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SYNTHETIC SCALES, CHARLES GRIFFES, AND  
THE KAIRN OF KORIDWEN

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## Preface

My sincere appreciation goes to Easley Blackwood and Robert P. Morgan for their valuable criticism and support of this project. Thanks also to Donna K. Anderson of the State University of New York College at Cortland, who greatly facilitated the work which led to the writing of this essay, both through her published writings on the music and life of Charles T. Griffes and through her advice and assistance in gaining access to manuscript materials. My wife, harpist Jeanmarie Chenette, provided detailed comments on an early draft of this essay, and has my deepest gratitude for her advice and her constant support.

Excerpts from The Kairn of Koridwen, unpublished musical composition by Charles T. Griffes, are used with the permission of the copyright owner, Donna K. Anderson. All rights reserved.

## Introduction

In 1916, the American composer Charles Griffes (1884-1920) wrote a dance-drama called The Kairn of Koridwen in which he, for the first time, based his musical language almost entirely on a non-diatonic arrangement of minor, major, and augmented seconds known as a synthetic scale.<sup>1</sup> Griffes conceived of the scale, with its two augmented seconds each surrounded by semitones, both as a programmatic counterpart to the exotic setting of the dance scenario and as an abstract pitch structure largely determining the range of harmonic possibilities in the work as a whole. These programmatic and abstract conceptions of the scale corresponded to preoccupations of Griffes' earlier years (the evocative use of unusual scales in works such as the 1912 Pleasure Dome of Kubla Khan) and his later years (the experimental use of synthetic scales in the 1917-8 Sonata and the 1919 Three Preludes for piano). Consequently, The Kairn of Koridwen can be seen as an important work in the development of Griffes' compositional language and one which has been too long neglected.

<sup>1</sup> A definition of this term and a listing of some types of synthetic scales may be found in Robert Fink and Robert Ricci, The Language of Twentieth Century Music: A Dictionary of Terms (New York: Schirmer Books, 1975), p. 90.

The reasons for the neglect of The Kairn of Koridwen lie in its peculiar attributes and the checkered history of its musical manuscript. The length of the work - around 50 minutes - precludes performance by any but the most dedicated dance or chamber groups, and the instrumentation - flute, two clarinets, two horns, celesta, harp, and piano - falls well outside the domain of any established ensemble. On top of these difficulties, the complete score, half of which disappeared soon after the 1917 premiere, became available only as recently as 1965, when the missing second scene was transcribed by the staff of the Free Library of Philadelphia's Fleisher Collection of Orchestral Music from a complete set of parts held by the New York Public Library.<sup>2</sup> As a result, the work has remained relatively obscure.<sup>3</sup>

Griffes based his dance-drama on a folk legend drawn from the collection Les Grandes Légendes de France compiled in 1892 by the French historian and prominent Wagnerian Edouard Schuré. This subject was suggested to Griffes by the sisters Alice and Irene Lewisohn, Artistic Directors of New York City's Neighborhood Playhouse, who commissioned Griffes to compose music which would reflect every nuance

<sup>2</sup>The Fleisher Collection makes the score available on a rental basis (rental number 6939).

<sup>3</sup>Only one documented performance of The Kairn took place between 1917, the year of the premiere, and 1965. Leonid Hambro conducted the first scene at a Griffes memorial concert in New York in 1951.

and gesture of the dramatic action.<sup>4</sup> Griffes worked from a detailed scenario provided by the Lewisoohns, which was summarized in the February, 1917 Neighborhood Playhouse program as follows:

It is night and the Druidesses of Sene are assembling about the kairn or sanctuary, to perform their rites to Koridwen, the Goddess of the Moon. They build the sacred fire (their symbol of the mystic force in life) and prepare in the cauldron a potion from the herbs and berries of the woods. The ceremony, accompanied by rhythmic movements, describes the circle of the universe and unfolds to them the three planes of existence. One by one they respond to the spell, and interpret in esoteric language the principles of their faith -- individuality and universality, liberty and light.

In the midst of these rites they are interrupted by Mordred, a Gallic warrior, who has come from the mainland to seek adventure and to demand a prophecy which he knows can be revealed to him only by winning the love of a Druidess.

Enraged at his daring sacrilege, the Sene rush upon him and prepare to sacrifice him according to their custom, but Awena, the high priestess, confers the privilege of sacrifice upon Carmelis. Just as Carmelis is prepared to strike with upraised sword, she sees for the first time the eyes of her victim appealing to her for mercy. The sword falls to the ground. Mordred realizes that he has conquered. The Druidesses, filled with horror at her defiance of her vows, hurl curses upon their sister, rush wildly over the cliffs and sail away.

According to their austere law, after three days of grace, they will come back to demand in exchange for the life of the warrior the life of her who has broken her vow. Meanwhile Carmelis and Mordred forget themselves in the happiness of their love, and it is only when Mordred unconsciously gathers and offers to her the berries of the sacred bella-donna that Carmelis is reminded of the doom awaiting her.

<sup>4</sup> Edward M. Maisel, Charles T. Griffes: The Life of an American Composer (New York: Alfred A. Knopf, 1943), p. 176.

Overcome by the futility of her efforts to conquer her fate, Carmelis becomes the visionary and seer; she foretells Mordred's future, first his victory, then his bondage, and reveals to him the secrets of the Druid faith -- the three planes of existence beginning with darkness and ending in universal light. Then handing him her torch, the symbol of her soul, which will forever lead him onward, she sends him forth to his destiny.

The legend tells us that the boat disappears and that as she sees its light dimly in the darkness, her voice is carried far across the sea in soft and savage intensity: "I was yours in life; in death, I will possess and never leave you. You shall feel me in the moonlight. I shall be with you in the shadows."

For her, there remains the sacred bella-donna. Will she not find in death a greater promise of life?

When the Sene return, they find Carmelis lying beside the sanctuary, the empty horn by her side. They solemnly encircle her, repeating to themselves the austere law of their faith: "What is to be, will be."<sup>5</sup>

This analytical study of The Kairn of Koridwen will have the following specific objectives:

1. to provide a general introduction to Griffes' use of synthetic scales;
2. to analyze The Kairn of Koridwen from the point of view of synthetic scale technique;
3. to examine the correspondence between music and drama to see what they suggest concerning the meaning of synthetic scales in Griffes' musical language;
4. to make some general statements about Griffes' stylistic development by using The Kairn as a focus and point of comparison for a discussion of other works using synthetic scales.

<sup>5</sup>Quoted from a copy of the original program provided to the author by Donna K. Anderson, musicologist and Griffes specialist. This synopsis was also printed as the first appendix to the text cited in footnote 4, Edward Maisel's 1943 biography of Griffes.

## Synthetic Scales and Griffes' Mature Musical Style

Although the music of Charles Griffes remained unambiguously tonal to the end of his short life, his later works experiment with constructive techniques which move outside the traditional realm of the major and minor key system. Griffes' third Prelude for piano (1919),<sup>6</sup> for instance, begins clearly in F, but the centrality of F is established through rhythmic placement, repetition, and melodic focus<sup>7</sup> rather than through functional diatonic means (fig. 1):

<sup>6</sup> Although Griffes originally intended to write a set of five preludes, the three published in 1967 under the title *Three Preludes* (editor's title) were the only ones completed before Griffes' fatal illness set in during the last months of 1919.

<sup>7</sup> These techniques for creating a tonal focus may have been inspired by the music of Stravinsky, with which Griffes was well acquainted. Griffes had been engaged as a pianist for the American premiere of *Petrouchka* (two piano version) in 1916. The same year he also saw the New York Ballet Russe production of *Firebird*, a score which he later purchased. Griffes' *Five Poems of Ancient China and Japan* and Stravinsky's *Three Japanese Lyrics* were premiered on the same program in 1917. See Maisel for further details.

Fig. 1 - Griffes, Three Preludes, number 3, measures 1-4  
No tempo or dynamic markings given in the original.



From measure 7 on, the same techniques are applied differently to establish a new tonal center, the pitch A (fig. 2):

Fig. 2 - Griffes, Three Preludes, number 3, measures 7-11



In spite of the shift in focus, the pitch materials remain constant, a seven note scalewise pattern or synthetic scale A-Bb-C#-D#-E-F-Gb-(A) accounting for nearly every note in the Prelude.<sup>8</sup>

Synthetic scales can be found in Griffes' music written as early as 1912. The original 1912 piano version of The Pleasure Dome of Kubla Khan, and the later orchestral version as well, includes a melody (possibly borrowed)<sup>9</sup>

<sup>8</sup> The only exceptions are the three B's in measures 3 and 4 and a single D occurring in measure 18.



based on a seven note synthetic scale B-C#-D-E#-F#-G#-A#-(B) which Griffes uses to depict the dancing and revelry he imagines taking place in Kubla Khan's exotic palace (fig. 3):

Fig. 3 - Griffes, Pleasure Dome of Kubla Khan, oboe at letter H



From these programmatic origins, Griffes expands the role of synthetic scales in later compositions to encompass the entire web of harmonic and melodic relationships within a work. The Prelude discussed above is a relatively simple example. Among larger works, the Sonata for piano (1917-8) adheres closely to its synthetic scale as the source for harmonic and melodic material. The thematic material of each of its three movements derives almost entirely from the single untransposed eight note scale Bb-C#-D-Eb-F-F#-G#-A-(Bb) - this in spite of the differences in key from one movement to the next (fig. 4):

<sup>9</sup>Griffes' diaries mention an Arabian melody which he copied from a book in the New York Public Library for possible use in The Pleasure Dome of Kubla Khan. Donna K. Anderson, in her book The Works of Charles T. Griffes: A Descriptive Catalogue (Ann Arbor: UMI Research Press, 1983), p. 318, speculates that this may be the melody.

Fig. 4 - Griffes Sonata

a. Movement 1, first theme

10 Allegretto con moto

mf

p

b. Movement 1, transition

31

f

8va

## c. Movement 1, second theme

36 *mf* *espressivo*

## d. Movement 2, main theme

*Molto tranquillo*

*p*

## e. Movement 3, main theme

*Allegro vivace*

*p*

Griffes frequently divides the synthetic scale into smaller units which call up associations with other, more familiar harmonic types. In the Sonata for piano, for instance, a brief passage near the end of the second movement begins on an arpeggiated dominant seventh chord sounding relatively diatonic and tonal (fig. 5, m. 38), continues with a pentatonic, chant-like melody implying Eb minor (fig. 5, m. 50), and ends up with a discordant

figure using all the pitches of the synthetic scale in close proximity (fig. 5, m. 56). Griffes preserves the pitches of the synthetic scale through each of these transformations of the musical material.

Fig. 5 - Griffes Sonata, movement 2, measures 38-40, 50-52,  
and 56-60

The musical score is presented in two systems. The first system, measures 38-40, shows a right hand with a 'tranquillo' marking and a 'p' dynamic, and a left hand with a 'pp' dynamic and a triplet of eighth notes. The second system, measures 50-52 and 56-60, shows a right hand with a 'pp' dynamic and a left hand with a 'p' dynamic. The score includes various musical notations such as notes, rests, and dynamic markings.

The piano Prelude discussed above exhibits a similar alternation between harmonic types. It begins relatively discordantly with tonal centers established through melodic and rhythmic means (see figures 1 and 2 above) and ends on a simple A major triadic subset of the synthetic scale. On the basis of its motivic and cadential structure, the piece divides into two large sections. Section two repeats section one, with the following modifications:

1. the melodic ideas of the first six measures (fig. 1 above) are transposed upward mostly by the interval of a third, but always staying within the confines of the synthetic scale so that the specific intervals actually vary (fig. 6a, measures 15-17, left hand);
2. the three note discord in the right hand of measures 1 to 6 (fig. 1 above) is replaced by a new three note subset of the scale, an A major triad (fig. 6a, measures 15-17, right hand);

3. measures 7 to 10 are omitted (see fig. 2 above);
4. the cadential chord, which contained six out of the seven pitches from the synthetic scale in measure 14, (fig. 6a, first measure) is replaced by an A major triad at the end (fig. 6b, measure 24).

Fig. 6 - Griffes, Three Preludes, number 3, measures 14-17, 23-24

a.



b.



It should be noted that the cadential chords of the two sections, a six note chord built up from A and an A major triad, bear a functional harmonic relationship to each other in that the six note chord contains both half step neighbors to the dominant pitch E. This six note chord resolves explicitly to the A major triad in the last two measures of the piece (fig. 6b, measures 23-24), in the manner of an augmented sixth (Eb functions as D $\sharp$ ) resolving irregularly to the triad based on the tonic rather than the dominant degree. However, the aural necessity of this final resolution, given the syntax Griffes has set up, derives more from the earlier alterations of the musical types through transposition and redefinition of the three note

right hand chord (modifications 1 and 2) than it does from functional harmonic considerations. Both types of alterations replaced ambiguous or discordant harmonies with A major triads. The final cadence merely reconfirms the fact that a triadic subset of the synthetic scale rather than a discordant six note subset serves as the basis of section two.

As a consequence of the structure of the synthetic scale, transposition and the choice of different focal subsets from the scale become dynamic forces capable of totally redefining the harmonic content of the musical materials. In the pitch world of this Prelude, an A triad is capable of being either augmented (A-C#-F) or major (A-C#-E), and a relatively simple transformation (literal transposition up two degrees within the scale) derives one from the other. Neighboring scale degrees can be one, two, or three semitones apart, so that transpositions of a melodic idea or chord by a single degree within the scale result in radical alterations of interval contour (fig. 7):

Fig. 7 - Griffes, Three Preludes, number 3, melody of measures 6-7 and entire texture on beats 1 and 2 of measure 11





Similar examples are provided by the Sonata for piano, where transposition within the scale of the piece Bb-C#-D-Eb-F-F#(frequently omitted, as in fig. 8)-G#-A-Bb results in different modalities within a succession of parallel chords (fig. 8, marked \*) and alterations within a basic melodic contour (fig. 8, marked  $\text{—}$ ):

Fig. 8 - Griffes, Sonata, movement 1, measures 5-8



An important distinction emerges here between Griffes' use of synthetic scales and the synthetic scale technique employed by Alexander Scriabin in his late works such as the Sonata number 7 for piano. Scriabin based his Sonata on a scale which consists, with one exception, of a regular alternation of half and whole steps (fig. 9a):

Fig. 9 - Scriabin, Sonata number 7

a. synthetic scale

b. measures 10-12

The image shows musical notation for Scriabin's Sonata number 7. Part (a) shows a synthetic scale on a single staff, consisting of a sequence of notes with various intervals. Part (b) shows measures 10-12, which are transposed versions of the synthetic scale. The notation includes treble and bass clefs, a key signature of one sharp (F#), and various musical symbols such as slurs, accents, and dynamic markings like 'gva' (grandioso) and 'p' (piano). The measures are numbered 10, 11, and 12.

Scriabin utilizes this symmetry by transposing harmonic and melodic materials so that their modality or interval contour is preserved, as in the example depicted in figure 9b. Griffes, on the other hand, exploits the asymmetry of his scales by transposing chords and melodic lines to degrees where their interval content is altered.

Griffes' synthetic scales resemble traditional diatonic scales in the asymmetry of their structure, but Griffes expands the range of contrast available from the different scale degrees by constructing asymmetric scales which emphasize the more highly differentiated interval types: minor and augmented seconds. As a result of this differentiation, Griffes' musical vocabulary is capable of a wide range of expression, shifting easily from late-nineteenth century chromaticism (emphasizing the functional harmonic relationships between scale degrees) to discordance (emphasizing the non-functional juxtaposition of scale degrees) to exoticism (emphasizing scale degrees related by augmented seconds or semitones) to a folk-like





b. Griffes, Sonata, movement 2, measures 50-52



In a very real sense, The Kairn of Koridwen was a proving ground for ideas that Griffes utilized a year later in his composition of the Sonata.

The Kairn of Koridwen

Griffes left conflicting clues as to whether The Kairn should be regarded as a musical/dramatic whole or as a musical work divorced from its dance scenario. Hand-written annotations in the orchestral and piano scores indicate a precise correlation between music and drama, a correlation which is borne out by Griffes' worry, expressed in his diary, about the correspondence between the music and the "psychology of some spots."<sup>10</sup> On the other hand, Griffes referred to the work as "a continuous symphonic music in two movements or scenes"<sup>11</sup> and contemplated presenting it as a concert piece less than a year after its danced premiere.<sup>12</sup> For purposes of this analysis, the main question concerns the use of synthetic scales to create a coherent musical structure. References to the drama will be helpful primarily in clarifying the meaning of synthetic scales in Griffes' musical language.

The Kairn is in two scenes, beginning with a "Lento misterioso" overture (fig. 12)<sup>13</sup> whose pitch materials are drawn entirely from the synthetic scale Bb-C#-D-E-F-G#-A-(Bb). The Bb tonality is obscured at the start by the key signature (one flat) and the melodic

<sup>10</sup> Quoted in Donna K. Anderson, The Music of Charles T. Griffes: A Descriptive Catalogue (Ann Arbor, Michigan: UMI Research Press, 1983), p. 341.

<sup>11</sup> Letter to Rudolph Schirmer quoted in Maisel, p. 187.

<sup>12</sup> Letter to Marion Bauer quoted in Maisel, p. 229.

emphasis accorded the notes C# and G#, but the preeminence of Bb and F is assured by their importance in the opening and closing phrases of the clarinet solo:

<sup>13</sup> Although the following pages contain numerous musical illustrations, it is obviously impossible to include more than a small fraction of the music to such a large work. See footnote 2 (page 2) for information on the availability of the score.

Fig. 12 - Griffes, The Kairn, Scene 1, beginning to [2]

*Lento misterioso*

Cl.  
p

*poco rit.*

1

Cl. m. 3  
Cl. m. 10  
hm. m. 3-5  
m. 6  
m. 10  
pno.  
hn.

accel. f. cresc. rit. 2

f p  
cl.

It is tempting to add that the presence of a leading tone to B $\flat$  (and not to C $\sharp$ ) strengthens its attraction as a tonal center, but the parallel case of the piano Prelude discussed earlier reveals that the note without the leading tone can achieve preeminence as the tonal center as well.

A polyphonic section based on the same musical ideas follows immediately after this opening clarinet solo. Melodic lines from the clarinet part are fragmented,



transposed, and given to the instruments in pairs (clarinet 1/horn 1 and clarinet 2/horn 2; sources of each melodic fragment in measures 12-14 are indicated in figure 12). All the instruments enter except the celesta, as the music crescendos and accelerates to a single-chord climax consisting of six of the seven notes of the scale and signaling the rise of the curtain. The overture ends with the solo clarinet returning to its cadential figure from measures 4 to 5.

Viewed as a whole, this overture is harmonically static and derives its shape from the shifting foci of the melodic line as the clarinet melody slowly expands outward and leads into the textural, rhythmic, and dynamic crescendo of the polyphonic section. A Bb pedal underlies most of the rise to the climax, but the thickness of the texture and the density of notes above this pedal cause the upper parts to be heard as a relatively undifferentiated mass sustaining all the notes of the synthetic scale simultaneously. For the last two measures before the climactic chord, the average density of different pitches on each eighth note beat exceeds five, and any given quarter note beat can be found to contain all seven pitches.

On a microscopic level, however, this music evinces a principle of harmonic succession that involves two complementary subsets of the synthetic scale, a succession which is embodied in the first four eighth note beats of the bar two after 1. A chord made up of scale degrees  $\hat{1}$ ,  $\hat{3}$ ,  $\hat{4}$ ,

and  $\hat{6}$  (Bb-D-E-G#) progresses to a chord made up of the other three scale degrees (A-C#-F-(A)), implying a possible partitioning of the synthetic scale into harmonically functional subsets which are whole-tone related. The reverse of this progression occurs on the corresponding beats of the preceding bar.

The progression in the bar two after 1 could be described as a traditional progression from the French sixth chord on Bb to the augmented triad whose root is a half step lower, but the reversibility of the process removes it from its traditional functional context, establishing its aural identity most strongly as a simple alternation of the two whole tone scales. A more functional echo of this progression occurs four minutes later in the scene when the first significant modulation of the work moves from Bb to A by way of the outward resolution of the augmented sixth Bb-G#. At this point, the music leaves the synthetic scale and enters the diatonic world of A major (fig. 13):

Fig. 13 - Griffes, The Kairn, Scene 1, 1 before 5 to 2 after 5 (harp and celesta omitted)

The musical score for Griffes' *The Kairn*, Scene 1, shows measures 1 before measure 5 to 2 after measure 5. The score is in 4/4 time and features piano (pno.), horn (hn.), celesta (cl.), and piano (pno.) parts. Measure 1 before 5 is marked with a '3' and 'pno.'. Measure 5 is marked with a '5' and 'pno. + fl.'. Measure 2 after 5 is marked with a '5' and 'pno.'. The score shows a progression from a French sixth chord on Bb to an augmented triad on Bb-G#.

After the overture, and corresponding with the entrance of the first druidess (the High Priestess), the synthetic scale becomes literally an ostinato, played first by the piano and then by the piano in conjunction with the harp (fig. 14a):

Fig. 14 - Griffes, The Kairn, Scene 1

a. ostinati at 2

Musical score for piano and harp. The score is in 3/4 time and features a synthetic scale ostinato. The piano part (pno.) is marked *pp* and begins at measure 2, indicated by a boxed '2'. The harp part (hp.) is marked *pp* and begins at measure 5, indicated by '5 after' and a boxed '2'. The harp part includes a glissando (gliss.) and a fermata (7). The piano part includes a fermata (10).

b. melodic lines at 2

Musical score for horns and clarinets. The score is in 3/4 time and features melodic lines. The horns (hn.) and clarinets (Cl.) are marked *p* and begin at measure 2, indicated by a boxed '2'. The score includes a first salutation (1<sup>st</sup> Salutation) and a dynamic marking of *f*.

The melodic ideas played above this ostinato by the horns and clarinets (fig. 14b) move initially from D to B $\flat$ . When the High Priestess issues the first of three salutations to the moon, the D disappears from the melodic contours just as it receives new emphasis as the lowest note of the piano ostinato. Throughout this section, the melody emphasizes B $\flat$  (primarily) and D (secondarily) while the harmony continues to prolong the seven note synthetic scale.

When the synthetic scale as a whole finally disappears (rehearsal [3]), a four note subset of the scale remains (allowing, for the first time, for the aforementioned alteration of  $\hat{4}$  - Eb rather than E) which is equivalent to scale degrees  $\hat{1}$ ,  $\hat{3}$ ,  $\hat{4}$ , and  $\hat{5}$  of the Bb minor scale. Using this pitch material, a horn call is sounded to summon the other druidesses to their mystic rites. It is answered canonically by the wind instruments in imitation of the echoes of the forest, the whole blending into a mass of sound recalling the earlier prolongation of the synthetic scale. The horn call has its desired effect, bringing in the other druidesses as well as the modulation from Bb to A which draws the first musical section to a close.

Up to the modulatory passage, the music consistently fits in with the patterns established in the overture. Harmonic stasis, resulting from the prolongation of the synthetic scale as a whole and Bb as its focal note, allows other parameters to shape the music, notably texture (the thickening textures of the overture and horn call section, each of which grows by accretion from a single melodic line), dynamics (the crescendo of the overture; the crescendo and diminuendo of the High Priestess section), timbre (a progression from the clarinet timbre of the overture, to mixed clarinets and horns in the High Priestess section, to the horn which summonses the other druidesses), and rhythm (the accelerando of the overture; the changes in tempo and time signature which mark each new section). Yet

the seeds for later harmonic development are sewn by this opening section. It stamps the sound of the synthetic scale indelibly upon the mind of the listener, establishes a precedent for variable partitioning of the synthetic scale into whole tone related segments (overture) or diatonically related segments (overture Bb-F and C#-G#; horn call Bb-Db-Eb-F), opens up the possibility for shifting tonal foci within the confines of the synthetic scale, a possibility which is realized in the first modulation of the piece, from Bb to A, and establishes a duality between Bb and C# (in the overture) and between Bb and D (in the High Priestess section) which will be prophetic for later events.

Scene 1 as a whole carries out the implications of this opening. Its succession of tonal foci derives almost entirely from the synthetic scale with its one allowable alteration, even in passages which are otherwise diatonic (see fig. 25 below; an exception to this statement will be discussed in connection with that figure). Almost every note in the scale is tonicized through functional harmonic relationships, melodic emphasis, or use as an ostinato or pedal at some point in the scene; the one exception, G# (Ab), is used as a dominant pedal which never resolves in the lengthy sections in which it appears (fig. 15a). Figures 15b-g illustrate sections in which tonic emphasis is given to each of the other scale degrees.

Fig. 15 - Griffes, The Kairn, Scene 1  
Initial measures from sections emphasizing pitches  
of the synthetic scale

- a. Ab as pedal, 24 to 3 after (harp omitted)

Handwritten musical score for section a, measures 24-27. The score is in 4/4 time. The bass line (pno.) features a constant Ab pedal point, indicated by a circled Ab below the staff. The right hand (pno.) has a melodic line with various ornaments and dynamics. The first measure is marked with a circled 24 and the word "Feroce". Above the first measure, there is a handwritten note: "fl. + c. (5th later)". The score includes various musical notations such as slurs, accents, and dynamic markings like "f".

- b. Bb as tonal center, 28 to 4 after

Handwritten musical score for section b, measures 28-31. The score is in 4/4 time. The bass line (pno.) features a constant Bb pedal point, indicated by a circled Bb below the staff. The right hand (pno.) has a melodic line with various ornaments and dynamics. The first measure is marked with a circled 28. The score includes various musical notations such as slurs, accents, and dynamic markings like "ppp", "p", and "f".

c. Db as tonal center, **34** to 4 after (flute and harp omitted)

34 Pomoso tutti

d. D as tonal center, **17** to 4 after

17 Moderato

e. E as tonal center, **33** to 2 after (horns and harp omitted)

33 fl., cl., cel.

f. F as tonal center, **37** to 5 after

g. A as tonal center, **5** to 2 after (clarinet, horns, celesta, and harp omitted)

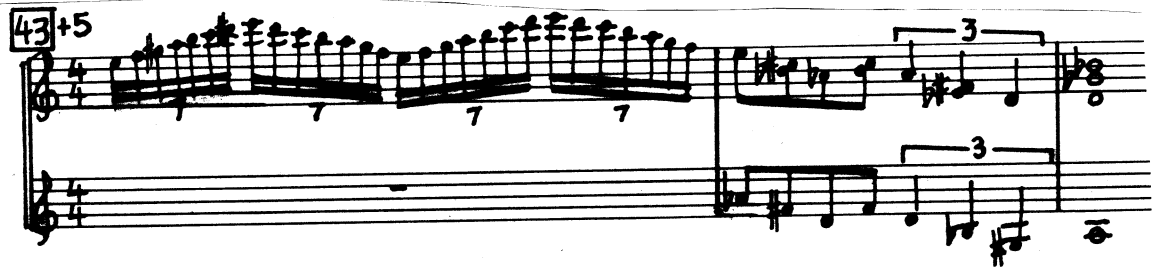
Several of the excerpts depicted in figure 15 are nearly or completely diatonic (fig. 15d,e,g) and make use of pitches from outside the synthetic scale, even though their tonics are from within the scale. Figures 15b and 15c, which are also totally diatonic, consist of pitches which can all be found in the synthetic scale (with lowered fourth degree), and represent a way of extracting a pentatonic subset from that scale. Figure 15f contains hints that it might be more integrally related to the synthetic scale as well. Its close juxtaposition of the pitches Fb, F, and Gb suggests a relationship with the G#, A, and Bb of the original scale and raises the possibility of transposi-



tion of the original downward by a major third. If such transpositions are allowed by Griffes' compositional language, a whole new range of possible relationships between the synthetic scale and the music becomes available.

An examination of three measures in the piano part near the end of the scene (fig. 16) reveals that such transpositions are indeed employed within the work. The first of these measures recalls the piano ostinato which accompanied the entry of the High Priestess at the beginning of Scene 1 (see fig. 14a), with the difference that the pitch materials are now a perfect fifth higher:

Fig. 16 - Griffes, The Kairn, Scene 1, 5-7 after 43, piano



A chart of the transpositions of the original synthetic scale makes this relationship clear (fig. 17); T-7, the transposition seven half steps above the original, matches perfectly the pitch content of the measure under consideration (including the following downbeat).

Fig. 17 - Griffes, The Kairn  
Original synthetic scale (T-0) and its transpositions.



The remainder of the example employs T-5, with the fourth scale degree appearing both altered and unaltered (Ab and A). Interestingly, Griffes chooses to use, in this near-literal reference back to the beginning of the scene, the only two scale transpositions which share a four pitch segment (augmented second surrounded by semitones) with the original scale T-0.

In the concluding measures of Scene 1, Griffes uses a string of three transpositions of the synthetic scale (T-2, T-5, and T-0), each of which is connected to the following by an augmented second acting in the manner of a pivot. As T-2 gives way to T-5, the augmented second G-A# loses its character as an augmented second, becoming the minor third G-Bb in T-5 (figure 18, second measure, beats 2 and 3). On

the next beat, the pitch C# appears, confirming the departure from T-2 and creating a new augmented second Bb-C# which T-5 shares with T-0.

Fig. 18 - Griffes, The Kairn, Scene 1, final 6 measures

A segment of T-2 sustains as a pedal beneath T-5 until the final two measures. At the same time, the other two pitches which T-5 and T-0 share, A and D, are omitted from the rising line traced by the horn and flute. These pitches are filled in as a perfect fifth bass descent on the last two beats, the conclusiveness of which is conditioned by the fact that the expected cadence on D in T-5 actually occurs on D in T-0 because of the introduction of a G# in the final chord. This G# serves the somewhat contradictory functions of leaving the scene ending open by departing from the syntax of the preceding measures and rounding it off by referring back to the original scale, T-0.

These closing measures of Scene 1 effectively demonstrate the possibilities inherent in Griffes' use of synthetic scales. Any given musical passage calls into operation multiple frames of reference for the evaluation of pitch materials. These are determined by (i) the type of scale used, (ii) the relative pitch level of the scale, and (iii) the absolute pitch level of the tonal focus. As a result, separate musical passages can be tied together harmonically in a number of different ways. They may be related by similarity in pitch materials, even though they have different focal pitches (compare figures 12, 15a, 15c, and the end of 18 with figure 19; all are derived from T-0, but the tonal focus shifts from Bb in the first two to Db, D, and A in the other three respectively),

Fig. 19 - Griffes, The Kairn  
Scene 1, 8 to 2 after  
(piano only)



or they may share a focal pitch, even though they are different transpositions of the same scale (fig. 20):

Fig. 20 - Griffes, The Kairn, Scene 1  
 Sections with F# tonic built on T-5 ( 38 ) and T-9 ( 39 )  
 Non-harmonic tones bracketed

A common focal pitch can also tie together passages based on entirely different scale patterns (compare figures 15g and 19 with fig. 21),

Fig. 21 - Griffes, The Kairn, Scene 1, 18 to 2 after  
 Tonal focus A, based on scale T-0  
 Non-harmonic tone bracketed

or passages based on different scale patterns may be tied together by rhythmic, motivic, or melodic correspondences (fig. 22):

Fig.22 - Griffes, The Kairn, Scene 1, 8-15 after 26  
 Similar melodic contours based on different scales

The image shows two staves of musical notation. The top staff is for Horn (hn.) and the bottom for Clarinet (cl.). Both are marked 'p espr.' and 'pp espr.' respectively. The notation shows melodic lines with various intervals and dynamics. The top staff is marked with a box containing '26+8' and the bottom staff with a box containing '26+12'. The notation includes various note values, rests, and dynamic markings.

Finally, Griffes uses a special technique for controlling successions of pitch materials based on shared scale segments, as in figure 18. In this case, the shared segments consist of the most distinctive parts of the synthetic scales, their augmented seconds, used as pivots to minor thirds or as shared intervals making the transitions between T-2, T-5, and T-0 particularly smooth.

Perhaps the most radical of these techniques for creating harmonic relationships in The Kairn is the use of shared pitch segments to control the succession of scale resources. George Perle, in his book Serial Composition and Atonality, cites similar procedures in the music of Scriabin as a proto-serial technique for controlling pitch set succession.<sup>14</sup> While Griffes tends to be less rigorous than Scriabin in his adherence to the letter of his pitch set structure (synthetic scale), his music nonetheless contains some striking instances of this procedure applied to the

<sup>14</sup> George Perle, Serial Composition and Atonality, 5th edition (Berkeley, California: University of California Press, 1981), pp. 40-3.

ordering of synthetic scales. The ending of Scene 1 was discussed above. Another example is found at the beginning of the modulatory passage leading from the opening music in Bb to the second section which is in the key of A (fig. 23):

Fig. 23 - Griffes, The Kairn, Scene 1, 4 to 3 after Augmented 2nds as pivots between scale transpositions

The image shows a handwritten musical score for three staves. The top staff is for a clarinet (cl) and is marked '4 Animato'. The middle staff is for piano (pno) and includes the instruction 'Overture -> Horn call'. The bottom staff shows transpositions T-0, T-3, and T-10. The music features augmented seconds as pivots between scale transpositions, with a 'suspended' section indicated by a bracket and the word 'suspended' written below it.

After more than 4 minutes of music drawn almost entirely from T-0, this passage suddenly introduces two new pitches, G and B. As mentioned earlier, these new pitches serve the dramatic function of ushering in the other druidesses who have been summoned by the High Priestess's horn call. Musically, the newly introduced pitch G forces a reinterpretation of the augmented second F-G# from its original role as scale degrees 5 and 6 of T-0 to a new role as a perceived minor third between 3 and 5 in T-3. In its dual capacity, the interval F-G# ties together two different transpositions of the synthetic scale much like the augmented second connecting T-2 to T-5 in figure 18 above. As a consequence

of the introduction of the pitch B and the disappearance of A, a new augmented second is created between the G# (Ab) of the clarinet and the B of the piano. This augmented second in turn links T-3 to T-10, which is introduced by the right hand of the piano (the pitches G#-B-C-D-D#-F#) in the third measure after 4.

One additional example from Scene 1 will suffice to demonstrate how larger sets of shared pitches may serve as connecting links between different transpositions of the synthetic scale. This example is drawn from the middle of the scene, as the druidesses begin to chant a solemn invocation to Koridwen, the Goddess of the Moon (fig. 24). The chant itself literally reproduces the solo clarinet music from the overture and is condensed in figure 24 so that attention may be directed to the measures on either side of it.



Fig. 24 - Griffes, The Kairn, Scene 1,  
7 after 15 to 3 after 16  
Scale succession determined by 4 or 5 note sets  
of shared pitches

24

Musical score for measures 15 and 16. Measure 15 is marked with a box containing '15' and '+7 cl.'. The score includes staves for piano (pno), horn (hms), harp (hp), and clarinet (cl.). Dynamics include *f* and *pp*. A 'scale' staff below shows pitch sets: WT1, WT2, WT1, WT2, WT1, WT2, and WT1. The clarinet part has a dynamic of *p* and a *pp* marking.

Musical score for measures 17 and 18. Measure 17 is marked 'Chant' and measure 18 is marked 'End Chant'. The score includes staves for piano (pno) and harp (hp). Dynamics include *p* and *pno p espr.*. A 'scale' staff below shows pitch sets: WT1, WT2, WT1, WT2, WT1, WT2, and WT1.

Musical score for measure 19. Measure 19 is marked with a box containing '19'. The score includes staves for piano (pno), horn (hms), harp (hp), and clarinet (cl.). Dynamics include *f* and *f'*. A 'scale' staff below shows pitch sets: WT1, WT2, WT1, WT2, WT1, WT2, and WT1.

The first of these measures makes use of harmonies derived

from the two whole tone scales in alternation (marked WT1 and WT2 in figure 24), a procedure clearly related to the whole tone partitions of the synthetic scale mentioned earlier. It is impossible to say whether these whole tone harmonies are derived from a particular transposition of the synthetic scale, because almost all the pitches of each whole tone scale are present. However, the following measure settles down on WT1 using pitches which can all be found in T-5 (with lowered fourth degree). The clarinet line in this measure confirms the shift to T-5 by employing characteristic notes from T-5 which lie outside the scope of WT1. On the final beat of measure 3, another shift occurs as a result of the introduction of F. Confirmed by the Fb in the following measure, this shift implies the scale T-8 which has the special property of anticipating within itself all five pitches from the first phrase of the chant. As a result, the return to T-0 in its original form appears as a natural outcome of the preceding music. When the clarinet solo ends this time, the piano appends a glancing reference back to T-8 before the music continues on to a new passage in T-0 (final measures, fig. 24).

In this brief example, each adjacent pair of scales is tied together by at least four shared pitches. The scales seem chosen to create the smoothest possible transition back into the clarinet solo, which is the largest section of music in the entire piece subjected to such a literal repetition. This repetition is justified dramatically by

the cycle that has run from the mysterious nocturnal scene of the overture through the dancing entry of the druidesses (the A major section) and their ceremonial preparations (Bb and whole tone) to this enactment of their mysterious ritual in honor of Koridwen. Musically, the repetition is justified by the return of T-0 through the smooth connection of related pitch materials, a process whose final step makes use of the special relationship between T-8 and T-0.

With all the above-mentioned techniques at his disposal, Griffes defines an overall form for Scene 1 comprising three large parts, each of which fulfills a specific dramatic function (fig. 25):

Fig. 25 - Griffes, The Kairn, Scene 1  
Dramatic and harmonic structure

Dramatic Structure	Harmonic Structure
<b>Part 1</b>	
Overture, High Priestess [2], and Horn Calls [3]	....T-0, Bb focus
Entry of Druidesses [4] and General Dance [8]	.....A Major
Cauldron [10], Invocation to the Moon [12], and Sacred Fire [13]	.....T-2 and Whole Tone Bb focus
Chant 12 after [15]	.....T-0, Bb focus
<b>Part 2</b>	
Slowly Circling the Cauldron [16]	.....T-0, Bb--D/A focus
Religious Dance [18]	.....T-0 and Whole Tone Bb/A--D focus
Prophecy 1: Tragedy [26]	.....Eb
Prophecy 2: Spiritual [28]	.....Bb
Prophecy 3: Passionate, Tantrums, Emotions	....Bb/Db
Prophecy 4: Joyously	.....Db--E--Db
<b>Part 3</b>	
Entrance of Warrior 15 after [34]	.....T-5, focus unclear
Wrath of Priestesses [36]	.....Whole Tone T-5,6,7,8
Sword Scene [38]	.....T-5, F# focus
Warrior and Druidess	.....T-9, F# focus
Fury of Priestesses, They Flee [41]	...T-5, F# focus
Druidess Sinks at Altar [43]	.....T-5, D focus

Part 1, consisting of the cycle away from and back to the original music of the overture, depicts the entry and ritual preparations of the druidesses; part 2 describes their religious dance and prophecies; and part 3 depicts the warrior's arrival and his conquest over the druidess assigned to kill him. Corresponding to this three part dramatic structure is a three part harmonic structure consisting of (part 1) a cycle from Bb to A and back to Bb; (part 2) a progressive harmonic motion beginning in Bb and proceeding to several other harmonic areas whose focal

itches lie in the realm of T-0, ending with a strong emphasis on Db; and (part 3) an exploration of the harmonic realm of T-5, beginning and ending on D but emphasizing F# in the middle. As mentioned above, the final cadence of part 3 refers back to T-0 through the introduction of a single pitch (see fig. 18 above).

Melodic correspondences within the scene tend to reinforce the harmonic and dramatic scheme outlined above. While there are melodic threads linking parts 1 and 2 (fig. 26) and parts 1 and 3 (fig. 27),

Fig. 26 - Griffes, *The Kairn*, Scene 1  
Melodic links between section 1 (piano at 10, clarinet at 15) and section 2 (flute and harp at 16)

The image displays three staves of musical notation from Griffes' *The Kairn*, Scene 1, illustrating melodic links between different sections.

- Staff 1 (Piano):** Labeled with a boxed 10. The tempo/mood is *Lento grave pesante f*. The notation shows a series of descending half notes: G4, F#4, E4, D4, C4, B3, A3, G3. A dashed line indicates the continuation of this line.
- Staff 2 (Clarinet):** Labeled with a boxed 15. The tempo/mood is *Piu tranquillo*. The notation shows a melodic line starting with a half note G4, followed by quarter notes F#4, E4, D4, C4, B3, A3, G3, and ending with a half note F#3. A *p* dynamic marking is present.
- Staff 3 (Flute and Harp):** Labeled with a boxed 16. The tempo/mood is *Piu mosso*. The Flute (Fl.) part shows a melodic line starting with a half note G4, followed by quarter notes F#4, E4, D4, C4, B3, A3, G3, and ending with a half note F#3. The Harp (Hp.) part provides accompaniment with a *mf* dynamic marking.

Fig. 27 - Griffes, *The Kairn*, Scene 1  
 Melodic links between section 1 (horn at [2], flute and piano at [5]) and section 3 (clarinet and horn at 5-7 after [42])

The figure consists of three staves of musical notation. The first staff, labeled with a circled '2' and 'hn.', shows a horn part starting with a piano (*p*) dynamic. The second staff, labeled with a circled '5' and 'fl. + pno.', shows a flute and piano part starting with a forte (*f*) dynamic. The third staff, labeled with a circled '42 + 5' and 'Cl.', shows a clarinet part starting with a mezzo-forte (*mf*) dynamic, followed by a horn part starting with a piano (*p*) dynamic. Arched lines connect the notes across the staves, illustrating the melodic links between the sections.

the closest melodic connection between parts 2 and 3 occurs at the end of part 2 and the beginning of part 3 (fig. 28), where the inversion and interval alteration of the melodic line seem designed to reinforce the disruption caused by the warrior's intrusion upon the ceremony of the druidesses:

Fig. 28 - Griffes, *The Kairn*, Scene 1  
 Melodic alterations reinforcing the contrast between sections 2 (tutti at [34]) and 3 (clarinet at [35])

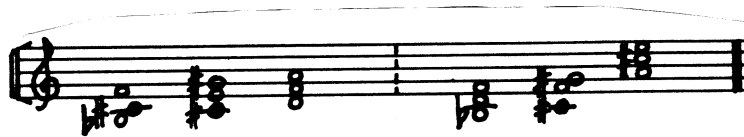
The figure consists of two staves of musical notation. The first staff, labeled with a circled '34' and 'Pomposo tutti', shows a tutti section starting with a forte (*f*) dynamic. The second staff, labeled with a circled '35' and 'Cl.', shows a clarinet part starting with a piano (*p*) dynamic. Arched lines connect the notes across the staves, illustrating the melodic alterations between the sections.

This transformation of the melodic line coincides with the

transition from the harmonic realm of T-0 to the harmonic realm of T-5. Although T-5 shares an augmented second with T-0 (Bb-C#) and could therefore be introduced relatively smoothly, Griffes chooses instead to emphasize the augmented second Eb-F# which distinguishes T-5 from T-0. As a result, the harmony effectively reinforces the sense of disruption caused by the warrior's arrival.

With the exception of F#, which is explained by its derivation from T-5, each of the most strongly emphasized tonal centers of Scene 1 (Bb, A, Db, and D) is also a scale degree in T-0. Moreover, these scale degrees are the only ones which can serve as the roots of major or minor triads within the confines of T-0 (fig. 29):

Fig. 29



This fact provides Griffes with a ready-made principle for determining pitch class priority within the synthetic scale. Scale degrees capable of supporting major or minor triads ( $\hat{1}$ ,  $\hat{2}$ ,  $\hat{3}$ , and  $\hat{7}$ ) come to the fore, while traditionally strong scale degrees such as the dominant (F) recede to a position of little importance.

The triadic substructure of the scale also helps to account for unusual harmonic progressions occurring on a local level throughout the work. Progressions between

triads a minor second, minor third, or major third apart (i.e., the intervals separating triads in the synthetic scale) occur much more frequently than circle of fifths progressions (fig. 30), mirroring on a small scale the preferred intervals of the overall modulatory plan of Scene 1 (see fig. 15 above).

Fig. 30 - Griffes, *The Kairn*  
Local harmonic progressions between triads a minor second, minor third, or major third apart based on scale T-9 (Scene 1, [39]), T-11 (Scene 2, 5 after [31]), and T-0 (Scene 2, [38])

T-9 [39] *Moderato ma non troppo*  
*cel.*  
*p*

T-11 [31] 5 *pno. r.h.*  
*pp*

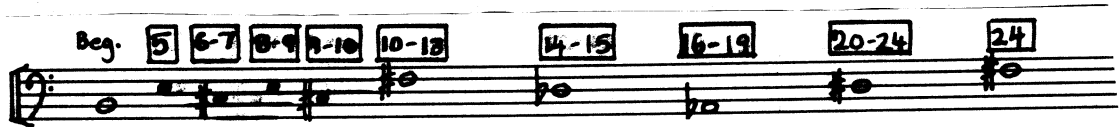
T-0 [38] *pno.*

Scene 2 exhibits a quite different pattern of harmonic relationships. Beginning in the key of B with a lengthy dominant prolongation, the first half of the scene moves backward through the circle of fifths making relatively little use of the characteristic intervals of the synthetic



scale or the characteristic pitches of T-0 (fig. 31):

Fig. 31 - Griffes, *The Kairn*, Scene 2  
Tonal outline of first half (beginning to [24])



On a local level as well, musical materials tend to be more diatonic than in Scene 1 (fig. 32):

Fig. 32 - Griffes, *The Kairn*, Scene 2  
Examples of diatonic music at [4] and [14]

The only explicit reference to the synthetic scale (T-4) occurs as part of the first section in F# (fig. 33):

Fig. 33 - Griffes, *The Kairn*, Scene 2  
Use of T-4 at 4 to 1 before [12]

Dramatically, the beginning of Scene 2 concerns the final hours of togetherness granted the druidess and the warrior before she must sacrifice herself for having failed

to take the warrior's life. It is early evening and the sun is still shining, keeping the nocturnal mysteries and synthetic scale derived harmonies of Scene 1 at a distance for the moment. However, as darkness descends and the departure of the warrior and death of the druidess draw near, the music begins to take on some of the coloration of the synthetic scale. This is expressed most notably in the increasing importance of third-related harmonies. When the reverse cycle of fifths reaches D#, the third-related key of F# is implied nearly as strongly (fig. 34),

Fig. 34 - Griffes, The Kairn, Scene 2, [20]  
Section giving nearly equal weight to the  
third-related foci D# and F#

The musical score for Figure 34 consists of three staves. The top staff is for the piano (pno.), the middle for the clarinet solo (Cl. solo), and the bottom for the harp (hp.). The tempo is marked as J=60. The score begins with a measure number of 20 in a box. The piano part features a melodic line with a fermata over a dotted quarter note. The clarinet solo part has a melodic line with a fermata over a dotted quarter note. The harp part provides a chordal accompaniment. The key signature is one sharp (F#).

and F# finally does win out in a passage where root movements by thirds and minor seconds become very prominent (fig. 35):

Fig. 35 - Griffes, The Kairn, Scene 2, [25]  
 Section beginning in F# and progressing back to T-0  
 with tonal focus A

Two bars before the key change at the end of this passage, the augmented and minor seconds in the flute melody clearly signal a return to the domain of the synthetic scale. The next measure confirms this return.

In one important respect, the first half of Scene 2 is closely tied to Scene 1, in spite of its departure from the interval patterns and pitch materials of the synthetic scale. The pitch F#, which was the only focal pitch in Scene 1 drawn from outside the basic scale T-0, recurs as an important organizing element in the first half of Scene 2. For the first two minutes of Scene 2, F# is heard almost constantly as the bass note in a lengthy dominant pedal. Later, F# is the focal pitch in the section based on T-4 (see fig. 33 above) and the passage which serves as the link back into the harmonic realm of T-0 (see fig. 35

above). These passages accord F# an emphasis which establishes it musically as the principal polar pitch outside the realm of T-0. Dramatic situations associated with F# occupy a similar position opposite the mysterious nocturnal world of Koridwen. When the love of the druidess and warrior first glimmers in Scene 1 and then flourishes in the sunlight of Scene 2, F# is the most prominent pitch element. When darkness descends and the separation of the lovers becomes imminent, F# disappears and T-0 returns.

The remainder of Scene 2 reestablishes the preeminence of T-0 by focusing once again on pitches from the scale. Each of the primary scale degrees A, Bb, Db, and D (degrees on which triads can be built in T-0) serves as the tonal center in at least one passage (fig. 36):

Fig. 36 - Griffes, The Kairn, Scene 2

Tonal focus A (14 after 25)



Tonal focus Bb (5 after 26)

26 +5

Musical score for measures 26-30. The key signature is B-flat major. The score is written for flute (fl.), clarinet (cl.), and piano (pno.). The piano part features a steady eighth-note accompaniment. The flute and clarinet parts have melodic lines with some grace notes and slurs.

Tonal focus Db (5 after 29)

27 +6 (fl., cl., hp. omitted)

Musical score for measures 27-32. The key signature changes to D-flat major. The score is written for piano (pno.). The piano part features a steady eighth-note accompaniment. The upper staves show chords and some melodic fragments, with the note 'hp.' (harp) written above them, indicating it is omitted.

Tonal focus D (6 after 27)

29 +5

Musical score for measures 29-34. The key signature changes to D major. The score is written for flute (fl.), clarinet (cl.), and piano (pno.). The piano part features a steady eighth-note accompaniment. The flute and clarinet parts have melodic lines with some grace notes and slurs.

Harmonic areas and single harmonies based on Bb, Db, and D begin to alternate more and more rapidly until a succession of passages in the three keys at 34, 35, and 36 (fig. 37a,b,c) gives way to music in which adjacent or juxtaposed harmonies explicitly embody the Bb/D and Bb/Db polarities (fig. 37d,e):

Fig. 37 - Griffes, The Kairn, Scene 2

a. section in Bb ( 34 )

34 Cl.  
Hp.  
I love

b. section in Db (4 after 34)

35 +4 pno, cel, hp

c. section in D ( 36 )

36 Cl.  
pno.  
I love

d. passage juxtaposing D and Bb harmonies ( 38 )

e. passage juxtaposing Bb and Db harmonies (2-4 after 39)

The last of these passages (fig. 37e) signals the return of the eight druidesses, accompanied by a melodic idea which marked their entry and exit in Scene 1 (fig. 38; compare with fig. 13 and fig. 22b):

Fig. 38 - Griffes, *The Kairn*, Scene 2  
Entry of the druidesses (5 after 40)

They rush in to discover their comrade lying dead upon the rocks, her suicide made possible by the poisonous berries unwittingly gathered for her by the warrior before his departure.

The drama ends with a mournful dirge, set to music which summarizes the harmonic language of the entire work (fig. 39):



Fig. 39 - Griffes, The Kairn, Scene 2, conclusion

The image displays three systems of musical notation for the conclusion of Scene 2 from Griffes' 'The Kairn'. The first system, marked with a box containing the number 41, features a treble clef staff with a complex melodic line and a piano accompaniment. The piano part is divided into two staves, with the upper staff labeled 'pno.' and the lower staff labeled 'pno.'. A clarinet part is also indicated by 'Cl.' above the piano staves. The second system continues the piano accompaniment with a series of chords and rests, marked with a double bar line and a repeat sign. The third system, marked with a box containing the number 42, shows a more complex texture with multiple staves, including a treble clef staff and a piano part with multiple staves. The piano part is labeled 'Cl, hn, pno' and 'hp, col, pno'. The notation is dense and includes various musical symbols such as slurs, ties, and dynamic markings.

A pentatonic subset of T-0 (with lowered fourth degree) gives rise to a melody line which makes a single arch supported by harmonies centering on the principal scale degrees B $\flat$  (measures 1-8), D $\flat$  (measures 9-12), B $\flat$  again (measures 13-16), and finally D. At the same time, the piano right hand plays an ostinato figure derived from an earlier alternation of D and B $\flat$  harmonies (see fig. 36d above). When this same chord succession occurs in isolation

at [42], it sums up one of the basic harmonic ideas of the entire work, the shifting of tonal foci within the confines of T-0. At this point, the conflict between the stronger rhythmic position of the D triad (determined by the phrase rhythm of the preceding melody) and the stronger distribution of the Bb triad (root between outer parts) indicates Griffes' unwillingness to resolve the question of pitch priority directly in favor of one or the other. Instead, he combines the D triad with a harmonic idea from earlier in the scene, consisting of an F major seventh chord with semitonal grace note neighbors to the chordal fifth and seventh (7 measures from the end). Since the resultant sonority consists of a D triad with pairs of semitonal neighbors on either side of D, it might be taken as an oblique confirmation of the pitch priority of D. Its pitch materials, however, are unanalyzable within the context of any single synthetic scale. Six of its seven pitches can be found in T-0, if both altered and unaltered versions of the fourth degree are allowed. Five of its pitches occur in each of the scales T-4, T-7, and T-11. To adequately account for all seven pitches in terms of synthetic scales, it is necessary to adopt a polytonal interpretation, identifying the total sonority as a combination of scales such as one of the following pairs: T-0/T-7, T-0/T-11, T-4/T-7, or T-4/T-11. In any case, the final sonority represents a departure from the harmonic realm of T-0, and leaves the ending of the work harmonically open.

Harmonically ambiguous or incomplete endings occur frequently in Griffes' music, especially during the years 1915 and 1916 when he was experimenting with ideas that would lead to his most radical musical innovations. Often such endings consist of the statement of one member of a pair without its more stable companion member. Two examples from 1915 illustrate this procedure (fig. 40):

Fig. 40 - Griffes

a. The White Peacock for piano, published ending

The image shows a musical score for the piano piece 'The White Peacock' by Charles Griffes. The score is written for two staves, treble and bass clef, in 2/4 time. The key signature is one sharp (F#). The piece begins with a dynamic marking of 'ppr' (pianissimo) and a forte 'f' marking. The melody in the treble clef features a series of eighth and sixteenth notes, often grouped with slurs. The bass clef accompaniment consists of chords and single notes, with some measures containing a '3' indicating a triplet. The score concludes with a final chord in the bass clef.

## b. "Impression du matin" from Four Impressions, ending

"With lips of flame and heart of stone." dim. *ppp*

Both works conclude on unusual, harmonically inconclusive sonorities. The aural interest of these sonorities outweighs their functional harmonic meaning, so they are left intact, without resolution to a more stable but less aurally compelling counterpart. A harmonically more stable ending was indeed indicated in the original manuscripts of The White Peacock (fig. 40c),

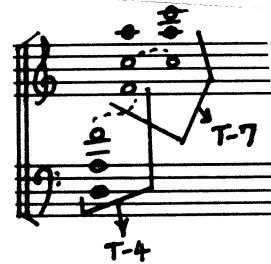
Fig. 40c - Griffes, The White Peacock, original ending (manuscripts in Library of Congress and Gannett Tripp Learning Center, Elmira College, Elmira, New York) Published in Anderson, The Works of C.T.G., p. 267

*ppp* *molto rit. e dim.*

but Griffes pasted the revision over the old ending in the manuscript used for publication, suggesting that the harmonic completeness of the original mattered less than the aural consistency of the final ending.

Similarly, The Kairn of Koridwen ends with an emphasis on aural consistency rather than harmonic completeness. The final sonority embodies, in a subtle manner, the juxtaposition of third-related focal pitches which had originated in the opening passages of Scene 1 and continued as a tonal preoccupation through the dirge. Figure 41 illustrates how the final sonority (minus its grace notes) comprises three overlapping triads whose roots are a third apart:

Fig. 41 - Griffes, The Kairn  
Triadic and synthetic  
scale substructure of  
final sonority



The two lower triads relate to each other precisely as Bb and Db triads relate in T-0; the two upper triads relate precisely as Bb and D triads relate in T-0. As a result, the pairs of triads reveal themselves as members of the scales T-4 and T-7, corroborating elements of the polytonal analysis given above. At the same time, the composite chord gives tonal emphasis to the pitch D as its lowest member, and reconciles the two synthetic scales T-4 and T-7 to the diatonic pitch collection D natural minor. This final reference to a diatonic pitch collection corresponds to the events of the drama. The death of the druidess and the return of her eight comrades coincides with the rising of the sun, and the words "Dawn begins to break" in Griffes' original piano score are accompanied by the same seven meas-

ures of music that end the work as a whole, with minor rhythmic changes (7 measures before **39**). Diatonic pitch collections are thus heard once again as representatives of the sunlit world standing outside the nocturnal and mysterious realm of Koridwen - the realm of the synthetic scale in Griffes' musical language.

Compare this ending to the furiously paced conclusion of Griffes' Sonata, written a year later (fig. 42):

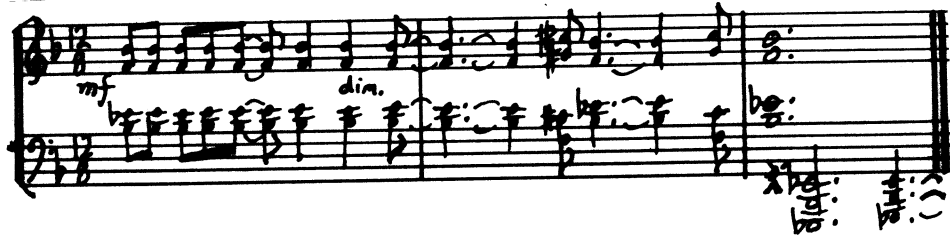
Fig. 42 - Griffes, Sonata, conclusion of movement 3

Wilfred Mellers uses words such as "savage" and "orgiastic" to describe this finale,<sup>15</sup> and indeed the ending has a relentlessness and finality about it which contrasts markedly to the earlier work. Griffes' synthetic scale technique becomes a closed system in the Sonata. The synthetic scale at its original pitch level serves almost exclusively as the source of melodic and harmonic materials (see fig. 4 above), and the final cadences of each movement remain strictly within the bounds of the synthetic scale (fig. 42 above and fig. 43):

<sup>15</sup> Wilfred Mellers, Music in a New Found Land (New York: Alfred A. Knopf, 1966), pp. 148 and 154.

## Griffes, Sonata

Conclusion of movement 1 (movement 2 follows without pause)



Conclusion of movement 2

The Sonata employs the same constructive techniques as The Kairn of Koridwen, but with a new shift in emphasis. The limitation to a single, untransposed scale pattern in itself assures harmonic unity, while the difficult problem becomes one of achieving contrast with such limited pitch materials. Griffes does this by shifting focal pitches within the scale and changing the way the scale is partitioned (i.e., into chromatic, pentatonic, or triadic subsets, etc.), techniques which were developed in his work on The Kairn. Transpositions of the scale, however, become less important, as do contrasting scale patterns such as diatonic pitch collections. Transpositions, when they



occur, are carefully regulated by the common segment technique described earlier. In the most extended passage using transpositions (movement 1, development), the initial departure from T-0 moves to T-6, a scale with almost no common segments, but the return to T-0 takes place smoothly. The disruptiveness of the original progression is balanced by the fact that the music is repeated literally at the new pitch level. On the other hand, the harmonically smooth return is characterized by variations in the melodic and rhythmic contour (fig. 44):

Fig. 44 - Griffes, Sonata, movement 1, development  
Non-common segment departure from T-0 (to T-6)  
followed by common segment return

57 *flebile* *tr*

ff f

T-0

*tr* *tr* *tr*

T-6

T-1 T-5

T-5 (T-0) T-0

In general, the Sonata consolidates and extends the gains made in The Kairn toward a synthetic scale technique which is an integral part of the musical design rather than a simple coloristic device. The music becomes much more compressed (10 minutes rather than 50), and the synthetic scale becomes a hermetic system as well as a model for harmonic and melodic development. The third Prelude carries the process one step further - toward greater compression (1 minute rather than 10) and economy. This evolution reflects the increasing importance Griffes attaches to finding all musical unity and variety within the context of the scale itself; and it suggests that Griffes may have been headed along the same path as many of his contemporaries - the path which led to the development of the twelve-tone technique four years after Griffes' death.

## Summary and Conclusion

The Kairn of Koridwen is a crucial work for understanding Griffes' transformation of the synthetic scale from a coloristic device into the controlling sonority and pitch resource it became in the Sonata and third Prelude for piano. Asymmetry is an important part of Griffes' synthetic scale technique - asymmetry both in the design of the scale and in its deployment. Because of the asymmetry of the scale, such techniques as transposition and variable subsetting of scale-derived materials are capable of totally reshaping the interval structure and expressive content of musical ideas. Supplemented by melodic and rhythmic techniques for creating tonal foci, these techniques become the principal means for establishing the similarity or dissimilarity of different harmonic areas.

Any musical passage derives its harmonic identity from three different considerations: (i) the type of scale used (often a subset of the synthetic scale); (ii) the relative transposition level of the scale, and (iii) the particular scale degree used as tonal focus, which is relatively independent of the level of transposition. Harmonic areas may be related or distinguished by any of these considerations independently of the others. In The Kairn of Koridwen, the most important techniques for creating harmonic variety involve transposing the synthetic scale to different pitch levels, varying the tonal focus within a single transposition of the scale, and altering the way

smaller units are extracted from the scale. At the same time, the presence of the synthetic scale behind all these techniques assures an overall unity. Successive transpositions of the synthetic scale may be tied together by common pitch segments to create an even greater smoothness in their succession. Sharper harmonic contrasts may be achieved by emphasizing unrelated segments of successive scale transpositions or by using harmonic materials foreign to the synthetic scale altogether, such as diatonic pitch collections. Even these may be related to the synthetic scale by their incorporation of diatonic parts of the scale. Overall, however, the synthetic and diatonic scale materials in The Kairn maintain a musical division which corresponds roughly to the dramatic distinction between a moonlit world of mystery and a sunlit world of love.

The triadic substructure of the synthetic scale suggests a simple principle for determining scale degree priority. Degrees capable of supporting major or minor triads within the confines of the scale receive emphasis as primary harmonic areas. These same degrees recur as the roots of triads in local harmonic progressions. With several of these triads vying for precedence, a tension of polarities is set up which carries through the work as a whole.

The scale patterns of Griffes' three main works using synthetic scales - The Kairn of Koridwen, the Sonata for piano, and the third Prelude for piano - bear several

similarities, particularly in their asymmetry and use of augmented second and semitonal intervals. As a body, the three works exhibit a trend toward greater compression and stricter adherence to the pitch materials provided by a single transposition of the synthetic scale. Consequently, the techniques of variable partitioning, shifting tonal foci, and transposing musical ideas within the scale become relatively more important, while incorporating foreign pitch elements and transposing the scale as a whole receive less emphasis, disappearing altogether from the fabric of the Prelude. Final cadences in the Sonata and Prelude achieve stability within the synthetic scale itself, advancing the scale toward the status of a closed system of pitch relations.

The development of Griffes' synthetic scale technique reflects a trend toward unity, economy, and internal consistency. Beginning from purely decorative roots in pieces such as The Pleasure Dome of Kubla Khan, the synthetic scale advances to a position in the Sonata and third Prelude where its interval content is imprinted on harmonic and melodic events at every level. The Kairn of Koridwen, which occupied Griffes during the latter half of 1916, was the composer's proving ground for his synthetic scale technique. Beginning as a coloristic depiction of the nocturnal mysteries of the druid legend, the use of synthetic scales in The Kairn gave rise to a musical unity independent of the drama. This unity was perceived by at

least a few members of the opening night audience when the work was premiered in 1917. Critic Paul Rosenfeld expressed it as follows: "From the initial measure of the short prelude, from the moment the clarinet uttered its half mournful, half glowing phrase, there expanded a music unified by a single quality, a quality that better than anything else evoked the druid rite there in the moonlight."<sup>16</sup> This "single quality" has its source in the synthetic scale. By abstracting the scale from its dramatic context in later works and following up on its musical implications, Griffes completed its transformation from a coloristic device into an internally consistent and closed musical system.

<sup>16</sup> Paul Rosenfeld, "Mr. Griffes en Route," Seven Arts I (April, 1917): 673-5. Rosenfeld's review of The Kairn is also reprinted in its entirety in Maisel, pp. 339-43. This quote appears on p. 341.

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