

STUDIES IN PIBROCH

2. THE METRE OF "BODAICH DHUBHA NAN SLIGEAN": A DEFINITIVE ACCOUNT

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I

In the account of "The Antient Rule for regulating Time & Composition" that he gives (1760-2:[33]) in his *Compleat Theory of the Scots Highland Bagpipe*, Joseph MacDonal expressly asserts that those who originally composed our classical pibrochs "were sure to have no odd Numbers in any piece they design'd to be regular". More specifically he then goes on to say: that "Their Adagios when regular commonly consisted of 4 Quarters"; that each of these four quarters contained so many "Fingers . . . 2, 4, or 8", as the case might be; that we count these fingers as bars; and that "The ordinar Length of a Pipe Adagio being 16 Fingers, composd about 16 Bars, 4 in each Quarter". By a "Pipe Adagio" Joseph MacDonal means, clearly, the *ùrlar* or ground of a pibroch; and, if his account of the "Antient Rule" substantially is true, it follows that in all regular pibrochs each whole measure must originally have been subdivided into four equal quarters of two, four, or eight bars each, and that no pibroch which does not satisfy this formal requirement can properly be called regular.¹

According to what may be called the accepted account (for which see all authorities cited and summarised in Lorimer 1962:5-7, and Campbell 1953:intro. 14 n.), there are, however, three regular metres which cannot be squared with Joseph MacDonal's "Antient Rule". Two of these metres are called the "Primary 6:6:4 Metre" and the "Secondary 6:6:4 Metre": but about the third there has been so little certainty that it has variously been called the "4:6:4:1 (or 2) Metre", the "4:6:4:2 (or 1) Metre" and the "Tertiary Metre".

Here we are not concerned with the first two of them, but only with the third. According to the accepted view, its chief

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characteristics are: (1) that each whole measure is made up of two bars each, which may be designated Phrs. A and B; (2) that these are arranged in three lines, thus:

	A		B	
A		B		B
	A		B	

but (3) that “two extra bars, or one extra bar”, of “drumming on low A” are, or is, “added at the end of line 3 to make up the numbers”; and consequently (4) that each whole measure is subdivided into four unequal units of 4, 6, 4, and 2 (or 1) bars—or, alternatively, into three unequal units of 4, 6, and 6 (or 5) bars. The accepted view admittedly receives much apparent support from the ways in which most extant pibrochs of this metre are set forth in the earliest manuscript versions of them that we possess. Yet, from a strictly musical point of view, it literally does not make sense; and, for many reasons which have all been fully explained elsewhere (Lorimer 1962), it will here be postulated: (1) that in all regular pibrochs in this metre each whole measure must originally have contained sixteen bars, but that one of its characteristics ceased, in course of time, to be fully understood, and that in the confusion which hence arose the last of these sixteen bars was sometimes omitted in subsequent transmission; (2) that—subject to the reservation that in Phr. A₄ two bars of “drumming on low A” often are substituted for an altered repeat of Phrs. A₁₋₃—the characteristic phrase-pattern can best be schematised:

A ₁	B ₁		A ₂	B ₂
B ₃			B ₁	
A ₃			A ₄	

and, consequently, (3) that each whole measure consists (a) of four quarters of four bars each, and (b) of two half-measures of eight bars each; and (4) that the second of these half-measures is essentially a repeat of the first in which Phrs. A and B are interchanged. In the light of these four postulates, we shall presently attempt to work out a definitive account of this metre. But first we must make a few preliminary remarks about some of the conventional *motifs* which so often are used as phrase-endings, not only in all tunes of this particular metre, but also in many other pibrochs.

Considering that the chanter, or melody-pipe, of the Scots Highland bagpipe only produces nine melody-notes,² that few pibrochs use more than five, six or seven of these nine notes, and that the phrase-patterns on which most pibrochs are based are very repetitive, it is not surprising that classical pipe-music evolved a great many conventional *motifs*. In common time, each such *motif* is equivalent to half a bar; and some of them are used chiefly as beginnings, others chiefly as endings, especially of whole phrases.

All phrase-endings which end on low A (the tonic of the chanter) or on low G (its lowest note) will here be called "closed" endings; and all those which end on any higher note will here be called "open" ones. It is especially important for us to notice:³

(a) The closed D-ending ". . . hiharódin":



(b) The closed C-endings ". . . hihòdin":



and ". . . hihòródin":



(c) The closed B-endings ". . . hihíódin":



and ". . . hihíóendam":



(d) The open B-ending “. . . hihóródó”:



(e) The closed A-ending “. . . hiharin”:



In this metre, the use of these phrase-endings seems chiefly to have been governed by the following conventions:

1. Both the closed D-ending “. . . hiharódin” and the closed C-ending “. . . hihòródin” may best be contrasted with the closed B-ending “. . . hihíóendam”.
2. The closed C-ending “. . . hihòdin” may best be contrasted with the closed B-ending “. . . hihíódin”.
3. Both the closed B-endings “. . . hihíódin” and “. . . hihíóendam” and the open B-ending “. . . hihóródó” all may best be contrasted with the closed A-ending “. . . hiharin”.
4. Neither the closed D-ending “. . . hiharódin” nor either of the closed C-endings “. . . hihòródin” and “. . . hihòdin” is tonally so conclusive as either of the closed B-endings “. . . hihíóendam” and “. . . hihíódin”.
5. The open B-ending “. . . hihóródó” is tonally very inconclusive indeed.
6. Of all the phrase-endings already mentioned, only the closed A-ending “. . . hiharin” in itself is tonally completely conclusive; and the single closed A-ending “. . . hiharin” is not tonally quite so conclusive as the double closed A-ending “Hiharin hiharin”.

From all this it follows that, of all the ways in which, for example, the closed C-ending “. . . hihòdin”, the closed B-ending “. . . hihíódin”, and the closed A-ending “. . .

hiharin" can together be used as phrase-endings, one of the most satisfying is:



In the singlings of all variations, all phrase-endings normally do not undergo any alteration: but from the ways in which those mentioned normally are altered in the doublings of all variations, it may be inferred that they were conventionally deemed to be based on the following theme-notes:

1. The closed D-ending “. . . hiharódin”, on D D.
2. The closed C-endings “. . . hihòdin” and “. . . hihòródin”, both on C C.
3. The closed B-endings “. . . hihíódin” and “. . . hihíóendam” and the open B-ending “. . . hihóródó”, all on B B.
4. The closed A-ending “. . . hiharin”, on A A.

3

Now let us take two typical pibrochs in this metre and make a rigorous musical analysis of them, in terms of our four original postulates, and with reference to three vitally important questions which no previous account has posed. These are: (1) What strictly musical relationships subsist between Phrs. A₁ and B₁? (2) What further development does each undergo? And (3) What is the tonal structure of the patterns formed by the *motifs* used as phrase-endings?

Bodaich Dhubha nan Sligean (The Old Men of the Shells):

Setting No. 1⁴

Scales: FE CBA; A FE CBA; E CBAG; CBAG. In the *Urlar* and *Var. I* of the version printed in P.S., Phr. B₁ has one extra bar; and, for reasons already explained elsewhere (Lorimer 1962:10-11), we here omit the first bar of Phr. B₁ of the *Urlar*, and the third bar of Phr. B₁ of *Var. I*, as given in P.S. This, however, is solely for purposes of our analysis; and the writer does not suggest that these bars should be omitted in playing the tune.

1. *Urlar*:

GROUND

Here Phr. A_1 can best be analysed:

Phr. A_1 = phr. a + "Hiharin hiharin"; and phr. a = a_1 (the A-beginning "Hienhòdrò . . .") + μ_1 (the closed B-ending ". . . hihíódin"). So phr. a has an A-beginning ("Hienhòdrò . . .") and a closed B-ending (" . . . hihíódin"); and it uses all four of the notes E CBA, but not F. Taken as a whole, Phr. A_1 also uses all four of the notes E CBA, but not F: but it has *both* an A-beginning ("Hienhòdrò . . .") and a closed A-ending ("Hiharin hiharin"); and it contains the descending sequence of endings ". . . hihíódin, . . . hiharin".

Phr. B_1 is a metrically and tonally expanded repeat of phr. a which can be analysed:

Thus Phr. B_1 may be said to have been derived from phr. a by inserting the notes here enclosed in square brackets:⁵ but phr. $B_1 = \text{phrs. } b + a$; and phr. $b = \beta$ (the A-beginning “Hiendre . . .”) + κ_1 (the open c-ending “. . . hede δ ”). Hence phr. b has an A-beginning (“Hiendre . . .”) and an open c-ending (“. . . hede δ ”); and it uses all four of the notes FE C A, but not B. Within Phr. B_1 , therefore, phrs. b and a are tonally complementary to each other, and between them the scale is split:⁶

$$\text{Phr. } B_1: \left[\begin{array}{c|c} F & \\ E & E \\ C & C \\ [A & B] \\ [A & [A] \end{array} \right]$$

But, taken as a whole, Phr. B_1 uses all five of the notes FE CBA; it has an A-beginning (“Hiendre . . .”) and a closed B-ending (“. . . hihíódin”); and it contains the descending sequence of endings “. . . hede δ , . . . hihíódin”. Hence, within Q. 1 (i.e., within the first of the four quarters of the *ùrlar*), Phrs. A_1 and B_1 are tonally complementary to each other, and between them the scale is split:

$$\text{Q. 1:} \left[\begin{array}{c|c} & F \\ E & E \\ C & C \\ B & B \\ [A & [A] \end{array} \right]$$

And Q. 1 contains the *rising* sequence of phrase-endings “. . . hiharin, . . . hihíódin”.

In Q. 2, Phr. A_2 is simply an unaltered repeat of Phr. A_1 . But Phr. B_2 is a much-altered repeat of Phr. B_1 which can best be analysed:



So the first half of Phr. B_2 consists of γ (the A-beginning “Hienódin . . .”) and δ (the open c-ending “. . . hiendred”); and, whereas γ echoes and summarises α_1 and μ_1 , and thus makes reference, not only to Phr. B_1 , but also to the first half of Phrs. A_1 and A_2 , δ likewise echoes and summarises β and κ_1 , and thus makes reference only to the first half of Phr. B_1 . In the second half of Phr. B_2 , $2\mu_2$

(the opening B-ending “Hihóródó hihóródó”) echoes and expands μ_1 , and thus make reference, not only to Phr. B₁, but also to the first halves of Phrs. A₁ and A₂. Thus Phr. B₂ makes reference to Phrs. A₁, B₁, and A₂, but especially to Phr. B₁; and all other tunes in this metre have the same characteristic.

The first half of Phr. B₂ has an A-beginning (“Hienódin . . .”) and an open c-ending (“ . . . hiendred”); and it uses all four of the notes E CBA, but not F. But the second half of Phr. B₂ has *both* a B-beginning (“Hihóródó . . .”) and an open B-ending; and it uses both the notes E and B, but not F, C, or A. Hence the first and second halves of Phr. B₂ are tonally complementary, and between them the scale is split:

$$\text{Phr. B}_2: \left[\begin{array}{c|c} \text{E} & \text{E} \\ \text{C]} & \\ \text{B} & \text{[B]} \\ \text{[A} & \end{array} \right]$$

But, taken as a whole, Phr. B₂ has an A-beginning (“Hienódin . . .”) and an open B-ending (“Hihóródó hihóródó”); and although it uses all four of the notes E CBA, it does not use F. (This incidentally shows that it was not so characteristic of Phr. B₁ that it included the note F as that it had an A-beginning and a B-ending.) Hence, within Q. 2, Phrs. A₂ and B₂ are tonally complementary, but only in the minimal sense that between them the scale is split:

$$\text{Q. 2:} \left[\begin{array}{c|c} \text{E} & \text{E} \\ \text{C} & \text{C} \\ \text{B} & \text{B]} \\ \text{[A} & \text{[A} \end{array} \right]$$

Q. 2 contains the *rising* sequence of phrase-endings “. . . hiharin, . . . hihóródó”. And the first half-measure has the open B-ending “Hihóródó hihóródó”, which tonally is very inconclusive indeed.

As we have already postulated, the second half-measure is essentially a repeat of the first in which Phrs. A and B are interchanged.

In Q. 3, Phr. B₃ is simply an unaltered repeat of Phr. B₁, and Phr. A₃ likewise is simply an unaltered repeat of Phr. A₂, which itself was simply an unaltered repeat of Phr. A₁. Hence, within Q. 3, Phrs. B₃ and A₃ are complementary, and between them the scale is split:

$$\text{Q. 3:} \left[\begin{array}{c|c} \text{F} & \\ \text{E} & \text{E} \\ \text{C} & \text{C} \\ \text{B]} & \text{B} \\ \text{[A} & \text{[A} \end{array} \right]$$

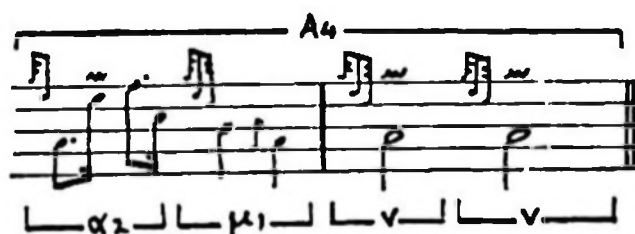
Q. 3, in fact, is simply a repeat of Q. 1 in which Phrs. A₁ and B₁ are changed round; and it contains the descending sequence of phrase-endings “. . . hihíódin, . . . hiharin”.

In Q. 4, Phr. B₄ can best be analysed:



Clearly this is a metrically (but not tonally) expanded repeat of phr. *b*, the first half of Phrs. B₁ and B₃, in which β (“Hiendre . . .”) is elaborated into $\beta + \gamma_1$ (“Hiendre cheòhió”), and κ_1 (“ . . . he-dehò”) into $\kappa_2 + \lambda_2$ (“Daredehò dreòhió”). These elaborations make a rhythmical and tonal climax, and they also bring it about that Phr. B₄ does not include any repeat of phr. *a*. Phr. B₄ has an A-beginning (“Hiendre . . .”) and an open B-ending (“ . . . dreòhió”); and it uses all five of the notes FE CBA.

Phr. A₄ can best be analysed:



Here α_2 (“Hiendreveò . . .”) is simply a tonally (but not metrically) expanded derivative of α_1 (“Hienhòdrò . . .”); and as a result of this elaboration Phr. A₄ begins by making a rhythmical and tonal climax which briefly sums up the tonal contents of this whole first measure of the tune. (This incidentally shows that it was less characteristic of Phr. A₁ that it did not use the note F than that it had both an A-beginning and an A-ending.) Taken as a whole, Phr. A₄ has both an A-beginning (“Hiendreveò . . .”) and a closed A-ending (“ . . . hiharin”); it contains the descending sequence of endings “. . . hihíódin, . . . hiharin”; and it uses all five of the notes FE CBA.

Hence, within Q. 4, Phrs. B₄ and A₄ have been tonally assimilated to each other, but still are tonally complementary, in the minimal sense that between them the scale is split:

$$Q. 4: \left[\begin{array}{c|c} F & F \\ E & E \\ C & C \\ B & B \\ \hline [A] & [A] \end{array} \right]$$

Q. 4 contains the *descending* sequence of phrase-endings “. . . dreòhió, . . . hiharin”. And the second half-measure has the closed A-ending “Hiharin hiharin”, which tonally is completely conclusive.

Thus, to recapitulate, Phr. A₁ contains a *descending* sequence of endings in which the closed B-ending “. . . hihíódin” is followed by the closed A-ending “. . . hiharin”. Phr. B₁ is directly derived from the first half of Phr. A₁, and is tonally complementary to the whole of Phr. A₁, but has the closed B-ending “. . . hihíódin”. Phr. A₂ = Phr. A₁; but Phr. B₂ is a much-altered repeat of Phr. B₁ which also makes reference to Phrs. A₁ and A₂, and has the open B-ending “Hihóródó hihóródó”. But from all this it results: (1) that Q. 1 has a *rising* sequence of phrase-endings in which the closed A-ending “. . . hiharin” is followed by the tonally less conclusive closed B-ending “. . . hihíódin”; (2) that Q. 2 also has a *rising* sequence of phrase-endings in which the closed A-ending “. . . hiharin” is followed by the tonally still less conclusive open B-ending “. . . hihóródó”; and (3) that the first half-measure has the open B-ending “Hihóródó hihóródó”, which tonally is very inconclusive indeed.

In the second half-measure, all this, however, is turned inside out. Phr. B₃ = Phr. B₁, and Phr. A₃ = Phrs. A₁₋₂. Phr. B₄ is an elaborated repeat of Phrs. B₁ and B₃ which makes a rhythmical and tonal climax, and has the open B-ending “. . . dreòhió”; and Phr. A₄ is an altered repeat of Phrs. A₁₋₃ which also makes a rhythmical and tonal climax, but still has the closed A-ending “Hiharin hiharin”. Hence: (1) Q. 3 has the *descending* sequence of phrase-endings “. . . hihíódin, . . . hiharin”; (2) Q. 4 has the *descending* sequence of phrase-endings “. . . dreòhió, . . . hiharin”; and (3), whereas the first half-measure has the tonally very inconclusive open B-ending “Hihóródó hihóródó”, the second has the tonally completely conclusive closed A-ending “Hiharin hiharin”. Thus all the paradoxes which initially arose out of the fact that Phr. B₁ was directly derived from Phr. A₁ have been most satisfactorily resolved.

The *Urlar* is followed by a “thumb variation”—i.e., a doubling, or altered repeat, of the *Urlar*, in which high A, the “thumb-note”, is substituted for certain other notes. This thumb variation is much more elaborate than in most other pibrochs.

2. Var. I (Thumb):

$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$. In Phr. A_1 , "Liendreò . . ." is substituted for "Hienhòdrò . . ." In Phr. B_1 , ". . . liveche" is substituted for ". . . hedehò", and "Heendreò . . ." for "Hienhòdrò . . ."; hence Phr. B_1 is not related to Phr. A_1 in the same way as in the *Urlar*. In Phr. B_2 , "Heenòdin . . ." is substituted for "Hienódin . . ." In Phr. B_4 , ". . . liveche" is substituted for ". . . cheòhió", and "Heendre cheòhió" for "Daredehò dreòhió". And in Phr. A_4 , "Hiendreiò . . ." is substituted for "Hiendreveò . . .". Thus in this variation the scale is extended upwards to include high a; and Phrs. A and B have both undergone much tonal expansion.

INTERMEDIATE VARIATIONS

3. Var. II (Singling):

$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$; $B_4 = B_{1,3}$; $A_4 = A_{1,2,3}$. Hence Phrs. B_4 and A_4 are not related to Phrs. A_1 and B_1 as in the *Urlar*. High A and F both have ceased to be used as melody-notes: but the scale has now been extended downwards to include low g.

Thus, although the *Urlar* uses all five notes of the pentatonic scale FE CBA, but no others, the variations explore the possibilities of the whole extended scale A FE CBAG. In the first half of Phr. A₁, a new rhythm, . . . $\text{c} \text{r} \mid \dots$, is introduced; and in Phr. B₁,

this is developed into $\text{r} \text{c} \text{r} \text{c} \mid \text{c} \text{r} \dots$. But all phrase-endings are still the same as in the *Urlar* and Var. 1.

4. Var. II (Doubling):



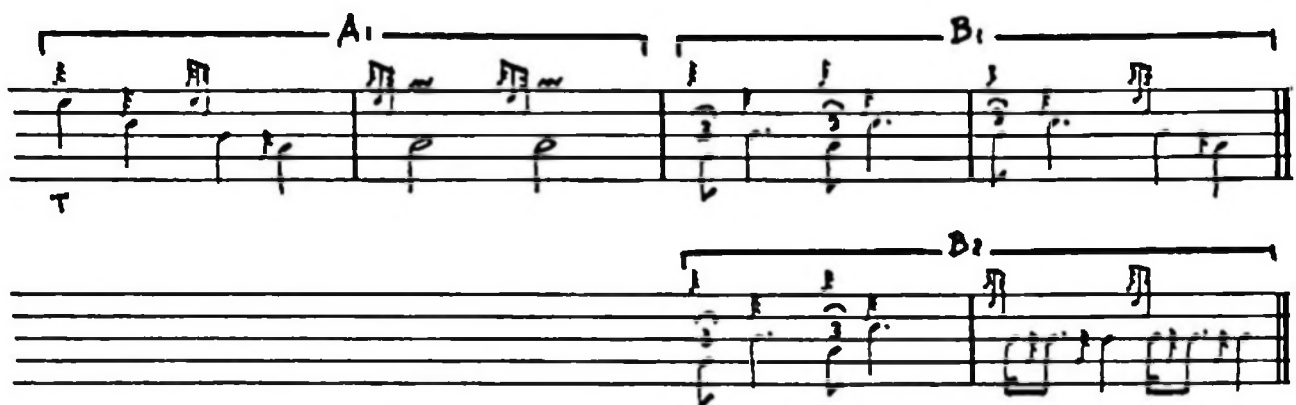
$A_2 = A_1$; $B_2 = B_1$; $B_3 = B_{1,2}$; $A_3 = A_{1,2}$; $B_4 = B_{1,2,3}$; $A_4 = A_{1,2,3}$. Hence neither Phr. A₁ nor Phr. B₁ undergoes any further development. The note E has ceased to be used as a melody-note, and the scale has been reduced to CBAG. In the first half of Phr. A₁, the new rhythm that has been developed in Phr. B₁ of the Singling is developed into $\text{r} \text{c} \text{c} \text{r} \mid \dots$; in Phr. B₁ this is further developed into $\text{r} \text{c} \text{c} \text{r} \mid \text{r} \text{c} \text{c} \text{r} \mid$; and in Q. 3 this, in its turn, is still further developed into

$\text{r} \text{c} \text{c} \text{r} \mid \text{r} \text{c} \text{c} \text{r} \mid \text{r} \text{c} \text{c} \text{r} \mid \dots$

And all phrase-endings have now been reduced almost to their essential theme-notes.

CONCLUDING VARIATIONS

5. *Taorluth* (Singling):



$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$; $B_4 = B_{1,3}$; $A_4 = A_{1,2,3}$. Has essentially the same underlying pattern as 3. Var. II (Singling);

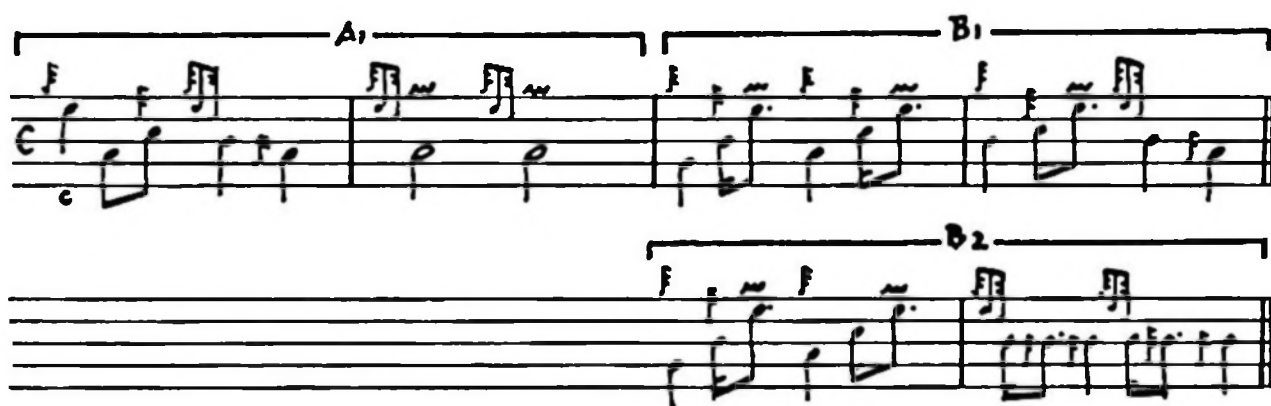
and all phrase-endings are once more the same as in the *Urlar*, 2. Var. I, and 3. Var. II (Singling).

6. *Taorluth* (Doubling):



$A_2 = A_1$; $B_2 = B_1$; $B_3 = B_{1,2}$; $A_3 = A_{1,2}$; $B_4 = B_{1,2,3}$; $A_4 = A_{1,2,3}$. Has essentially the same underlying pattern as 4. Var. II (Doubling) and all phrase-endings have again been reduced almost to their essential theme-notes.

7. *Crunluth* (Singling):



$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$; $B_4 = B_{1,3}$; $A_4 = A_{1,2,3}$. Has essentially the same underlying pattern as 3. Var. II (Singling) and 5. *Taorluth* (Singling); and all phrase-endings are once more the same as in the *Urlar*.

8. *Crunluth* (Doubling):

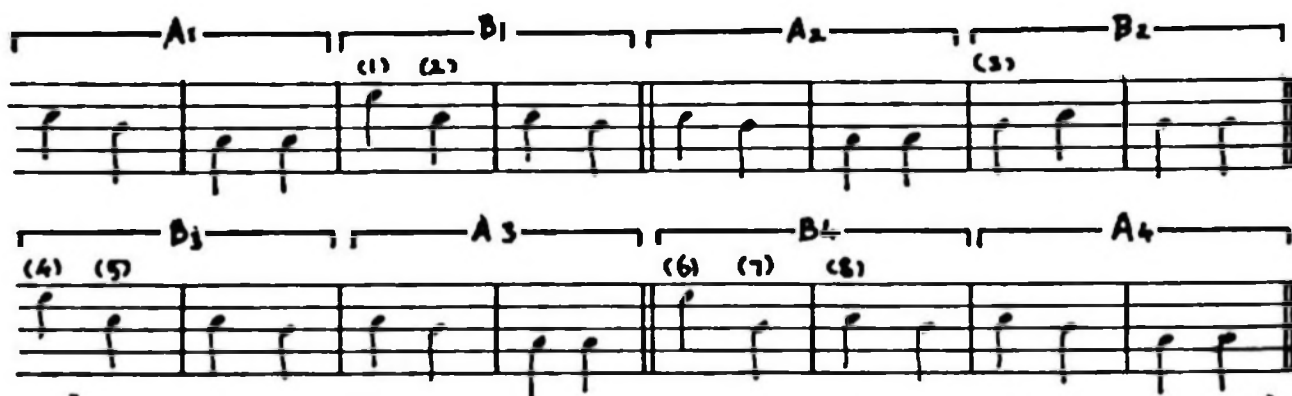


$A_2 = A_1$; $B_2 = B_1$; $B_3 = B_{1,2}$; $A_3 = A_{1,2}$; $B_4 = B_{1,2,3}$; $A_4 = A_{1,2,3}$. Has essentially the same underlying pattern as 4. Var. II (Doubling) and 6. *Taorluth* (Doubling); and all phrase-endings have once again been stripped down almost to their essential theme-notes.

THEME-NOTES

The variations thus depart from the *ùrlar* with much more freedom than in most other pibrochs. But, except as noted, the

Urlar and all variations throughout are based on the following theme-notes:



1. In Var. II (S.), and in all further variations, this E is replaced by B. 2. In Var. I this c is replaced by E. 3. In Var. I this B is replaced by c. 4. As 1. 5. As 2. 6. As 1. 7. In Var. I this B is replaced by E: but in Var. II (S.), and in all further variations, it is replaced by c. 8. As 2.

This pibroch undoubtedly is one of the most enchanting that has come down to us; and it is tonally of great interest. For, although the *ùrlar* uses all five notes of the restricted scale FE CBA, but no others, the variations fully explore the possibilities of the whole extended scale A FE CBAG. And several of the variations—especially the doublings of Var. II, *Taorluth*, and *Crunluth*—show (1) that it is not so characteristic of Phr. A₁ that it originally has an A-beginning, and uses the notes E CBA, but not F, as that it originally has an A-ending, and (2) that it likewise is not so characteristic of Phr. B₁ that it originally has an A-beginning, and uses all five of the notes FE CBA, as that it originally has a B-ending. But, despite the freedom with which the variations depart from the *ùrlar*, all phrase-endings throughout the whole tune conform to the same underlying theme-notes; and the pattern to which they thus conform can best be stated:

A	B	:	A	B
B	A	:	B	A

This means: “Q. 1 contains a sequence of phrase-endings in which an A-ending is followed by a B-ending, and so does Q. 2: but Q. 3 contains a sequence in which a B-ending is followed by an A-ending, and so does Q. 4”.⁷ Thus, in *Bodaich Dhubha*, Q. 1 contains a *rising* sequence of phrase-endings, and

so does Q. 2; but Q. 3 contains a *descending* one, and so does Q. 4. This, however, is not the only possible arrangement.

*Bratach Bhàn nan Stiubhartach (The Stewarts' White Banner)*⁸

Scale: ED BAG; A ED BAG. But low G is not used as a theme-note; neither is low A, except in Phr. A₄.

GROUND

1. *Urlar*:

The musical notation for the *Urlar* consists of four systems of staves. Each system contains two staves (treble and bass clef). The notes are primarily eighth and sixteenth notes, often beamed together. Above the staves, there are brackets indicating phrasal divisions: A₁ and B₁ on the first system; A₂ and B₂ on the second; B₃ and A₃ on the third; and B₄ and A₄ on the fourth. The notation includes various rhythmic values and rests, with some notes marked with a cross symbol.

Here Phr. A₁ can best be analysed:

This diagram shows a detailed analysis of Phr. A₁. It consists of a single staff of music with a treble clef. The notes are grouped into four sub-phrases indicated by brackets below the staff: alpha (α), kappa₁ (κ₁), kappa₁ (κ₁), and kappa₂ (κ₂). The first sub-phrase alpha is a quarter note. The second sub-phrase kappa₁ is a quarter note. The third sub-phrase kappa₁ is a quarter note. The fourth sub-phrase kappa₂ is a quarter note. The entire phrase A₁ is enclosed in a larger bracket above the staff.

The first and second halves of Phr. A₁ may conveniently be designated phrs. *x* and *a*. Now, phr. *x* = *a* (the B-beginning “Hihiótra . . .”) + κ₁ (the open E-ending “. . . cherede”); and in phr. *a*, κ₁ is developed into κ₁ (the E-beginning “Cherede . . .”) + κ₂ (the closed E-ending “Cheóhin”). Taken as a whole, Phr. A₁ uses all four of the notes ED BA, but not low G; it has a B-beginning (“Hihiótra . . .”) and a closed E-ending (“. . . cheóhin”); and it contains the level sequence of endings “. . . cherede, . . . cheóhin”.

Phr. B₁ can best be analysed:



The first half of Phr. B₁ is simply an unaltered repeat of phr. *x*, and the second can conveniently be designated phr. *b*. Now, in phr. *b*, *a* (“Hihiótra . . .”) is developed into λ₁ (the D-beginning “Hiharara . . .”) + μ (the closed B-ending “. . . hihióendam”). Hence, whereas Phr. A₁ = phrs. *x*+*a*, Phr. B₁ = phrs. *x*+*b*; and phrs. *a* and *b* are both developments of phr. *x*. Taken as a whole, Phr. B₁ uses all five of the notes ED BAG; it has both a B-beginning (“Hihiótra . . .”) and a closed B-ending (“. . . hihióendam”); and it contains the descending sequence of endings “. . . cherede, . . . hihióendam”.

Hence, within Q. 1, Phrs. A₁ and B₁ are tonally complementary, and between them the scale is split:

$$Q. 1: \left[\begin{array}{c|c} E] & E \\ D & D \\ [B & [B] \\ A & A \\ & G \end{array} \right]$$

Q. 1 contains the *descending* sequence of phrase-endings “. . . cheóhin, . . . hihióendam”.

In Q. 2, Phr. A₂ is simply an unaltered repeat of Phr. A₁. But Phr. B₂ is a much-altered repeat of Phr. B₁ which can best be analysed:



In the first half of Phr. B₂, *a* (“Hihiótra . . .”) is further developed into μ (the B-beginning “Hihióendam . . .”) + λ₂ (the closed D-ending “. . . hiharódin”); and, in the second half, κ₁ (the open E-ending “. . . cherede”) and κ₂ (the closed E-ending “. . . cheóhin”) are developed into κ₃ and κ₄ (the closed E-endings “Cheendan

cheembam”). Phr. B₂ thus makes reference to Phr. A₁, B₁, and A₂, but especially to Phr. B₁. Taken as a whole, Phr. B₂ consists of the rising series of beginnings and endings “*Hihíóendam hiharódin, Cheendan cheembam*”. It uses all five of the notes ED BAG; it has a B-beginning (“*Hihíóendam . . .*”) and a closed E-ending (“*. . . cheembam*”); and it contains the *rising* sequence of endings “. . . *hiharódin, . . . cheembam*”.

Within Q. 2, therefore, Phrs. A₂ and B₂ are complementary, and between them the scale is split:

$$Q. 2: \left[\begin{array}{c|c} E] & E] \\ D & D \\ [B & [B \\ A & A \\ & G \end{array} \right]$$

Thus, whereas Q. 1 contains, as we have seen, the *descending* sequence of phrase-endings “. . . *cheóhin, . . . hihíóendam*”, Q. 2 contains the *level* one “. . . *cheóhin, . . . cheembam*”. And the first half-measure has the closed, but tonally not very conclusive, E-ending “*Cheendan cheembam*”.

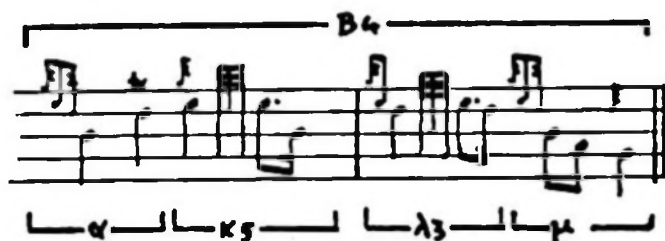
As in *Bodaich Dhubha*, and in all other pibrochs in this metre, the second half-measure is essentially a repeat of the first in which Phrs. A and B are interchanged.

In Q. 3, Phr. B₃ is simply an unaltered repeat of Phr. B₁; and Phr. A₃ is simply an unaltered repeat of Phr. A₂, which itself was simply an unaltered repeat of Phr. A₁. Hence Q. 3 is simply a repeat of Q. 1 in which Phrs. A₁ and B₁ are changed round. Within Q. 3, Phrs. B₃ and A₃ are complementary, and between them the scale is split:

$$Q. 3: \left[\begin{array}{c|c} E & E] \\ D & D \\ [B] & [B \\ A & A \\ G & \end{array} \right]$$

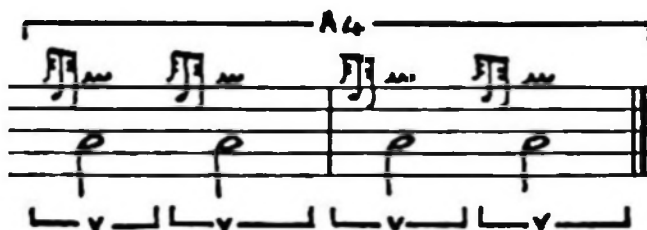
And Q. 3 contains the *rising* sequence of phrase-endings “. . . *hihíóendam, . . . cheóhin*”.

In Q. 4, Phr. B₄ can best be analysed:



Phr. B₄, in fact, is an altered repeat of Phr. B₃ in which κ₅ (the open ε-ending “. . . chebareò”) is substituted for κ₁ (the open ε-ending “. . . cherede”), and λ₃ (the D-beginning “Hihabarea . . .”) for λ₁ (the D-beginning “Hiharara”). One effect of these substitutions is that they make a rhythmical and tonal climax; another is that Phr. B₄ does not contain any repeat of phr. x.

Phr. A₄ can best be analysed as follows:



For reasons which have already been fully explained elsewhere (Lorimer 1962:16), 4ν (the closed A-ending “Hiharin hiharin, Hiharin hiharin”) is here conventionally substituted for an altered repeat of Phrs. A₁₋₃; and since Phrs. A₁₋₃ do not have an A-ending, but an ε-ending, Phr. A₄ therefore has no obvious musical relationship with them, but only a purely conventional one. Phr. A₄ uses both the notes ε and A, but not D, B, or low G; and it has *both* an A-beginning (“Hiharin . . .”) and a closed A-ending (“. . . hiharin”); and it contains the sequence of endings “. . . hiharin, . . . hiharin”.

Hence, within Q. 4, Phrs. B₄ and A₄ are complementary, and between them the scale is split:

$$Q. 4: \left[\begin{array}{c|c} \epsilon & \epsilon \\ D & \\ [B] & \\ A & [A] \\ G & \end{array} \right]$$

As we have seen, Q. 3 contains the *rising* sequence of phrase-endings “. . . hihāendā, . . . cheóhin”; but, solely because of the substitution that has drastically, but quite conventionally, been made in Phr. A₄, Q. 4 contains the *descending* sequence “. . . hihāendā, . . . hiharin”. And the second half-measure has the tonally completely conclusive A-ending “Hiharin hiharin”.

Thus, to sum up, Phr. A₁ = phrs. x+a; Phr. B₁ = phrs. x+b; and phrs. a and b are both developments of phr. x. Phr. A₁ contains a *level* sequence of endings in which an open ε-ending “. . . cherede” is followed by the closed ε-ending “. . . cheóhin”: but Phr. B₁ is complementary to Phr. A₁, and contains a *descending* sequence of endings in which the open ε-ending “. . . cherede” is

followed by the closed B-ending “. . . hihíóendam”. Phr. A₃ = Phr. A₁; but Phr. B₂ is a much-altered repeat of Phr. B₁ which also makes reference to Phrs. A₁ and A₂, and has the closed E-ending “Cheendan cheembam”. But hence: (1) Q. 1 contains the *descending* sequence of phrase-endings “. . . cheóhin, . . . hihíóendam”; (2) Q. 2 contains the *level* one “. . . cheóhin, . . . cheembam”; and (3) the first half-measure has the tonally not very conclusive closed E-ending “Cheendan cheembam”. In the second half-measure, however, Phr. B₃ = Phr. B₁, and Phr. A₃ = Phrs. A_{1,2}; Phr. B₄ is an altered repeat of Phrs. B₁ and B₃ which makes a climax; and in Phr. A₄, the closed A-ending “Hiharin hiharin, Hiharin hiharin”, is conventionally substituted for an altered repeat of Phrs. A₁₋₃. And hence: (1) Q. 3 contains the *rising* sequence of phrase-endings “. . . hihíóendam, . . . cheóhin”: but (2) Q. 4 contains the *descending* sequence “. . . hihíóendam, . . . hiharin”; and (3), whereas the first half-measure has, as we have seen, the tonally not very conclusive open E-ending “Cheendan cheembam”, the second has the completely conclusive closed A-ending “Hiharin hiharin”. Thus here, too, the paradoxes which initially arose out of the way in which Phr. B₁ is related to Phr. A₁ have all been satisfactorily resolved.

2. Var. I (Thumb):



A₂ = A₁; B₃ = B₁; A₃ = A_{1,2}; B₄ = B₃ (and therefore is not related to Phr. B₁ in the same way as in the *Urlar*). In Phr. A₁, “. . . chedili, Chedili . . .” is substituted for “. . . cherede, Cherede . . .” In Phr. B₁, “. . . chedili” again is substituted for “. . . cherede”, and “Hadili . . .” for “Hiharara . . .”. This substitution of high A for D perhaps is rather unusual.

INTERMEDIATE VARIATIONS

3. Var. II (Singling):

$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$. All phrase-endings are still the same as in the *Urlar*: but, apart from that, all phrases now have virtually been stripped down to their essential theme-notes.

4. Var. II (Doubling):

$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$. All phrase-endings have now been reduced to their essential theme-notes.

CONCLUDING VARIATIONS

5. *Taorluth* (Singling):

The musical notation for 'Taorluth (Singling)' consists of three systems of staves. The first system has two staves, with the upper staff containing a melodic line and the lower staff containing a bass line. The first phrase is labeled A₁ and the second phrase is labeled B₁. The second system has two staves, with the upper staff containing a melodic line and the lower staff containing a bass line. The first phrase is labeled B₁. The third system has two staves, with the upper staff containing a melodic line and the lower staff containing a bass line. The first phrase is labeled B₄ and the second phrase is labeled A₄. The notation includes various rhythmic values and accidentals.

A₂ = A₁; B₃ = B₁; A₃ = A_{1,2}. Has the same underlying pattern as 3. Var. II (Singling); and all phrase-endings are again the same as in the *Urlar*.

6. *Taorluth* (Doubling):

The musical notation for 'Taorluth (Doubling)' consists of three systems of staves. The first system has two staves, with the upper staff containing a melodic line and the lower staff containing a bass line. The first phrase is labeled A₁ and the second phrase is labeled B₁. The second system has two staves, with the upper staff containing a melodic line and the lower staff containing a bass line. The first phrase is labeled B₂. The third system has two staves, with the upper staff containing a melodic line and the lower staff containing a bass line. The first phrase is labeled B₄ and the second phrase is labeled A₄. The notation includes various rhythmic values and accidentals.

A₂ = A₁; B₃ = B₁; A₃ = A_{1,2}. Has the same underlying pattern as 4. Var. II (Doubling), and all phrase-endings have again been reduced to their essential theme-notes.

7. *Crunluth* (Singling):

The musical notation for *Crunluth* (Singling) consists of three systems of staves. The first system has two staves, with the upper staff containing notes and rests, and the lower staff containing a rhythmic pattern of eighth notes. Brackets above the first staff label the first four measures as A_1 and the next four measures as B_1 . The second system has two staves, with the upper staff containing notes and rests, and the lower staff containing a rhythmic pattern of eighth notes. A bracket above the second staff labels the four measures as B_2 . The third system has two staves, with the upper staff containing notes and rests, and the lower staff containing a rhythmic pattern of eighth notes. Brackets above the third staff label the first four measures as B_4 and the next four measures as A_2 .

$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$. Has the same underlying pattern as 3. Var. II (Singling) and 5. *Taorluth* (Singling); and all phrase-endings are again the same as in the *Urlar*.

8. *Crunluth* (Doubling):

The musical notation for *Crunluth* (Doubling) consists of three systems of staves. The first system has two staves, with the upper staff containing notes and rests, and the lower staff containing a rhythmic pattern of eighth notes. Brackets above the first staff label the first four measures as A_1 and the next four measures as B_1 . The second system has two staves, with the upper staff containing notes and rests, and the lower staff containing a rhythmic pattern of eighth notes. A bracket above the second staff labels the four measures as B_2 . The third system has two staves, with the upper staff containing notes and rests, and the lower staff containing a rhythmic pattern of eighth notes. Brackets above the third staff label the first four measures as B_4 and the next four measures as A_4 .

$A_2 = A_1$; $B_3 = B_1$; $A_3 = A_{1,2}$. Has the same underlying pattern as 4. Var. II (Doubling) and 6. *Taorluth* (Doubling); and all phrase-endings have once more been reduced to their essential theme-notes.

THEME-NOTES

Except as noted, the *Urlar* and all variations throughout are based on the following theme-notes:



1. In 3. Var. II (S.), and in all further variations, this D is replaced by B.

In this magnificent tune, all phrase-endings throughout conform to the following pattern:

E	B	:	E	E
B	E	:	B	A

Hence, as we have already seen, the first half-measure contains a *descending* sequence of phrase-endings followed by a *level* one, and the second contains a *rising* sequence followed by a *descending* one. All that this has in common with the pattern of phrase-endings found in *Bodaich Dhubha* is that in both of them Q. 4 contains a descending sequence in which a B-ending is followed by an A-ending. *Bodaich Dhubha nan Sligean* and *Bratach Bhàn nan Stiubhartach* evidently do not belong to the same metrical and tonal group.

4

A strict comparative analysis of the metrical and tonal structure of all sixteen extant examples of this metre shows that they can best be classified as follows:

Category A	{	Type A (1) Type A (2)	}	Group I
Category B		Type B (1) Type B (2)		
Category C	{	Type C (1) Type C (2) Type C (3) Type C (4)	}	Group II
		Type C (5)		

Type A (1) is probably the most primitive; and in the following survey all other types will be defined by reference to it.

CATEGORY A

In all tunes which belong to this category, Phr. A₄ is an altered repeat of Phrs. A₁₋₃, and has, therefore, an obvious musical relationship with them.

Type A(1)

There are three extant examples, which all have the following characteristics:

1. The first half of Phr. A₁ has a closed B-ending, and the contents of the second half are "Hiharin hiharin". Hence Phr. A₁ has the closed A-ending "Hiharin hiharin".
2. Phr. B₁ is directly derived from the first half of Phr. A₁, but is tonally complementary to the whole of Phr. A₁, and has the same closed B-ending as the first half of Phr. A₁.
3. In one extant example Phr. A₂ is an altered repeat of Phr. A₁: but in both others Phr. A₂ = Phr. A₁.
4. Phr. B₂ is a much-altered repeat of Phr. B₁ which also makes reference to Phrs. A₁ and A₂, and has the open B-ending "Hihóródó hihóródó".
5. Phr. B₃ = Phr. B₁.
6. In the only extant example in which Phr. A₂ is an altered repeat of Phr. A₁, Phr. A₃ = Phr. A₂: but in both others Phr. A₃ = Phrs. A₁₋₂.
7. Phr. B₄ is an altered repeat of Phrs. B₁ and B₃ which makes some sort of climax.
8. In the only extant example in which Phr. A₂ is an altered repeat of Phr. A₁, Phr. A₄ = Phrs. A₂₋₃: but in all other extant examples Phr. A₄ is an altered repeat of Phrs. A₁₋₃ which makes some sort of climax; and in all extant examples Phr. A₄ ends "Hiharin hiharin".

Hence Phr. A₁ has the closed A-ending "Hiharin hiharin", and Phr. B₁ has a closed B-ending. Whereas the first half-measure has the tonally inconclusive open B-ending "Hihóródó hihóródó", the second has the tonally completely conclusive closed A-ending "Hiharin hiharin". And the phrase-endings conform to the pattern:

A	B	:	A	B
B	A	:	B	A

Examples: *Lasan Phadruig Chaogaich*,⁹ *Fàilte Cloinn Dhòmhuill*,¹⁰ both D-tunes; and *Bodaich Dhubha nan Sligean*, Setting No. 1,¹¹ a C-tune.

Type A(2)

Much more elaborate than Type A(1), and seems to have been directly derived from it. There is only one extant example of it, and these are the respects in which it differs from tunes of Type A(1):

1. Phr. A₁ does not end "Hiharin hiharin", but ". . . hiharin".
2. Phr. B₁ is not directly derived from the first half of Phr. A₁, but is indirectly derived from the whole of Phr. A₁.
3. Phr. B₂ does not have the *open* B-ending "Hihóródó hihóródó", but has the *closed* B-ending "Hihóródó hihíódin".
4. Phr. B₃ is an altered repeat of Phr. B₁.
5. Phr. A₄ is a much-altered repeat of Phrs. A₁₋₃ which also makes reference to Phr. B₁, and does not end "Hiharin hiharin", but ". . . hiharin".

Hence Phr. A₁ has the closed A-ending ". . . hiharin"; and, as in Type A(1), Phr. B₁ has a closed B-ending. Whereas the first half-measure has the closed B-ending ". . . hihíódin", which in itself tonally is fairly conclusive, the second has the tonally completely conclusive A-ending ". . . hiharin". And, despite the differences that have here been noted, all phrase-endings conform to precisely the same pattern as in Type A(1). Example: *Cumha Mhic Shuain a Ròraig*,¹² a D-tune.

CATEGORY B

In all tunes which belong to this category, Phr. A₄ is no longer an altered repeat of Phrs. A₁₋₃, but still has a fairly obvious musical relationship with them.

Type B(1)

Seems to have been directly derived from Type A(1). There are three extant examples, and these are the only important respects in which they differ from tunes of Type A(1):

1. Phr. B₂ does not end "Hihóródó hihóródó", but ". . . hihóródó".
2. In Phr. A₄ the ending "Hiharin hiharin, Hiharin hiharin", is substituted for an altered repeat of Phrs. A₁₋₃: but since Phrs. A₁₋₃ all end "Hiharin hiharin", Phr. A₄ still has a fairly obvious musical relationship with them.

Hence, as in Types A(1-2), Phr. A₁ has the closed A-ending “Hiharin hiharin”, and Phr. B₁ has a closed B-ending. Whereas the first half-measure has the tonally inconclusive open B-ending “. . . hihóródó”, the second has the completely conclusive closed A-ending “Hiharin hiharin”. And all phrase-endings conform to precisely the same pattern as in Types A(1-2). Examples: *Spaidsearachd Iarla Rois*,¹³ a D-tune; *Bodaich Dhubha nan Sligean*, Setting No. 2,¹⁴ a C-tune; and *Cumha Chaisteal Dhùn-Naomhaig*,¹⁵ a CD-tune.

Type B(2)

Seems to have been derived from Type B(1) in the same way as Type A(2) from Type A(1). There are two extant examples of it, and these are the chief respects in which they differ from tunes of Type A(1):

1. Phr. A₁ does not end “Hiharin hiharin”, but “. . . hiharin”.
2. Phr. B₁ is either directly or indirectly derived from the whole of Phr. A₁.
3. In the second extant example Phr. B₂ does not end “Hihóródó hihóródó”, but “. . . hihóródó”.
4. In the second extant example Phr. B₃ is an altered repeat of Phr. B₁.
5. In the second extant example Phr. B₄ is an altered repeat of Phr. B₃ which does not have a B-ending but a D-ending.
6. In Phr. A₁ of both extant examples the ending “Hiharin hiharin, Hiharin hiharin”, is substituted for an altered repeat of Phrs. A₁₋₃: but since Phrs. A₁₋₃ all end “. . . hiharin”, Phr. A₄ still has a fairly obvious relationship with them.

Hence in both extant examples Phr. A₁ has the closed A-ending “. . . hiharin”, and Phr. B₁ has a closed B-ending. Whereas the first half-measure has the tonally inconclusive open B-ending “Hihóródó hihóródó”, or “. . . hihóródó”, the second has the completely conclusive closed A-ending “Hiharin hiharin”. In the first extant example all phrase-endings conform to precisely the same pattern as in Types A(1-2) and B(1): but in the second all phrase-endings conform to the slightly different pattern:

A	B	:	A	B
B	A	:	D	A

Examples: *Cumha Mhorair Bhraighid-Albainn*,¹⁶ a C-tune; and *Aontlachd Mhic Neill*,¹⁷ a CD-tune.

CATEGORY C

In all tunes which belong to this category, Phr. A₄ is not an altered repeat of Phrs. A₁₋₃, and has no obvious musical relationship with them.

Type C(1)

May perhaps have been derived from Type B(2). There is only one extant example of it, and these are the chief respects in which it differs from tunes of Type A(1):

1. Phr. A₁ does not end "Hiharin hiharin", but has a D-ending.
2. Phr. B₁ is directly derived from the whole of Phr. A₁.
3. In Phr. A₄ the familiar ending "Hiharin hiharin, Hiharin hiharin", is conventionally substituted for an altered repeat of Phrs. A₁₋₃; and since Phrs. A₁₋₃ all have a D-ending, Phr. A₄ no longer has any obvious musical relationship with them, but only a purely conventional one.

Hence Phr. A₁ has a D-ending: but, as in Types A(1-2) and B(1-2), Phr. B₁ has a closed B-ending. Whereas the first half-measure has the tonally inconclusive open B-ending "Hihóródó hihóródó", the second has the completely conclusive closed A-ending "Hiharin hiharin". And all phrase-endings conform to the pattern:

D	B	:	D	B
B	D	:	B	A

Example: *Fáilte Sheòrais Oig*,¹⁸ a D-tune.

Type C(2)

There are three extant examples, and these are the chief respects in which they differ from tunes of Type A(1):

1. Phr. A₁ has a c-ending.
2. Phr. B₁ is derived from the whole of Phr. A₁.
3. In Phr. A₄ the ending "Hiharin hiharin, Hiharin hiharin", is conventionally substituted for an altered repeat of Phrs. A₁₋₃; and since they all have a c-ending, it has no obvious musical relationship with them, but only a purely conventional one.

Hence Phr. A₁ has a c-ending, and Phr. B₁ has a B-ending. Whereas the first half-measure has the tonally inconclusive open B-ending "Hihóródó hihóródó", the second has the

completely conclusive closed A-ending “Hiharin hiharin”. And all phrase-endings conform to the pattern:

C	B	:	C	B
B	C	:	B	A

Examples: *Fàilte Siosalaich Srathghlais*,¹⁹ and *Cumha nam Marbh*,²⁰ both c-tunes; and *Cumha Mhic Neill*,²¹ a CD-tune.

Type C(3)

There is one extant example; and the only respect in which it differs from tunes of Type C(2) is that Phr. B₂ has the closed A-ending “Hihóendam hiharin”. Hence, whereas the first half-measure most exceptionally has the closed, tonally conclusive A-ending “. . . hiharin”, the second has the closed, still more conclusive A-ending “Hiharin hiharin”. And all phrase-endings conform to the pattern:

C	B	:	C	A
B	C	:	B	A

Example: *Dastram gu Seinnim Pìob*,²² a CD-tune.

Type C(4)

There is only one extant example, and these are the chief respects in which it differs from tunes of Type A(1):

1. Phr. A₁ has a closed E-ending.
2. Phr. B₁ is derived from the whole of Phr. A₁, and has a closed D-ending.
3. Phr. B₂ has the open D-ending “Hiótraea hiótraea”.
4. In Phr. A₄ the closed A-ending “Hindarid hindarid, Hindarid hindarid”, is conventionally substituted for an altered repeat of Phrs. A₁₋₃; and since they all have a closed E-ending, Phr. A₄ has no obvious musical relationship with them, but only a purely conventional one.

Hence Phr. A₁ has a closed E-ending, and Phr. B₁ has a closed D-ending. Whereas the first half-measure has the tonally inconclusive open D-ending “Hiótraea hiótraea”, the second has the completely conclusive closed A-ending “Hindarid hindarid”. And all phrase-endings conform to the pattern:

E	D	:	E	D
D	E	:	D	A

Example: *Cogadh no Sìth*,²³ a CD-tune.

Type C(5)

There is only one extant example, and these are the chief respects in which it differs from tunes of Type A(1):

1. Phr. A₁ has a closed E-ending.
2. Phr. B₂ has the closed E-ending "*Cheendan cheembam*".
3. In Phr. A₄ the ending "*Hiharin hiharin, Hiharin hiharin*", is conventionally substituted for an altered repeat of Phrs. A₁₋₃; and since Phrs. A₁₋₃ all have a closed E-ending, Phr. A₄ has no obvious musical relationship with them, but only a purely conventional one.

Hence Phr. A₁ has a closed E-ending, and Phr. B₁ has a closed B-ending. Whereas the first half-measure has the closed E-ending "*Cheendan cheembam*," which tonally is not very conclusive, the second has the completely conclusive closed A-ending "*Hiharin hiharin*". And all phrase-endings conform to the unique pattern:

E	B	:	E	E
B	E	:	B	A

Example: *Bratach Bhàn nan Stiubhartach*,²⁴ a D-tune.

As this survey has shown, there are four extant examples of Category A, five of Category B, and seven of Category C. Each of these sixteen tunes, of course, has certain peculiarities of its own: but they all have the same general phrase-pattern; and, besides that, there are five other characteristics that they all have in common. First, Phrs. A₁ and B₁ always are tonally complementary. Secondly, Phr. B₂ always is a much-altered repeat of Phr. B₁ which also makes reference to Phrs. A₁ and A₂, and has a tonally inconclusive, or not completely conclusive, ending. Thirdly, Phr. A₃ always is an unaltered repeat of Phr. A₂. Fourthly, Phr. B₄ always is an altered repeat of Phr. B₃ which makes some sort of climax. And, fifthly, Phr. A₄ always has a tonally completely conclusive closed A-ending.

Now, whereas all but one of the nine extant examples of Categories A and B have precisely the same pattern of phrase-endings, the seven extant examples of Category C have no less than five different patterns of phrase-endings between them. All extant examples of this metre accordingly may now finally be sorted out into three somewhat different groups. These are distinguished from one another by the fact that in

each the phrase-endings conform to a different *type* of pattern; and they do not exactly coincide with Categories A, B and C.

In Group I, which comprises all nine extant examples of Types A(1-2) and B(1-2), Q. 1 has a *rising* sequence of phrase-endings, and so has Q. 2, but Q. 3 has a *descending* sequence, and so has Q. 4. In Group II, which comprises all six extant examples of Types C(1-4), Q. 1 has a *descending* sequence, and so has Q. 2, but Q. 3 has a *rising* one, and Q. 4 has a *descending* one. And in Group III, which only comprises the one extant example of Type C(5), Q. 1 has a *descending* sequence, and Q. 2 has a *level* one, but Q. 3 has a *rising* sequence, and Q. 4 has a *descending* one. Thus there are three very important respects in which Groups II and III both differ from Group I. First, they are not so numerous; for whereas there are nine extant examples of Group I, there are only seven extant examples of Groups II-III. Secondly, they are less homogeneous; for whereas all but one of the nine extant examples of Group I have exactly the same pattern of phrase-endings, the seven extant examples of Groups II-III have no less than five different patterns of phrase-endings between them. And, thirdly, Groups II-III have one musically anomalous characteristic that Group I does not possess; for in all extant examples of Group I Phr. A₄ has an obvious (or, at least, a fairly obvious) musical relationship with Phrs. A₁₋₃, but in all extant examples of Groups II-III Phr. A₄ has no such relationship with Phrs. A₁₋₃, but only a purely conventional one.

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There cannot, in fact, be much doubt that the types included in Group I were all evolved before any of those included in Groups II-III; and the types included in Groups II-III all seem to have been evolved in the course of an attempt to break away from the original pattern of phrase-endings, presumably because it no longer was felt to be sufficiently sophisticated. But, before any of the types included in Groups II-III were finally invented, it must already have ceased generally to be appreciated that even in Types B (1-2) Phr. A₄ still has a fairly close musical relationship with Phrs. A₁₋₃; and between the dates at which the latest of the types included in Group I and the earliest of those included in Groups II-III were first invented there must, therefore, have been a fairly long interval. All this tends to confirm the writer's own

impressions that most of the tunes included in Group I were originally composed well before the end of the seventeenth century,²⁶ and that most of those included in Groups II-III probably were not originally composed until well on in the eighteenth.²⁷ Perhaps we shall not be much mistaken if we suppose that all the types included in Groups II-III were first invented at various dates between 1700 and 1750.

Some of the tunes included in Groups II-III seem to have enjoyed a vogue which lasted from well before the end of the eighteenth century until well on in the nineteenth.²⁸ But in all the printed collections of pibroch which have since then been published—including Angus Mackay's (1839), Thomason's (1900), and P.S. (1925-57)—all extant examples of this metre have been set forth in various ways which unfortunately do not disclose their true metrical form; and "in modern days", as P.S. (1936:6:167) rightly remark, ". . . tunes of this particular metre are under suspicion and are seldom played". The writer hopes that, despite its apparent novelty, this account of them at least has shown how little strictly *musical* warrant there is for any such misgivings. And since the various names by which this metre has hitherto been called all clearly are very tendentious, he proposes henceforward to call it the "Metre of *Bodaich Dhubha nan Sligean*"—or, for short, the "B.D.S. Metre".

If all the foregoing analysis also has had the effect of enlarging our comprehension of the rigorous musical logic which governs the metrical and tonal structure of even the simplest classical pibrochs, the effort that it has cost us has not entirely been wasted; and when we finally go on to re-examine the "Primary 6:6:4 Metre" and the "Secondary 6:6:4 Metre" in the light of Joseph MacDonald's "Antient Rule", many of the insights that we have gained may perhaps stand us in good stead.²⁹

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NOTES

¹ For a fuller account of Joseph MacDonald, and of his *Compleat Theory*, see Lorimer 1962:1-5.

² Here is a comparison of (P.) the scale used in Highland pipe-music with (J.) the just scale, and (E.) the equal scale:

J.									
P.	G	A	B	C	D	E	F	G	A
E.	G [♯]			C [♯]			F [♯]	G [♯]	

For the measurements on which this diagram (approximately) is based, see MacNeill & Lenihan (1961), the only authoritative account of the pipe-scale that has hitherto been published. In conformity with all modern practice, none of the transcripts of pipe-music in this article includes a key-signature. An approximation—but *only* an approximation—can be obtained by playing them (e.g., on the pianoforte) with c and f both sharp, but with g natural.

- ³ The *canntaireachd* (syllabic notation) used in these studies in pibroch is practically the same as Colin Campbell's "Nether Lorn" *canntaireachd*, except that high A is represented by li, c by ò, B by ó. For full details of the Nether Lorn *canntaireachd*, see P.S. 1925: v-vi; for specimens of the modified system used in these studies, see Lorimer 1962:25-7; and for most of the standard abbreviations here used in writing pipe-music out in staff-notation, see P.S. (*passim*), and Campbell 1948:intro. 17, *et passim*.
- ⁴ P.S. 1938: 207, 209), and R.L. (1863.A.1): but cp. also Lorimer (1962:10-11, 20-4). In both the following analyses, the Greek letters α, β, γ, δ . . . , and κ, λ, μ, ν, respectively, denote beginnings and endings. Unlike the analysis of the *ùrlar* of *Bodaich Dhubha* given in Lorimer 1962:20-4, both these analyses are based on a comparative study of all extant tunes that have the same general phrase-pattern; and consequently they are much more illuminating.
- ⁵ Cp. *Fàilte Cloinn Dhòmhnuille* (Thomason 1900:178-9), in the *ùrlar* of which Phr. B₁ is derived from the first half of Phr. A₁ in almost exactly the same way as in *Bodaich Dhubha*.
- ⁶ This is simply a diagrammatic way of saying: (1) that the first half of Phr. B₁ has all four of the notes FECA, but no others, and has an A-beginning and a C-ending; and (2) that the second half of Phr. B₁ uses all four of the notes ECBA, but no others, and has an A-beginning and a B-ending. This "splitting" of the scale between two halves of one metrical unit ensures that each tonally is less complete than both together; and it is perhaps the commonest of the technical devices used in composing our classical pibrochs.
- ⁷ Here it is, of course, merely a coincidence that the same letters of the alphabet have had to be used to designate Phrs. A and B, and also to designate the theme-notes on which the phrase-endings of this tune are based.
- ⁸ P.S. 1938: 201-2. But for lack of space, it might also be demonstrated that, as in *Bodaich Dhubha*, both halves of every phrase (except Phr. A₄) are tonally complementary to each other.
- ⁹ P.S. 1934: 139-40. The only extant example of this metre in which it is not the case that Phr. A₂ = Phr. A₁, but that Phr. A₂ is an altered repeat of Phr. A₁.

- ¹⁰ Thomason 1900:178-9. The variations given in this version all are grossly corrupt. *Ruaig air Caiptein nan Gall*, for which see P.S. 1957: 260-1, and Lorimer 1962:9, 28⁸, is clearly a derivative of *Fàilte Cloinn Dhòmhnuill*, and has not here been counted as a separate tune.
- ¹¹ P.S. 1938: 207, 209. The *ùrlar* now has 17 bars, and so has Var. I: but cp. Lorimer 1962:10-11.
- ¹² P.S. 1925: 39-40; and cp. Lorimer 1962:13.
- ¹³ Thomason 1900:201-2. Some of the phrase-endings appear to have been somewhat garbled in transmission; and the versions that we possess are probably related to a now lost original in much the same way as *Ruaig air Caiptein nan Gall* to *Fàilte Cloinn Dhòmhnuill*.
- ¹⁴ P.S. 1938: 208-9. The *ùrlar* now has 18 bars: but cp. Lorimer 1962:11-12.
- ¹⁵ P.S. 1925: 25-7). Each whole measure now has only 15 bars: but cp. Lorimer 1962:12.
- ¹⁶ Campbell 1797: 159-62. The known history of this tune, for which see Lorimer 1962:14, affords an excellent example of the way in which all tunes of Categories B and C (i.e., all those in Phr. A₁ of which the ending "Hiharin hiharin, Hiharin hiharin", is conventionally substituted for an altered repeat of Phrs. A₁₋₃) were all too liable to be mutilated in transmission.
- ¹⁷ P.S. 1939: 244-5. Each whole measure now has only 15 bars: but cp. Lorimer 1962:14.
- ¹⁸ Campbell 1797: 110; and cp. Lorimer 1962:15.
- ¹⁹ Campbell 1797: 190-3; and cp. Lorimer 1962:15.
- ²⁰ Mackay 1862-40: 64. Each whole measure now has only 15 bars: but cp. Lorimer 1962:15-16.
- ²¹ Thomason 1900:119-20.
- ²² P.S. 1936: 166-7. Each whole measure now has only 15 bars: but cp. Lorimer 1962:15.
- ²³ Thomason 1900:132.
- ²⁴ P.S. 1938: 201-2.
- ²⁵ This classification broadly confirms the one provisionally worked out in Lorimer 1962:9-16; for, of the "six distinct metrical types" which there were postulated, "Types I-IV" coincide with those here included in Group I, and "Types V-VI" with those here included in Groups II-III. Considering that the criteria we initially adopted were so much blunter than those on which we have relied in this article, this final result is all the more gratifying.
- ²⁶ This supposition at least does not conflict with such other evidence as we possess. Of the nine extant examples of Group I, *Spaidsearachd Iarla Rois* is traditionally attributed to Donald Mòr MacCrimmon, who flourished early in the seventeenth century; Joseph MacDonald quotes it (1760-2:[32]); and, if we are right in thinking (above, n. 13) that some of its phrase-endings have been garbled in transmission, they had already been garbled by then. *Fàilte Cloinn Dhòmhnuill* (and its derivative *Ruaig air Caiptein nan Gall*), *Bodaich Dhubha nan Sligean* (both settings), and *Spaidsearachd Iarla Rois*, all seem to have been much elaborated or altered in transmission; and in *Thainig mo Rìgh air Tìr am Muideart* (a "secondary 6:6:4" pibroch said to have been composed in 1745) the opening phrases have clearly been borrowed from *Fàilte Cloinn Dhòmhnuill*. All this suggests (1) that these four

extant examples of Group I were all originally composed at a relatively early date, and (2) that all four of them once were very widely disseminated, but (3) that by 1745 *Fàilte Cloinn Dhòmhuill*, at least, was no longer very well-known. The fact that Joseph MacDonald quotes *Spaidsearachd Iarla Rois* and (1760-2:[38]) *Cumha Chaisteal Dhùnaomhaig* of course is evidence that both these tunes were still current in the mid-eighteenth century, but not that tunes of any similar type were still being composed.

- ²⁷ Of the 9 tunes included in Group I, 4 are D-tunes, 3 are C-tunes and 2 are CD-tunes: but of the 7 included in Groups II-III, 2 are D-tunes, 2 are C-tunes and 3 are CD-tunes. Thus about 44 per cent. of the tunes included in Group I are D-tunes, and only about 22 per cent of them are CD tunes: but about 43 per cent of those included in Groups II-III are CD-tunes, and only about 29 per cent of them are D-tunes. Although the sample on which they are based is only a very small one, these percentages are very striking; and at least they suggest that most of the tunes included in Groups II-III are probably of later origin than most of those included in Group I. But Joseph MacDonald (1760-2:[32] also quotes *Cogadh no Sith*; and Type C (4) must, therefore, have been invented before 1760 at latest.
- ²⁸ Thus according to P.S. 1936: 167, 1938: 202, and 1957: 253, 255, some of the tunes included in Groups II-III were often played in competitions held during the late eighteenth and early nineteenth centuries; and some also figure in several early mss.
- ²⁹ For one outstanding example of the advantages that may accrue from a working knowledge of the musical logic of pibroch, see P.S. 1930: 94-5. As the writers shrewdly remark, such knowledge may "also assist in the emendation of tunes which have come down to us in an obviously mutilated form", but perhaps its "greatest value would be as a guide to the would-be composer of piobaireachd". It is probably because such knowledge ceased, c. 1780, to be transmitted that so many of the "pibrochs" composed since c. 1825 are musically worthless. The writer, however, hopes that in the end these studies in pibroch may help to bring about a revival of pibroch-composition.

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