd, or minor 3rd), 2) a ascending or descending interval punctuated with a staccato note, or 3) a single sustained pitch (see Figure 2). The first two motives are identifiable by their long-long and long-short profiles, while the

third motive, present in only the first canon, functions as a **cadential** point between phrases.

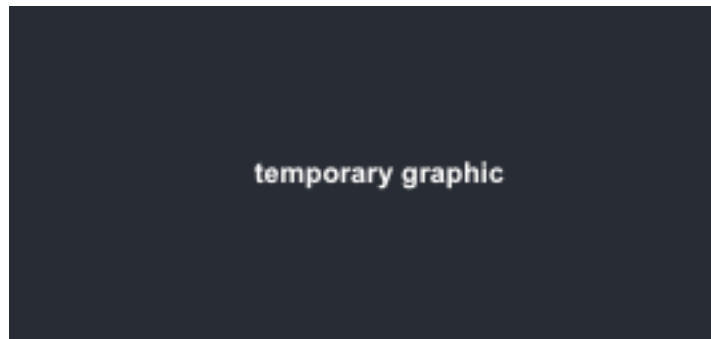


Figure 2: Flute mm. 21-38 motives and durations

The first canon emerges organically from the preceding section's call and response using the same D-F echoing response. The passage can be segmented into three phrases, each concluding with an instance of a longer sustained F. The flute plays the shortest rhythmic durations, the clarinet plays an augmentation of these rhythms, while the bassoon plays an even greater augmentation rhythms.

The trio remains in their separate rhythmic subdivisions carried over from the first section (bassoon in quarters, clarinet in quintuplet sixteenths, flute in triplet eighths), and these subdivisions enable a duration ratio of 1:2:4 for the prolation canon to unfold. For every one quarter note in the bassoon, the flute plays two triplet eighth-notes, and the clarinet play four quintuplet sixteenth-notes. These duration ratios include the short rests between instances of the motives, which are appended to the motivic instance (refer to Figure 2 for how the rhythms are segmented). Figure 3 plots the durations for each motive and clearly shows the ratio of 1:2:4 maintained for the entirety of the canonic passage.

Figure 4 shows a corresponding graph for the canon from measures 42-56. This second canon generally maintains the prior augmentation relationship (flute with

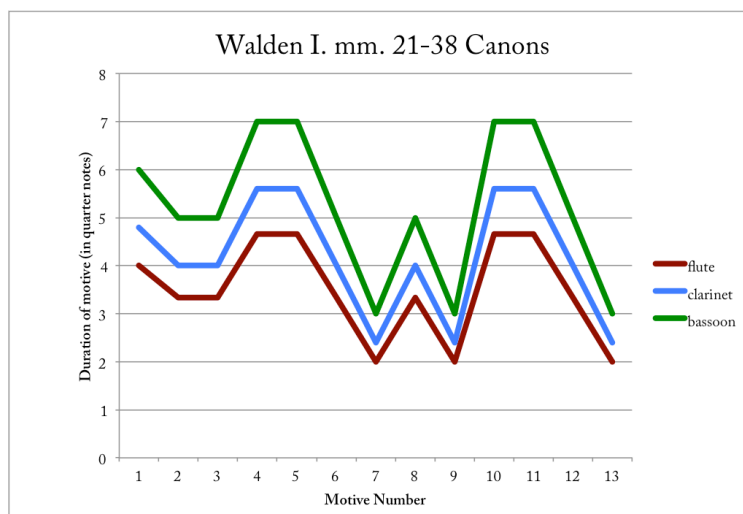


Figure 3: *Walden I.* mm. 21-38 prolotion canon speeds

shortest values, clarinet augmenting flute, oboe augmenting clarinet), but the ratio between voices is not static as before. It begins with nearly the same rhythmic/duration values, but the instruments change rhythmic subdivisions over the course of the passage (e.g. the oboe begins in quarter note divisions at mm. 42, changes to quintuplets in mm. 47, and changes to triplets in mm. 52). There is a general trend toward shorter motive durations over the course of the passage, and this perhaps contributes to an increase in event energy, also enhanced by the staccato repeated notes in the horn and bassoon, and prepares the entrance of the homophonic melody in measure 57.

concluding passage on the differences between these two augmentation canons and why it's important

Another instance of diminution, canon, and retrograde occurs throughout the second movement, which in many ways is a study in periodicity and cyclical organization. Abrahamsen re-reads or recombines the first movement's homophonic melody, the staccato major 6th, and the oboe's F#-C# motive. The staccato major 6th is articulated by the clarinet and horn every 2 bars from mm. 2-26. On top of this background

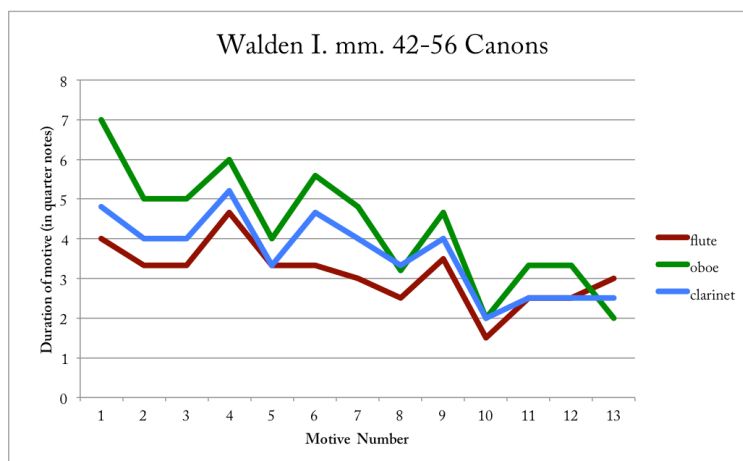


Figure 4: *Walden I.* mm. 42-56 prolation canon speeds

punctuation, the flute and bassoon occupy the middleground with a transposition and elongation of the first movement's homophonic melody. The first movement's homophonic melody (mm. 57-61) uses only pitches $G-A-Bb$, contains seven instances of the motives from the first and second canon, and is abruptly cut off by the introduction of the tutti D major chord. The re-reading of this melody in the second movement is transposed a perfect fifth lower to $C-D-Eb$ and performed in retrograde, making it twice as long.

This nine-measure melody undergoes three cycles (mm. 1-9, mm. 10-18, mm. 19-27) with each successive cycle filtering out motivic instances. By labeling all motivic instances from 1-14, the second cycle removes all odd-numbered motives, while the third cycle removes all motives but multiples of three (another way to think of this is the second cycle removes every other motive and the third removes every two motives). Figure 5 shows the three flute and bassoon cycles from measures 1-27 and highlights the retrograde and filtering process. While this process is not necessarily a classic rhythmic augmentation, it does create an increasing amount of rest between motives contributing to a sensation of an augmentation. Considering Abrahamsen's usage of






the word “decay” in his program note, the process is analogous to a type of decay by removal. It’s as if we are presented with a perfect symmetrical flower, and over time the flower decays with the petals falling off one by one.





Figure 5: *Walden II*. Flute and bassoon mm. 1-27 cyclical retrograde melody

One final instance of augmentation and diminution in this same passage of the second movement occurs in the oboe’s melancholy, expressive melody. From measures 1-26, the oboe performs seven phrases whose proportions compress and expand over time. The phrases consist of three ordered motives: 1) a leaping, descending two-note interval, 2) an angular ascending triadic figure, and 3) a single accented sustained tone. The process of phrase length diminution and augmentation can be seen in Table 3. As a consequence of this process, phrase three and four, the two most compressed phrases, do not contain instances of the third motive and have truncated versions of the first and second motive.

Table 3: *Walden II* oboe melody phrase durations

Phrase	Duration
1	15 
2	9 1/2 
3	6 1/2 
4	4 1/3 
5	9 1/2 

Phrase	Duration
6	9 1/2 
7	9 1/2 

concluding section on oboe augmentation and diminution

conclusion on augmentation, diminution, canon, and retrograde processes

Rhythmic Displacement

Rhythmic displacement, or phasing, is a process involving a repeated gesture gradually moving out of alignment between instruments. It not only shapes the opening of *Walden* but also serves as the basis for *Wald*. The technique is related to the music of American minimalists, particularly Steve Reich, with which Abrahamsen was familiar.^[**find citation**] In *Walden*, the rhythmic displacement technique takes two forms: 1) phasing over repetitions due to gestures changing rhythmic placement and 2) phasing over repetitions due to polyrhythmic gestures of different length. **Is this last sentence necessary or an accurate description?**

The first movement of *Walden* opens with four phrases separated by grand pauses. All four phrases contain different rhythmic configurations of only two motives, an ascending perfect fourth (Bb-Eb) horn call and three ascending minor third (D-F) echoing responses in the flute, clarinet, and bassoon. Each instrument articulates their motive within a consistent rhythmic subdivision: the flute and horn in triplet eighths, the clarinet in quintuplet sixteenths, and the bassoon in quarter notes. Throughout *Walden* Abrahamsen frequently places instruments in contrasting rhythmic subdivisions **and this is important because**. Figure 6 shows the first two phrases of

Walden.

$\text{♩} = 63-66$

Flauto

Oboe

Clarinetto

Corno

Fagotto

G.P.

G.P.

5

Fl.

Ob.

Cl.

Cor.

Fg.

3 quarter + 1 triplet eighth

4 quarter notes

5 quarter notes

G.P.

^{*)} Clarinet in A and Horn in F both written at actual pitch.

Figure 6: Horn call and responses

Over the course of the first section (mm. 1-17), the echoing responses shift in their rhythmic position by fixed amounts causing displacement both with one another and the horn call. The Bb-Eb horn call consistently enters every five measures within beat four, while with each phrase the bassoon enters five quarter notes earlier, the clarinet four quarter notes, and the flute three quarter notes plus one triplet eighth-note. By the fourth phrase, the horn call is isolated from the responses having rotated to the end (see Figure 7).



Figure 7: Horn motive phrase four

This process breaks down the initial call and response relationship and raises interesting questions into the importance of ordering. **more on this? what does it say about the process being applied to a horn call motive and the nature about call and response changing order** After the four phrase process completes, Abrahamsen introduces the oboe, the only instrument absent thus far, and proceeds to the next section. This elegant but strict procedure determines not only the unfolding of the first section but also the point at which to move on to new material, as a continuation beyond the fourth phrase would begin the process again.

A second example of rhythmic displacement occurs between measures 5-7 of the third movement. In this passage, there are two separate layers, a polyrhythmic ostinato of F-G-Ab in the flute and horn, and a sequence of displaced motives in the oboe, clarinet, and bassoon. The trio articulates a slightly different pair of motives: 1) a rising or falling major second or major third and 2) a single, isolated staccato or tenuto note. The trio repeat their respective motives a different number of times in contrasting rhythmic subdivisions: the clarinet three times in sixteenth-notes, the oboe five times in quintuplet sixteenth-notes, and the bassoon four times in quarter notes. With each repetition, the oboe pattern shifts earlier by one quintuplet sixteenth-note,

the clarinet pattern shifts later by one sixteenth-note, and the bassoon pattern shifts earlier by one quarter-note. The motives and displacement process during this passage is displayed in Figure 8. The same process can be found later in the flute and horn between measures 15-17, where for instance, the flute oscillates between two notes that shift earlier by one quintuplet eighth-note with each oscillation.

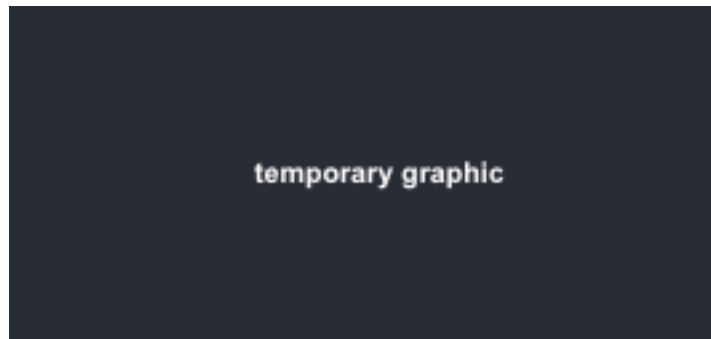


Figure 8: Rhythmic displacement in *Walden III*

In these two examples of rhythmic displacement in the first and third movements, Abrahamsen's use of the technique serves different purposes. The first illustrates displacement as a macro-level process that shapes the pacing of several phrases, while the second example highlights its micro-level phasing applications that generate shifting textures. **one more concluding sentence**

Connections to Other Music

As with much of Abrahamsen's music, there are intersections between *Walden*, earlier pieces, and later pieces. Abrahamsen completed *Walden* and *Winternacht* in the same year (1978) and both share similar compositional features. The two works each contain four movements that successively decrease in duration, returning musical material between movements, and a final movement that is polystylistic, polytonal, and clearly references older musical styles. In the case of *Winternacht*, the first

movement serves as a “kind of overture”²⁰ that foreshadows the music to come in the third and fourth movement. Figure 9 shows one example of this from the first and third movements. The first movement contains a section where Stravinskian rhythms articulated in the strings crossfade with material from a previous section. The same material, recast in a different tempo and meter, serves as the basis for the third movement. The way in which this and other sections return throughout *Winternacht* is like the difference between a door being temporarily opened and catching a glimpse of a room versus being inside the room.

An additional connection between *Winternacht* and *Walden* can be heard in the presence of a similar horn call in both works. Figure 10 compares the two. The triadic nature of this horn motive calls to mind a natural horn, or more specifically a German *Jagd Horn* (hunting horn). In his dissertation on Ligeti’s *Hamburg Concerto*, composer Anthony Cheung discusses

Walden does not have large sections of music that return in the same fashion as in *Winternacht*. Instead several movements contain recurring gestures or otherwise similar material that retain particular musical identities. For instance, in measure 18-20 of the first movement, the first entrance of the oboe is a descending F# to C# perfect fourth. This same musical motive reappears in the second movement in measures 5-6, 15-16, and 24-25, as well as at the climax of the third movement in measures 26-27. Another case can be found in the close relationship between the ending of the first movement and beginning of the second movement. Towards the end of the first movement, a C# and E staccato repeated-note gesture appears in the bassoon and French horn while a new homophonic texture and melody arises in the trio of flute, oboe, and clarinet. The staccato repeated-note gesture grows in

²⁰Ernste, “Hans Abrahamsen’s *Winternacht*: Reflections on an Etching by M.C. Escher.”

8

F [battere in 3 : perhaps with subdivisions]
Andante fluente (Tempo II)
 ♩ = 60 (♩ = 120)

47

Fl. alt.

Cl.

C. à p.

Cor.

Pf.

Vn.

Ve.

p dolce

pizz.

pp

mp

p

morendo

III

Vivo, energico ma ben ritmico
 ♩ = 120

Fl.

Cl.

C. à p.

Cor.

Pf.

Vn.

Ve.

pp

p

mp

mf

pp

pizz.

p

Figure 9: *Winternacht* Material from Movement I Returning in Movement III

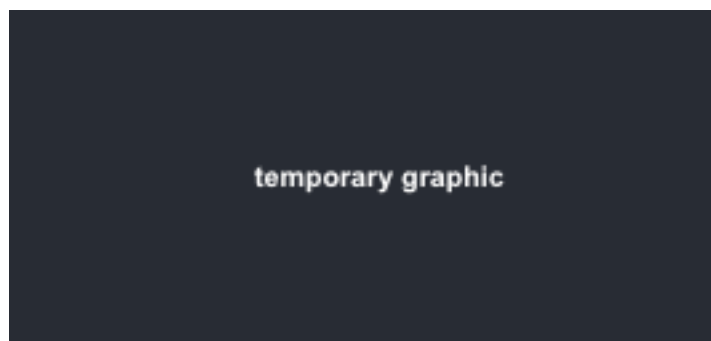


Figure 10: *Winternacht* and *Walden* Triadic Horn Calls

assertiveness and abruptly cuts off this melody and transforms into a tutti punctuated chord articulated by the entire quintet. In a way, the second movement picks up where this prior melody left off. Abrahamsen presents it directly at the beginning of the second movement transposed a perfect fifth lower and shortly thereafter the staccato C# and E gesture returns in the clarinet and horn.

The opening section of the first movement of *Walden* also serves as the germinal material for *Wald* which was written many years later.

Part 3: An Analysis of *Wald*

Background and Instrumentation

Abrahamsen completed *Wald* in 2009 on a co-commission from the Asko|Schönberg Ensemble (Netherlands) and the BBC for the Birmingham Contemporary Music Group (United Kingdom). Asko/Schönberg and conductor Reinbert de Leeuw gave the world premiere on January 14, 2010 at the Muziekgebouw aan't IJ in Amsterdam, while the BCMG with George Benjamin conducting gave the UK premiere during the 2010 BBC Proms on August 6 at the Royal Albert Hall in London.

The title, the German word for “forest” or “woods,” shares the first four letters of his first period woodwind quintet *Walden*. Abrahamsen draws upon German, Danish, English, and occasionally Italian for his titles, and he has said that “the language of the title means a lot to me and to which associations it arouses the listener. There may, for instance, be a world of difference between a”Traumlied,” a “Drømmesang,” and a “Dream Song.”²¹ **The associations...**

In an interview with the BBC prior to the UK premiere of *Wald*, Abrahamsen described the work’s connection with *Walden* and mentioned that it could bear a subtitle of “Variations” or “A Theme from Walden.”

The piece is scored for a sinfonietta ensemble of fifteen musicians: bass flute, English horn, bass clarinet, bassoon, French horn, trumpet, bass trumpet, percussion, harp, piano, 2 violins, viola, cello, and double bass. **more on the use of unique doublings** The musicians are seated in a non-standard semi-circle configuration of four groups of duos and two groups of trios with the piano occupying the central position outside of any group. Figure 11 shows the tree-like diagram of this seating plan. This seating arrangement is intimately connected with the way Abrahamsen handles orchestration and the transference of material over the course of the work and will be discussed in greater detail later on.

more on the broader implications/suggestions of this seating arrangement and its tree-like shape

²¹Abrahamsen, “*Ten Studies*.”

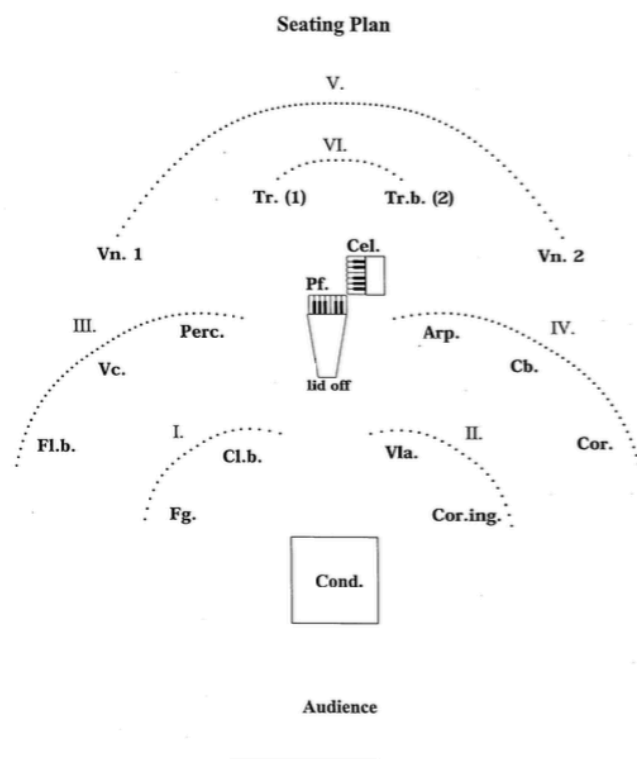


Figure 11: *Wald* seating plan.

Form

The form of *Wald* consists of an introduction and seven variations whose successive durations decrease over the course of the work. The listing of durations in Table 4, measured from the only commercially released recording by Asko|Schönberg Ensemble,²² shows that this decrease is not linear but illustrates Abrahamsen's affinity for compressing global proportions, as seen earlier in *Walden*.

Table 4: *Wald* Formal Proportions.

Section	Duration
Introduction	3:10
Variation 1	2:38
Variation 2	2:16
Variation 3	2:28
Variation 4	1:59
Variation 5	1:39
Variation 6	1:31
Variation 7	1:18

The variations are juxtaposed with little to no transitional material. Their boundaries and subsections within variations are clearly demarcated in the score through the use of different tempi, meters, descriptive markings, and double bar lines. Table 5 gives a comprehensive list of every tempo change and descriptive marking that accompanies a new subsection or variation.

²²Abrahamsen, *Hans Abrahamsen: Walden/Wald*.

Table 5: *Wald* tempo and descriptive markings

Section	Measures	Tempo	Descriptive markings
Intro	1-36	Tempo I ♩ = 88	Allegro con brio “wie aus der Ferne” (“as from a distance”)
	37-72	Tempo II ♩ = 66	Poco meno ma maestoso poco grottesco e ironico
	73-90	Tempo III ♩ = 100	Allegro vivace e agitato “aufgeregt” (“excited”)
	91-108	Tempo IV ♩ = 88	Meno mosso, soave e fluente
Var 1	109-170	Tempo I ♩ = 92	Allegro con brio ma un poco piu mosso ancora “wie aus der Ferne” (yet “as from a distance”)
	171-237	Tempo II ♩ = 77	Poco meno maestoso ma un poco piu mosso ma poco lamentoso
	238-253	Tempo III ♩ = 100	Allegro vivace e piu agitato “sehr aufgeregt” (“very excited”)
	254-267	Tempo IV ♩ = 88	Meno mosso, soave e fluente
Var 2	268-321	Tempo I ♩ = 94	Allegro con brio ma sempre poco piu mosso
	322-381	Tempo II ♩ = 82	Un poco meno ma ancora piu mosso lamentoso e melancolico
	382-401	Tempo III ♩ = 100	Allegro vivace e agitato “wieder aufgeregt” (“excited again”)
	402-408	Tempo IV ♩ = 88	Meno mosso, soave e fluente
Var 3	409-442	♩ = 32	Adagio misterioso (“Nachtmusik”)
Var 4	443-473	♩ = 32	Stesso tempo
Var 5	474-581	♩ = 64	Con nuova energia “Wie ein plötzliches Erwachen” (“Like a sudden awakening”)
	490-521	♩ = 144	Vivo furioso

Section	Measures	Tempo	Descriptive markings
	522-561	$\text{♩} = 165$	(“vielleicht eine Jagd”) (“perhaps a hunting”) Presto volante (“galoppierend, immer vorwärts”) (“galloping, always forward”)
	562-581	$\text{♩} = 132$	Più mosso
Var 6	582-594	$\text{♩} = 66$	Andante mesto
Var 7	595-605	$\text{♩} = 64$	Piu lento

This table highlights variations and sections that are musically connected by these indications, but does not describe the full extent of their relationships. There are interrelated sections and variations across the piece that are not captured by this table. The entire form of the work can be grouped in the following way:

Part A: Introduction, Variation 1, Variation 2

Part B: Variation 3 and Variation 4

Part C: Variation 5

Part D: Variation 6 and Variation 7

The introduction establishes the primary motivic and harmonic material, while variations 1 and 2 are very close re-readings of the introduction with differences in proportion, orchestration, and motivic development. These three sections, grouped as Part A, each contain four subsections differing in tempo, harmony, and activity. Variation 3 and 4 contain the quietest, calmest, and most introverted music, while Variation 5 functions as the climax, with the loudest, most chaotic, and texturally dense music. Variations 6 and 7 are harmonically related to the fourth part of Part A and contain similar harmonic material with different orchestrations.

Harmony

some brief language on microtonality throughout *Wald* so it's expected when it comes up in discussion during the analysis

Spatial Layout

Abrahamsen's arrangement of the 15 musicians into a semi-circle of six symmetrical groups guides his approach to orchestration. Throughout the variations, the six groups exchange musical ideas in a way that is balanced and symmetrical: phrases performed by one group of instruments are answered by phrases from the corresponding symmetrical groups. A brief examination of the first sections of the introduction (measures 1-36) illustrates this process.

Part A

The Introduction, Variation 1, and Variation 2 form Part A of *Wald* due to their similarity in subsections, musical elements, and compositional techniques. The Introduction contains four juxtaposed subsections each of which are subsequently revisited and varied in Variation 1 and 2. The variation subsections contains the same or similar descriptive markings (e.g. "Allegro con brio" in all three first subsections) as well as slightly adjusted tempi (e.g. ♩. = 88, ♩. = 92, and ♩. = 94, respectively). These aspects are clearly outlined in Table 5. Variation 2 is the most varied of these three sections, where the Introduction and Variation 1 being very close re-readings of one another and the variation process starting in earnest with Variation 2.

Table 6 highlights a few notable characteristics of the subsection proportions

when measured in number of seconds from the Asko|Schönberg recording.[^N.B. These subsection proportions exhibit the same characteristics when measured from the tempi and meters in the score as well.] Within any given section, the subsection durations follow a particular order when grouped from longest to shortest: subsection 3, 2, 1, and 4. Comparing individual subsections across the Introduction, Variation 1, and Variation 2, each decreases in length with every time, mirroring the way that sectional proportions of *Wald* decrease as a whole. These characteristics produce a gradual accretion of energy over the first three sections, which is then contrasted by the long and comparatively static atmosphere of Part B (Variations 3 and 4).

Since the four subsections are very similar to one another across the Introduction, Variation 1, and Variation 2, the following discussion will examine each subsection in turn, identifying its principle musical elements, organizational features, and how Abrahamsen approaches varying these aspects across the three sections.

Table 6: *Wald* Intro, Var 1, and Var 2 subsectional proportions.

	Subsection 1	Subsection 2	Subsection 3	Subsection 4
Introduction	0:45	0:48	1:00	0:36
Variation 1	0:36	0:43	0:48	0:30
Variation 2	0:31	0:38	0:41	0:25

Subsection 1

The first subsection contains several aspects that remain consistent across Part A: highly organized proportions, symmetrical call and response patterns, microtonal temperaments, and rhythmic displacement as a primary technique. There are four

elements that characterize the first subsection: 1) a twice-articulated D4-G4 dyad, 2) a continuous measured tremolo of D4-G4 dyad, 3) an ascending perfect fourth call, and 4) a thrice-articulated repeated note response. See Figure 12 for an example of each element. Many of these same elements are slightly varied and carried over into subsection 2 but that will be discussed in detail further below.

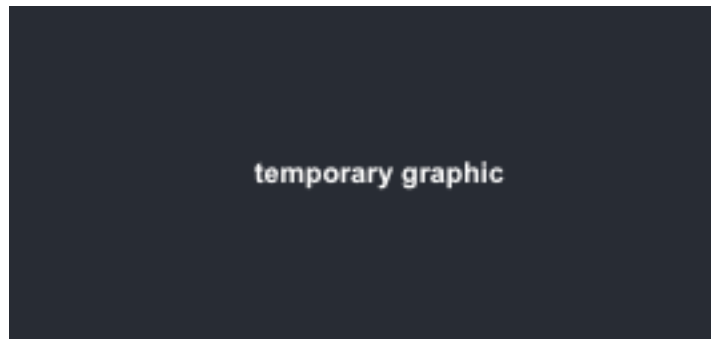


Figure 12: *Wald* subsection 1 musical elements

Elements 1 and 2 undergo the least amount of substantial variation across all three sections, while Elements 3 and 4 are varied more significantly and are essentially one gesture with two parts, intrinsically linked. Element 1 and 2 will be discussed first, and in order to highlight their aspects most coherently, the metrical details of subsection 1 must be addressed first.

Each instance of subsection 1 in Part A is metered in $\frac{3}{8}$ and contains frequent markings of “3-Taktig” and “2-Taktig,” which indicate grouping and phrasing and determine whether a measure is conducted in 3 or 2.[[^]**Citation for Wald Score Performance Notes.**] Subsection 1, along with the other 3 subsections, contains frequent double bar lines which demarcate important phrasing divisions and instrumental entrances or changes. In the Introduction’s subsection 1, these double bar lines are instead repeat signs, which are a characteristic feature of Abrahamsen’s second period works beginning with *Schnee*. With these repeat signs and double bar lines as

grouping guides, the metrical scheme of subsection 1 across its three instances reveals some clear organization:

Introduction: Subsection 1

$\frac{3}{8}$ 2 mm. ||: 9mm. :||: 8mm. :||: 9mm. :||: 8mm. :||

Total: 70 measures (repeats included)

Variation 1: Subsection 1

$\frac{3}{8}$ 2mm. || 8mm. || 7mm. || 8mm. || 7mm. || 8mm. || 7mm. || 8mm. || 7mm. ||

Total: 62 measures

Variation 2: Subsection 1

$\frac{3}{8}$ 6mm. || 6mm. || 6mm. || 6mm. || 6mm. || 6mm. || 6mm. || 6mm. || 6mm. ||

Total: 54 measures

Abrahamsen begins with alternating groupings of measures that differ by one, but by Variation 2, he has settled on equal divisions of 6 measures. Subsection 1's decreasing length throughout Part A comes from Abrahamsen removing eight measures from each instance. This alternation between phrase lengths is but one example of how Abrahamsen uses will alternate subtle and straightfoward aspects of the musical surface.

Elements 1 and 2 are closely tied to this alternating structure and the double bar lines demarcating it. Element 1 consists of a perfect fourth dyad, which is repeated twice. In the Introduction, Element 1 occurs only once at the very beginning during the 2 measure introduction in the piano. In Variation 1, Element 1 occurs eight times, once at the beginning of every double bar line, and is scored for a much larger variety


















of instruments. Variation 2 returns to fewer occurrences, this time only 3, as well as fewer instruments.

Tracking the changes in Element 1 across Part A reveals differences in three characteristics: 1) the pitches of the dyad, 2) the space between articulations of the dyad, and 3) the instrument(s) performing the dyad. For the Introduction and Variation 1, the pitches of Element 1 remain D4-G4, while in Variation 2, Element 1 and every other element along with it have been changed to Bb3-F4.

The space between the two attacks of this element as well as the instruments that articulate it are its most distinguishing features. The Introduction's single instance will serve as a model to compare to Variation 1 and 2. It is articulated by the piano who performs it on the inside of the strings with marimba mallets and a slight bit of resonance is added by the sostenuto pedal. The second attack appears three eighth notes away from the first, placing the figure on the downbeats of measure 1 and 2. In Variation 1, Element 1 appears after every double bar line making eight instances in total, and the instruments that appear at each instance as well as the duration between attacks follow a specific pattern.










Table 7 displays this pattern of rhythmic diminution, where each column beyond the first displays the rhythmic duration between the two attacks for that instance of Element 1. Abrahamsen decreases not only the duration between the two attacks of Element 1 but also the time between each instrument's appearance. For instance, the piano appears in the first, four, sixth, and seventh instances, creating a period of rest between each articulation of two instances, one instance, and zero instances.

Table 7: *Wald* Variation 1 pattern of Element 1 instances.

Instrument	One	Two	Three	Four	Five	Six	Seven	Eight
Piano	9 			6 		3  $\frac{2}{5}$ 	3 	
Harp		6 		3  $\frac{2}{5}$ 	3 			
Kalimba			9 			6 		3  $\frac{2}{5}$ 
Trpt 1 and 2					9 			6 
Bsn + Bs Cl							9 	
Vla + Eng Hn							9 	

In Variation 2, Abrahamsen decreases

Table 8: *Wald* Variation 2 pattern of Element 1 instances.

Instr	One	Two	Three	Four	Five	Six	Seven	Eight	Nine
Piano	4 			6 			4 		
Harp		6 			4 			6 	
Marimba			4 			6 			4 

conclusion of Element 1

Abrahamsen scores Element 2 for the two muted violins in Group V which are placed on symmetrical opposite ends of the stage. The material consists of a continuous measured tremolo dyad notated as either a grouping of 6 sixteenth notes or 5:6 quintuplet sixteenth notes. The violins alternate these different subdivisions based on the double bar grouping scheme as well as the internal measure divisions indicated by “3-Taktig” and “2-Taktig.” Additionally, in the Introduction and Variation 1, the violins alternate between a D4-G4 dyad and $\frac{1}{6}$ th tone flat D4-G4 dyad. For instance in the first subsection of the Introduction during the nine measure repeats, the first violin maintains a rhythm of sixteenth notes while the second violin maintains 5:6 quintuplet sixteenth notes. Within this nine measure repeat, the subdivision is “3-

Taktig” so both violins produce a slight accent every three notes producing a subtle phasing in articulation, given the contrasting polyrhythms. Additionally, every three measures violin 1 and 2 switch between the D4-G4 dyad and $\frac{1}{6}$ th tone flat D4-G4 dyad. In the eight measure phrases, these characteristics flip: the second violin has the faster sixteenth notes, the subdivision is “2-Taktig,” the subtle accents are every other note, and the dyad exchange occurs every two measures instead of three. The only substantial change in this element across the three instances of subsection 1 are that the microtonal dyads disappear in Variation 2 when all of the pitch material changes to Bb3-F4.

conclusion of Element 2 talking about the subtlety of this material

Element 3 and 4 are inherently connected by their pitch characteristics, orchestration, and most importantly by the process they go through together. As is the case with the previous elements, Abrahamsen exclusively uses the equal tempered and just intonation D4-G4 pitches in the Introduction and Variation 1, while Variation 2 only uses equal tempered Bb3 and F4. In all three sections, Abrahamsen orchestrates Element 3 for bass flute and the French horn which alternate each phrase. The bass flute always presents the perfect fourth motive with timbre trill (or bisbigliando) ornamentations with equally tempered pitches, while the French horn performs the motive with a mute, no ornamentations, and with the $\frac{1}{6}$ th tone flat just intonation pitches.

Similarly, Element 4 exhibits the properties of alternating between equal temperament and just intonation pitches. Abrahamsen controls this through orchestration where two different symmetrical trios alternate phrases, so this alternation between the two is both musical and spatial. The equal tempered trio consists of Group III (bass flute, cello, kalimba) and the just intonation trio consists of Group IV (harp,

bass, horn). Abrahamsen carefully chose the members of Group IV for this purpose, as the harp has detuned the necessary D4 and G4 strings, while the bass and horn can play these just intonation pitches through natural harmonics. Element 4 contains three different motives: 1) a repeated D, 2) a repeated G, and 3) a plucked ascending fourth. Each of these motives alternates exclusively between two instruments, and again, one half of the alternating group presents these motives with some ornamentation of short fluttertongue or saltando on the attack repetitions. It is interesting to note that the unornamented versions are in just intonation while the equal temperament versions are always ornamented, thus “muddying” the clarity of the equal temperament. **more on this aspect?**

Throughout Subsection 1, Abrahamsen subjects Element 3 and 4 to a similar type of rhythmic displacement as found in *Walden*. Subsection 1 found in the Introduction is closest to the opening of the earlier work where there are four phrases (each repeated once) containing two elements that gradually move out of phase. Disregarding the repeat signs for a moment, Element 3 consistently occurs every 10 measures while Element 4 gradually moves out of phase with Element 3 by a process of rhythmic augmentation. Due to the repeat signs, Element 3’s periodicity of every 10 measures actually only works out during the 2nd repeat of a phrase moving to the first repeat of the next, as the eight and nine measure repeat signs give the second repeat a slightly shorter duration than 10 measures.

Unlike the rhythmic displacement process in *Walden*, the component parts of Element 4 both move out of phase with Element 3 and grow in duration over time. This is reflected in the global duration of the Element, which when measured from the onset of the first attack through the ending of the last attack expresses a duration pattern of 6, 10, 11.5, and 15 eighth notes. Like the ascending perfect fourth of

Element 3 that remains a duration of seven eighth notes, the ascending perfect fourth motive within Element 4 articulated by the harp and kalimba remains the same length. The other two motives, the repeated D and repeated G, both grow in length with each repeated phrase. Each repeated D and repeated G motive contains three articulations which grow by different durations. The first attack grows by 1.5 eighth notes (or 1 eighth note plus one 2:3 eighth note), the second attack grows by one eighth note, and the third attack stays the same duration. The last attack remaining the same reflects the way in which the plucked fourth motive also does not change. Each time these articulations grow in duration the rhythmic value is prepended to the attack causing the motive to move earlier and change phase with respect to Element 3. Figure 13 shows the relationship between Element 3 and 4 and the rhythmic augmentation of Element 4 over the course of the Introduction and Variation 1.

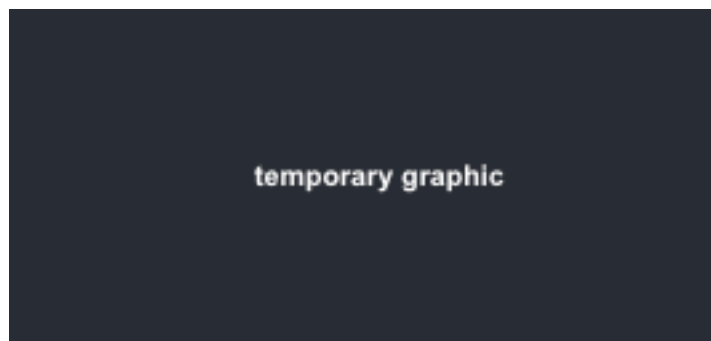


Figure 13: *Wald* Introduction Subsection 1 rhythmic displacement

In Variation 1, Element 3 again sounds every ten measures, and now with the removal of repeat signs, its periodicity is unencumbered. The double bar lines of Variation 1 are directly linked to the occurrences of Element 1 and do not confine the instances of Element 3 and 4 as the repeat signs do in the Introduction. In other words, over the course of Variation 1, Element 3 and 4 begin to “bleed over” the neatly proportioned eight and seven measure phrase lengths.

In Variation 1, the process of displacement instead occurs through rhythmic diminution rather than augmentation. Abrahamsen begins with a global duration of Element 4 that is longer than the Introduction, producing a sequence of 17.5, 15, 11.5, 10, 7.5, and 10 eighth notes. Abrahamsen also varies the rhythm of the three attacks to create a short-long-long pattern, in contrast to the Introduction's long-short-short pattern.

The rhythmic diminution process that Abrahamsen applies to each attack primarily creates a sequence of -1 eighth, -1.5 eighths, -0 eighths. There are several notable exceptions to this sequence of reductions. In measure 140, the cello extends the third attack by 3 eighth notes to sustain over the double bar line and create a smoother introduction of the trumpets. During the fifth instance of Element 4, the double bass has subtracted so many rhythmic values that the first two attacks are missing as reducing them by 1 and 1.5 eighth notes eliminates them altogether. At the sixth instance, the rhythms have returned in the double bass and the horn subtracts smaller rhythmic durations from the first two attacks in order to reproduce the exact same rhythmic configuration as found in the Introduction's measures 6-8, as if the augmentation and diminution process has completed a full cycle. **interesting collision between Element 1 and 4 in mm. 163-164**

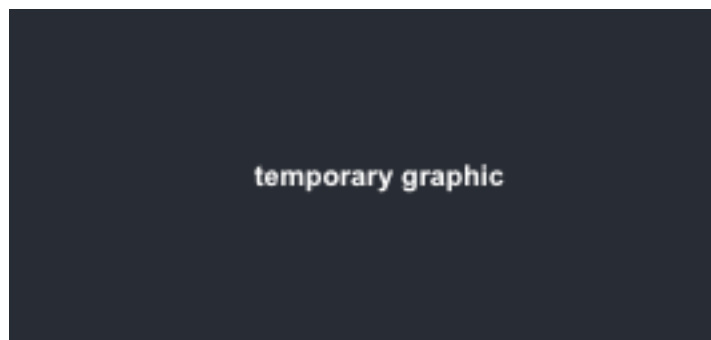


Figure 14: *Wald* Variation 1 Subsection 1 rhythmic diminution

Variation 2 is the first real variation in the sense that Abrahamsen begins to change the pitch and rhythmic characteristics of these Elements to a much greater degree than between the Introduction and Variation 1. Variation 2 continues the trend of reducing the number of Element 3 and 4 instances, and Abrahamsen does this by greatly expanding the rhythmic proportions of the various motives. There is one instance of Element 3 in the bass flute between measures 279 and 291. The now perfect fifth Bb3-F4 motive remains timbrally ornamented but is scaled by a factor of 6. The Introduction and Variation 1 versions remain 7 eighth notes long, while the Variation 2 version expands to 42 eighth notes.

In the two instances of Element 4 in Variation 2 (for bass/cello and horn/bass flute), their rhythmic proportions also reflect augmentation by a factor of 6. The bass' repeated Bb from measures 284-312 create a duration pattern of 24 eighths, 36 eighths, and 27 eighths, which is a augmentation of the bass rhythms from Variation 1 measures 113-118 (4 eighths, 6 eighths, 4.5 eighths). Similarly the cello's repeated Bb in measures 289-299 (9 eighths, 6 eighths, 18 eighths) form an augmentation of the bass rhythms from the Introduction measures 6-8 (1.5, 1, 3 eighths).

Subsection 1 conclusion

Subsection 2

In the second subsection of Part A, Abrahamsen recasts the previous four elements in a more chromatic language and louder dynamic context. Like the first subsection, Variation 1 is close re-reading of the Introduction, while Variation 2 is further removed and contains changes in harmony and **density**. Again, Abrahamsen controls the metrical scheme of each subsection 2 by alternating double bar line group-

ings that differ by one measure. Unlike Var2:Sec1, the final instance of subsection 2 does not settle into equally grouped phrases:

Subsection 2 Meters

Introduction: Subsection 2

$\frac{2}{4}$ 2 mm. ||: 8mm. :||: 9mm. :||: 8mm. :||: 9mm. :||

Total: 70 measures (repeats included)

Variation 1: Subsection 2

$\frac{2}{4}$ 7mm. || 8mm. || 7mm. || 8mm. || 7mm. || 8mm. || 7mm. || 8mm. ||
7mm. ||

Total: 67 measures

Variation 2: Subsection 2

$\frac{2}{4}$ 8mm. || 7mm. || 8mm. || 7mm. || 8mm. || 7mm. || 8mm. || 7mm. ||

Total: 60 measures

The individual elements of Intro:Sec2 differ from those in Intro:Sec1 by harmony, orchestration, and underlying technique. Element 1 again only appears at the very onset of Intro:Sec2 and takes on larger roles in Variation 1 and Variation 2. Its first appearance is again in the piano but performed staccato on the keys, creating a clear formal demarcation and setting the harmonic collection for what follows. These punctuated chords contain three chromatic perfect fourths (<123678>) symmetrical around the D4-G4 axis of Intro:Sec1, creating a 6-6[012567]. As in subsection 1, this harmonic language is extremely limited, as Abrahamsen uses only this collection along with microtonal inflections throughout Intro:Sec2 and Var1:Sec2. Var2:Sec2 uses the same set class but transposed by T_{10} , which is a transposition level that removes the D4-G4 center.

Element 1 again takes on a more substantial role in Var1:Sec2 and Var2:Sec2, occurring at the beginning of every double bar line and following both a pattern of orchestration and duration between attacks. Tables 9 and 10 describe how Element 1 in Var1:Sec2 and Var2:Sec2 rotates between piano, harp, and marimba and alternates between four eighth notes and six eighth notes of duration between attacks. The difference between these two processes is subtle; in Var2:Sec2, the instrumental ordering is slightly changed, the piano is muted, and the durations between attacks have switched.

Table 9: Var1:Sec2 Element 1 Pattern.

















Instr	One	Two	Three	Four	Five	Six	Seven	Eight	Nine
Piano	4 			6 			4 		
Harp		6 			4 			6 	
Marimba			4 			6 			4 

Table 10: Var1:Sec2 Element 1 Pattern.

Instr	One	Two	Three	Four	Five	Six	Seven
Piano	6 			4 			6 
Marimba		4 			6 		
Harp			6 			4 	

Element 2 remains closely associated with its corresponding element from subsection 1. It remains scored for the symmetrical violin I and violin II but becomes a sul ponticello tremolo and removes microtonality and subdivision accents. Instead, the violins alternate the two perfect fourth dyads symmetrical around D4-G4 and accents the downbeat every 2 or 3 measures, depending on the double bar grouping (every 2 for 8 measure grouping or every 3 for 9 measure groupings). In Var1:Sec2

the downbeat accents change slightly to accommodate the 8 and 7 measure groupings (3+2+3 for 8 measure groupings or 2+3+2 for 7 measure groupings). Abrahamsen removes Element 2 in this *sul ponticello* tremolo form and instead recasts it as a spicato repeated note gesture alternating between double bass and cello. The two strings alternate between sixteenth-note subdivisions for three measures (double bass) and triplet sixteenth-note subdivisions for two measures (cello) throughout the entirety of Var2:Sec2.

Elements 3 and 4 of subsection 2 form the primary foreground material and undergo similar rotational and rhythmic displacement processes found in subsection 1. In Intro:Sec2 and Var1:Sec2, Element 3 retains its ascending perfect fourth contour but like Elements 1 and 2, it is chromatically harmonized within the <123678> collection and includes microtonal inflections in specific instruments. Element 3 maintains a consistent duration of 7 triplet quarter notes; this is akin to the 7 eighth note duration of Element 3 in Intro:Sec1, almost as if a rhythmic translation between sections. Both sections feature Element 1 maintaining a triplet subdivision, the first in a meter of $\frac{3}{8}$ and then second in $\frac{2}{4}$. Throughout Part A, Element 3 in Subsection 2 cycles every ten measures with its periodicity being disrupted by repeat signs in Intro:Sec2. Abrahamsen reduces the number of instruments taking part in Element 3 in each instance. Intro:Sec2 features two families of instruments alternating within each of the four repeated sections: 1) trumpet, bass trumpet, bassoon, bass clarinet, and 2) cello, bass, viola, English horn. Abrahamsen's spatial seating plan again comes into consideration here; the first subset consists of Group I and VI, a left-side group and a symmetrical pair and the second subset reflects this as it includes Group II, a right-side group, and a symmetrical pair from Group III and IV. Var1:Sec2 alternates between two smaller subsets (trumpet/bass trumpet and cello/bass/piano), while

Var2:Sec2 again reduces the number of instruments to viola/violin 2 and cello/violin 1.

Within the harmonic framework of <123678>, Abrahamsen varies the harmonic presentation of Element 3 in Intro:Sec2 and Var1:Sec2. Figure 15 shows the harmonizations of Element 3 across Intro:Sec2 and Var1:Sec2. In this figure, the initial presentations of Element 3 are voiced as chromatic trichords, <123> followed by <678>, each time. However, in Var1:Sec2, Abrahamsen voices them as <13> followed by <78> in the odd presentations and <12> followed by <68> in the even presentations. **Comment on how subtle this is and how he explores interval motion; moves from P4 in Intro:Sec2 to m2/M2 in Var1:Sec2 to M3/P5 in Var2:Sec2** Intervallic voice leading of each instrument...

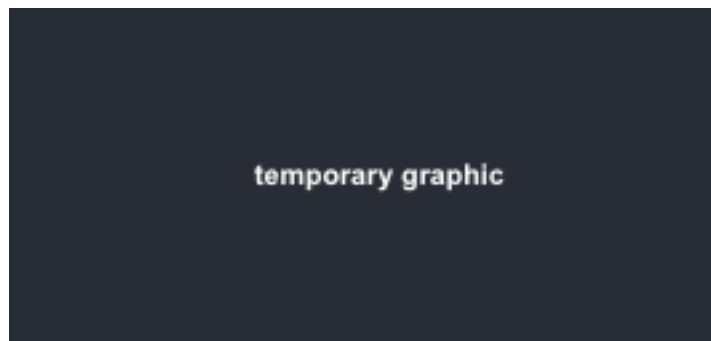


Figure 15: Intro:Sec2 and Var1:Sec2 Harmonization of Element 3

Element 4 of subsection 2 is associated with Element 4 of subsection 1 in that it undergoes a rotational process with the periodic Element 3. However, Abrahamsen's realization of Element 4 in subsection 2 is more rhythmically complex and not based on repeated note echoing responses like subsection 1. Instead Element 4 consists of a six-note sequence of three intertwined chromatic perfect fourths that rhythmically displace earlier and later in time at different speeds. Abrahamsen scores the alternating statements for symmetrical trios, odd statements by Group IV's harp and the Group

II duo and even statements by Group III's marimba and the Group I duo. The harp and marimba percussively articulate each note of the sequence, while the individual instruments within Group I and II perform non-intersecting trichordal segmentations of the six-note sequence. **The voice leading of these trichordal segmentations is different for each statement for each instrument, and this characteristic will be examined in greater detail below.**

In subsection 1, Abrahamsen controls the rhythmic displacement process of Element 4 by adding or subtracting rhythmic values from the repeated-note gestures. In other words rhythmic displacement occurs because the motives themselves grow longer (Intro:Sec1) or shorter (Var1:Sec1) in duration. In subsection 2, the rhythmically intertwined chromatic perfect fourths of Element 4 do not change in duration but instead pull apart at different polyrhythmic speeds. Figure 16 shows the first two statements of Element 4 in Intro:Sec2. The top staff indicates the composite six-note sequence of <123678> while the lower three staves tease apart the overlapping perfect fourths. The first statement of Figure 16 highlights how these perfect fourths remain in different subdivisions (e.g. quarters vs. quintuplet eighths vs. triplet quarters) and maintain consistent rhythmic durations (e.g. 3 quarters plus 2 quarters) throughout all subsection 2 instances. These different subdivisions create a global polyrhythm of 4:5:6 (eighths vs. quintuplet eighths vs. triplet eighths).

The second statement in the figure highlights how the displacement process unfolds in Intro:Sec2. The <27> dyad consistently cycles every eight measures and always remains on the downbeat. Its periodicity is obscured by the way in which the <16> and <38> dyads pull apart from this central location. At the rate of 1 quarter note per repetition, the <16> dyad shifts earlier in the cycle, while the <38> dyad shifts later by 1 triplet quarter. In the Introduction, this process occurs for each time

of the four repeated phrases.

Figure 16: Intro:Sec2 Element 4 Rhythmic displacement

This process becomes more complex in Var1:Sec2 as the harp and marimba groups no longer alternate phrases and instead perform simultaneous displacement processes. The top two staves of Figure 17 indicate the two composite lines articulated by the marimba and harp, respectively, while the remaining lower staves extract the perfect fourth dyads. Both six-note sequence lines share the <27> dyad as a central axis, while the other two dyads again shift earlier and later with each phrase. The <16> and <38> dyads have two rhythmic subdivision versions, and they displace earlier or later, depending on the dyad, by one value of their subdivision (e.g. quarter or triplet quarter). While Abrahamsen does not alternate the phrases between the harp and marimba, he does alternate the two processes between the two instruments.

more on this

should I note the error in the score?

note how the dyads form a quarter note sequence and a triplet quarter sequence

close up look at voice leading inside six-note sequence for Var1:Sec1

Group I

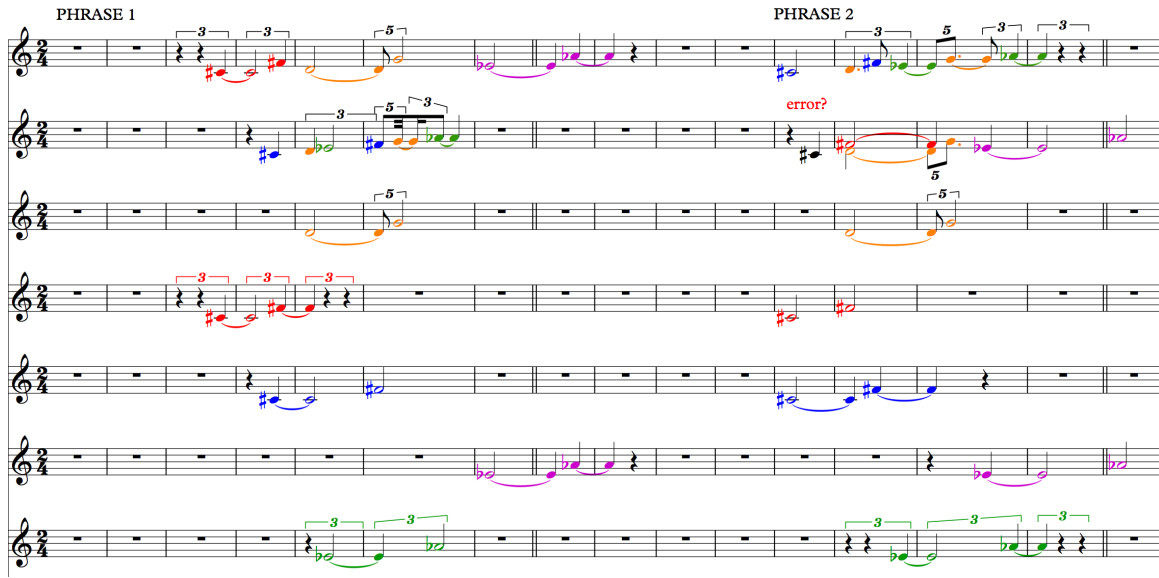


Figure 17: Var1:Sec2 Element 4 Rhythmic displacement

In Var2:Sec2, Abrahamsen builds on the two simultaneous displacement processes initiated in Var1:Sec2 and expands its development to include variations in pitch ordering and contour. This process contains four separate threads of pitch sequences that Abrahamsen articulates over seven phrases. These four threads again express the 4:5:6 polyrhythmic subdivisions found in Var1:Sec2, but in this instance, the central quintuplet eighth-note layer is harmonized creating a fourth thread. The figure below depicts each of the four lines independently and does not consider the composite ordering. When unwoven in this fashion, it is clear that Abrahamsen has constructed these sequences through retrograde.

Four Threads

- 1: <50166116610561>
- 2: <50e44ee44e054e>
- 3: <4e4e0516615005e44e5016166150e4e>
- 4: <616105e44e5005166150e4e44e50>

Retrograde Octachords

3: A B C D

4: R(C) R(B) R(A) R(?)

Retrograde ordering: <4e4e0516><6150e4e4><4e500516><615005e4><4e501616><616105e4>
|| <4e50><6150e4>

The quintuplet eighth note threads of 1 and 2 above consist of two hexachords (<501661> and <50e44e>) mirrored about a central axis. Abrahamsen extends the process in both threads for one phrase beyond the end of the retrograde, suggesting that this process could continue with a new ordering. Threads 3 (quarter) and 4 (triplet quarter) contain retrograde **octachords** that have been separated in time. Thread 3 contains four octachords, highlighted in the figure as A, B, C, and D. Thread 4 contains retrograde versions of those same octachords presented in retrograde around the central B octachord: R(C), R(B), R(A), R(?).

It is interesting to note that each octachord contains a tetrachord of the same dyad pair. When the octachords are re-ordered into retrograde order (see lower portion of the figure), these tetrachordal dyad pairs rotate in order position throughout the sequence. In the first two octachords they occupy the outer positions, in the second two octachords the middle positions, and in the final two octachords the inner positions. **say this better**

section 2 conclusion

Subsection 3

Introduction: Subsection 3:

$\frac{12}{8}$ 1 mm. ||: 2mm. :||: 3mm. :|| 4mm. ||: 3mm. :||: 2mm. :|| 3mm.

Total = 28 measures (repeats included)

Variation 1: Subsection 3:

$\frac{12}{8}$ 2mm. ||: 2mm. :||: 1mm. :|| 1mm. ||: 2mm. :|| 1mm. ||: 1mm. :||
1mm. ||: 2mm. :|| 3mm. ||

Total = 24 measures (repeats included)

Variation 2: Subsection 3:

$\frac{12}{8}$ 20 mm.

Total = 20 measures

Subsection 4

Subsection 4, the shortest of them all, concludes each section of Part A. Abrahamson continues to control the structure of subsections through metrical schemes. Subsection 4 differs from the preceding subsections by texture and changes in meter. All earlier subsections are defined by their single time signature, while subsection 4 contains a sequence of five metrical changes where the last time signature is truncated by 12♩ with each instance:

Introduction: Subsection 4:

$\frac{10}{16}$ 1mm. $\frac{3}{4}$ 1mm. $\frac{6}{16}$ 4mm. $\frac{3}{8}$ 1mm. $\frac{3}{16}$ 11mm.

Variation 1: Subsection 4:

$\frac{10}{16}$ 1mm. $\frac{3}{4}$ 1mm. $\frac{6}{16}$ 4mm. $\frac{3}{8}$ 1mm. $\frac{3}{16}$ 7mm.

Variation 2: Subsection 4:

$\frac{10}{16}$ 1mm. $\frac{3}{4}$ 1mm. $\frac{6}{16}$ 4mm. $\frac{9}{16}$ 1mm.

Subsection 4 is defined by four phrases of cascading figures that alternate between

marimba and harp dup and piano at each new metrical change. In the same way that fourth element of subsection 2 is a composite of interwoven pitch sequences, so too are the cascading figures a composite sequence. Harmonically, these cascading figures are an expansion of the nearly pentatonic 4-22[0247].

Part B

Variation 3 and 4.

Part C

In a radio interview with the BBC prior to the UK premiere of *Wald* at the 2010 BBC Proms, Abrahamsen described how a variation from Beethoven's *Diabelli Variations* provided the inspiration for the transition between Variation 4 and Variation 5:

A piece that has inspired me a lot for this piece is Beethoven's *Diabelli Variations*. I cannot remember the number of the variation but they are very short variations, very fast. And then there comes, a little over the middle of the piece, a very long variation and it's around four and half minutes. And it dies out, very low in the low register, and then suddenly Beethoven "Dah! Dah! (sings excitedly)". And that moment has given me the impulse that this slow variation of 4 and 5 is a kind of, I have written Night Music. And it's kind of the woods spirits have some kind of talks together, and then suddenly the morning comes and nature wakes. And its a little frightened.

While the variation is not quite the four and half minutes that Abrahamsen mentions, Variation 20 from *Diabelli Variations* fits this description. It is not surprising that Abrahamsen found inspiration from this variation given Beethoven's use of the

perfect fourth in the beginning of Variation 20 and the perfect fourths found throughout *Wald*. Figure 18 shows the three staves of Variation 20 and highlights the perfect fourth opening, the quiet dynamic, slow tempo, and emphasis on low register.



Figure 18: Beethoven's *Diabelli Variations* Variation XX.

Table 11: *Wald* Variation 5 Durations

Section	Duration
Section 1	0:18
Section 2	0:29
Section 3	0:50

Part D

Variation 6 and Variation 7.

Conclusion

Appendix

Chronological List of Works

Year	Title	Duration	Instrumentation
1970	<i>Skum</i>	14:00	orchestra
1971	<i>Rundt om og Ind Imellem</i>	10:00	hn, 2trp, tbn, tba
1972	<i>EEC sats</i>	10:00	orchestra
1972	<i>Efterår</i>	5:00	vc, fl, gtr
1972	<i>Landskaber</i>	8:00	fl, ob, cl, bn, hn
1973	<i>10 Præludier</i>	20:00	string quartet
1973	<i>Flowersongs</i>	11:00	three flutes
1973	<i>Glansbilleder [Scraps]</i>	4:00	cello and piano
1973	<i>Universe Birds</i>	4:00	10 sopranos or 5 sopranos
1974	<i>Gush</i>	4:00	alto saxophone
1974	<i>Symfoni</i>	14:00	orchestra
1975	<i>Stratifications</i>	8:00	orchestra
1976	<i>October</i>	6:00	horn and piano
1976	<i>Danmarks-sange</i>	10:00	soprano and va, fl, cl, perc, pf
1978	<i>Canzone</i>	9:00	accordion
1978	<i>Winternacht</i>	13:00	fl, cl, cnt, hn, pno, vn, vc
1978	<i>Walden</i>	11:00	fl, ob, cl, bn, hn
1981	<i>Nacht und Trompeten</i>	11:00	orchestra
1981	<i>String Quartet No. 2</i>	15:00	string quartet
1984	<i>Märchenbilder</i>	14:00	sinfonietta
1984	<i>Seks stykker</i>	14:00	vn, hn, pf
1985	<i>Zwei Schneetänze</i>	4:00	4rec, or fl, cl, vn, vc
1987	<i>Lied in Fall</i>	14:00	cello and chamber orchestra
1987	<i>Winternacht</i>	13:00	fl, cl, perc, pno, gtr, vn, vc
1988	<i>Storm og Stille</i>	3:00	cello, or vn, va, vc
1990	<i>Capriccio Bagateller</i>	4:00	violin
1990	<i>Aarhus Ragtime</i>	3:00	chamber orchestra
1990	<i>Hymne</i>	3:00	cello or viola
1992	<i>Efterårslied</i>	6:00	soprano, vn, vc, cl, pno/hpd
1995	<i>Walden</i>	11:00	ob, 2cl, bn, asx
1998	<i>Ti studier</i>	21:00	piano
1999	<i>Two Pieces in Slow Time</i>	7:00	2hn, 3trp, 3tbn, 2tba, 2cnt, 2perc
2000	<i>Siciliano</i>	6:12	cello
2000	<i>Concerto for Piano and Orchestra</i>	15:00	piano and chamber orchestra
2004	<i>Fire Stykker for Orkester</i>	17:00	large orchestra

Year	Title	Duration	Instrumentation
2005	<i>Three Little Nocturnes</i>	9:00	accordion and string quartet
2006	<i>Air</i>	9:00	accordion
2006	<i>Schnee</i> , Canons 1a & 1b	17:00	fl, cl, ob, 2pno, perc, vn, va, vc
2008	<i>Schnee</i>	57:00	fl, cl, ob, 2pno, perc, vn, va, vc
2008	<i>String Quartet No. 3</i>	12:00	string quartet
2009	<i>Efterårslied</i>	6:00	ca, pno/hpd, vn, va, vc
2009	<i>Traumlieder</i>	14:00	vn, vc, pno
2009	<i>Wald</i>	18:00	sinfonietta
20??	<i>Kharon</i>	7:00	trombone
2010	<i>Liebeslied</i>	3:00	bs fl, ob, bs cl, perc, pno, vn, va, vc
2010	<i>Ten Sinfonias</i>	20:00	orchestra
2011	<i>Double Concerto</i>	22:00	violin, piano, and string orchestra
2012	<i>Flowersongs</i>	10:00	fl, ob, and cl
2012	<i>String Quartet No. 4</i>	20:00	string quartet
2013	<i>Schneebilder</i>	20:00	vn, va, vc, pno
2013	<i>Let me tell you</i>	30:00	soprano and orchestra
2014	<i>Bamberger Tanz</i>	4:00	orchestra
2015	<i>Left, alone</i>	18:00	piano and orchestra

List of Arrangements

Year	Arrangement	Duration	Instrumentation
	Bach: 8 Canons	20:00	
	Bach: Befiehl du deine Wege	5:00	
2012	Nielsen: Commotio	21:00	
1988	Nielsen: Fantasistykker, op. 2	6:00	ob, vn, va, vc
	Nielsen: Festpræludium	3:00	
2010	Nielsen: Symfoni Nr. 6	32:00	
1990	Nielsen: Three Piano Pieces op. 59 posth.	10:00	
1989	Ravel: Le Tombeau de Couperin	20:00	
2011	Debussy: Children's Corner	18:00	
1988	Satie: Trois Gymnopedies	12:00	ob and string quartet
2012	Ligeti: Arc-en-ciel	4:00	
2012	Ligeti: En Suspens	2:15	
????	Nørgård: Surf	5:00	
	Schumann: Kinderszenen, op.15		wind quintet
1998	Weyse: Fire Aftensange	20:00	mezzo-soprano and orchestra

List of Related Works

Work	Related Work
<i>Flowersongs</i> (1973)	<i>Ten Preludes</i> (1973) VIII
<i>Flowersongs</i> (1973)	<i>Schnee</i> (2006-08) Canon 2A
<i>Winternacht</i> (1976-78) IV	<i>Nacht und Trumpeten</i> (1981)
<i>Ten Preludes</i> (1973)	<i>Ten Sinfonias</i> (2010)
<i>Six Pieces</i> (1984) II	<i>Concerto for Piano and Orchestra</i> (1999-2000) I
<i>Ten Studies</i> (1984-98)	<i>Six Pieces</i> (1984)
<i>Ten Studies</i> (1984-98) I-IV	<i>Four Pieces for Orchestra</i> (2004) I-IV
<i>Ten Studies</i> (1984-98) II	<i>Concerto for Piano and Orchestra</i> (1999-2000) I
<i>Ten Studies</i> (1984-98) VIII	<i>Concerto for Piano and Orchestra</i> (1999-2000) IV
<i>Canzone</i> (1978)	<i>Air</i> (2006)
<i>Air</i> (2006)	<i>String Quartet No. 3</i> (2008)
<i>Walden</i> (1978) I	<i>Wald</i> (2008-09)
<i>Schnee</i> (2006-08)	<i>Wald</i> (2008-09)
<i>Schnee</i> (2006-08)	<i>Double Concerto</i> (2010-11) IV
<i>Schnee</i> (2006-08) Canon 1A	<i>let me tell you</i> (2013) I
<i>Traumlieder</i> (2009)	<i>Six Pieces</i> (1984)
<i>Liebeslied</i> (2010)	<i>Double Concerto</i> (2011) I

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