

# STUDIES IN PIBROCH

## I. THE "4:6:4:1 (OR 2)" METRE IN PIBROCH RECONSIDERED IN TERMS OF JOSEPH MACDONALD'S "ANTIEN'T RULE"

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Meaning regarded as an end of desire is value  
And unifies succession in time.

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The Rev. Patrick MacDonald claims ([1803] 1927: [i]), that his younger brother Joseph MacDonald, the author of *A Compleat Theory of the Scots Highland Bagpipe*, was "one of the most promising musical Geniuses of his time"; and he must indeed have been one of the most gifted, most original, and most energetic collectors of traditional Scottish music who ever lived. He was the son of Rob Donn's patron, the Rev. Murdoch MacDonald, Durness, and was born in Sutherland (or Strathnaver, as it then was called) in 1739. According to Patrick MacDonald (1784: [1]), their father taught all his children the first principles of music; and at fifteen Joseph not only "played on the violin, with an easy flowing execution, and in that expressive manner, which distinguishes real genius and feeling", but "had also made considerable progress in playing on the bagpipe". After spending a few years at the school of Haddington, he stayed for a short time in Edinburgh, and "there had an oppurtunity . . . of extending his musical knowledge, and improving his taste". Although he had come to be very fond of "the Italian music", he never lost "his passion for that of his native mountains"; and on returning to Strathnaver, where he spent over two years, he not only made a collection of traditional vocal airs, and wrote out "some of the best poems that were sung to them", but also "made a collection of the different kinds of bagpipe-music". No pibrochs had then been written down; and it must presumably have been from some traditional source that he obtained his own considerable knowledge of classical Highland pipe-music, and (as claimed on the elaborate title-page of his *Compleat Theory*) of "all the Terms of Art" that "its first

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Masters and Composers in the Islands of Sky & Mull” used in teaching their pupils. He may conceivably have obtained his knowledge from Angus Mackay, Gairloch, or perhaps even from Angus Mackay’s father, Iain Dall, Padruig Og MacCrimmon’s best pupil, who was born in 1666 and died in 1754, when Joseph MacDonald himself was fifteen. Joseph MacDonald in fact was the first collector of pibroch; and it was he who first wrote any of it down in staff-notation.<sup>1</sup> Colin Campbell did not compile his *Canntaireachd* Manuscript, the earliest complete collection of pibroch that we now possess, until 1797; and it is therefore all the more to be deplored that Joseph MacDonald’s “collection of the different kinds of bagpipe-music” apparently has not survived.

In 1760 Joseph MacDonald was commissioned to be an officer in the service of the East India Company. Patrick MacDonald expressly says (1784: [1]) that, before setting out for India, he gave one of his sisters a copy of some of the vocal airs that he had collected during the last two years: but that he took with him “all his other collections and papers, relating to Highland music and poetry”, and that “he employed the leisure of a prosperous voyage . . . in arranging and digesting these materials, with the view of publication”; and in a letter to his father, written soon after arriving in India, Joseph MacDonald himself laments (P. MacDonald 1784: [1]):

O! that I had been at more pains, to gather those admirable remains of our ancient Highland music, before I left my native country. It would have augmented my collection of Highland music and poetry, which I have formed a system of, . . . and propose to send soon home.

Though he seems chiefly to have been concerned with Highland vocal music, he had not ceased to be interested in bagpipe-music, and in the same letter he also says:

. . . I set the wrights to work, in a town on the coast of Persia, where we put in at, and got the black fellows, some of whom are very ingenious, to make me two or three whistles, *feadain meaghra*, which have answered so well as to enable me to preserve all my pipe-music. My good friend Mr. M. at London, has been so kind as to send me a fine Highland bagpipe, and a suit of Highland cloaths . . .<sup>2</sup> with which I expect yet to make a conquest of an Indian princess.

How many scholars of pipe-music to-day would have enough practical knowledge to be able to get some Persian craftsmen,

however ingenious, to make them some serviceable practice-chanters?

Joseph MacDonald can scarcely have had time to make a conquest of his Indian princess, for barely a year after arriving in India he died of a malignant fever (P. MacDonald 1784: 2; [1803] 1927: [i]). His work, however, did not all perish with him. In 1784 Patrick MacDonald published his epoch-making *Collection of Highland Vocal Airs*; and in the preface he declares (1784: 2) that it contains almost all the airs that Joseph MacDonald had copied out for his sister before leaving home, and that they form its “first and largest division”, which is headed “North Highland Airs” and contains 86 tunes. According to Patrick MacDonald ([1803] 1927: [i]), his brother’s treatise entitled *A Compleat Theory of the Scots Highland Bagpipe* was discovered in Bengal by Sir John MacGregor Murray, and when Sir John returned home he gave Patrick MacDonald “the copy he had secured”. Patrick MacDonald published a printed edition of his brother’s treatise in 1803, and a reprint of his edition was published in 1927. The printed text (cp. M. A. MacDonald 1953:210, 213, 215) is very corrupt. In this article, all quotations from Joseph MacDonald’s *Compleat Theory* will, therefore, be taken from his own original manuscript, which has fortunately been preserved and is now in the Laing Collection in Edinburgh University Library.<sup>3</sup>

The manuscript itself appears to be only a rough draft; and though the meaning always is fairly clear, there are a good many sentences which are not strictly grammatical and therefore require careful exegesis. According to one of the statements on the title-page, the manuscript contains, *inter alia*, “an Account of the Rules and method by which the Pipe Composition and Time were Regulated. . . . The Whole Carefully collected & preservd in its Antient Style and Form without Alteration or Amendment”. And one of the entries in the draft index at the end of the manuscript reads: “The Antient Rule for regulating Time & Composition”. All this plainly implies that it was from his traditional sources that Joseph MacDonald originally obtained his own knowledge of this “Antient Rule”; and he evidently regarded it as a fundamentally important part of the traditional musical theory of classical Highland pipe-music.

At the beginning of his discussion of the “Antient Rule”, Joseph MacDonald alleges (1760-2: [33]) that “the first Composers of Pipe Musick” had “never heard of any other

Instrument or known any of the Rules ever invented of Musick”; but that is certainly an exaggeration, for although the pibroch-composers of the sixteenth and seventeenth centuries probably had very little knowledge of any non-Celtic music, they must often have heard Scottish and Irish harp-music, and may well have been familiar with many of its rules. Joseph MacDonald then goes on to say:

here it may not be improper to discover the general rule by which they Taught and regulated the Time. . . . This Rule we may more properly call the Rule of Thumb. In effect it was much the same, for it was by the four Fingers of the Left hand that all their Time was measured and regulated; e.g. An Adagio in Common Time of such a style must not exceed or fall short such a number of Fingers, otherwise it was not regular. . . . They were sure to have no odd Numbers in any piece they designd to be regular. Their Adagios when regular commonly consisted of 4 Quarters. In each Quarter there were such a number of Fingers; (which we count as Bars) 2, 4, or 8 as the Quarter was long or short; or the Bar was subdivided into more Fingers according to their length, and thus they Adagios and Grounds<sup>4</sup> counted upon their 4 Fingers, and measured by their Ear—and when the Finger and Ear corresponded all was well.

The ordinar Length of a Pipe Adagio being 16 Fingers, [?] composd about 16 Bars, 4 in each Quarter.

In normal eighteenth-century usage “to discover” means “to reveal, disclose”. Consequently, Joseph MacDonald’s opening remark, that “here it may not be improper to discover the general rule”, strongly suggests that it may originally have been communicated to him as a professional secret, and under such restrictions that although he apparently saw no harm in writing it down, in English, in the rough draft of a book addressed to learned musicians, he would not necessarily have considered himself to be free to divulge it to every common piper.<sup>5</sup>

As Mr. Archibald Campbell has pointed out (1948: intro. 7), “by Adagio he means, clearly, what we call the ground or urlar” of a pibroch; and by “such a number” he seems to mean, as we should put it, “such and such a number”. Unless we suppose that Joseph MacDonald had himself been misinformed—and there is no evidence that he had—the traditional account of the matter seems, therefore, to have been that the old hereditary pipers of the sixteenth and seventeenth centuries had taught their pupils to regulate the metrical structure of the pibrochs that they composed by counting out the time on the

four fingers of the left hand. The conventional unit of measurement was, therefore, a "finger"; and, although in certain tunes one of our bars might be subdivided into several of these fingers, it was normally the case that one of these fingers had about the same length as one of our bars. No pibroch, moreover, was normally regarded as regular unless the ground consisted of four quarters, each of which contained two, four or eight fingers; and since the ground normally contained sixteen fingers, each of its four quarters normally contained four.

Whether because Joseph MacDonald was still so young when he died, or because it is not always clear, at first sight, exactly what he means,<sup>6</sup> his account of the traditional rule of composition has not yet been taken so seriously as it clearly deserves to be taken. If in this article we succeed in vindicating the truth of his important statements that "their Adagios when regular commonly consisted of 4 Quarters", and that "the ordinary length of a Pipe Adagio" was "16 Fingers . . . 4 in each Quarter", the two-hundredth anniversary of his death will thus, in some measure, have been fitly commemorated.

As the Piobaireachd Society (henceforth cited as P.S.) have pointed out (1930:3:94), Thomason's *Ceol Mor* (with supplement) contains 287 pibrochs, and Thomason himself classified 109 of these 287 tunes as "Four-lined Airs", in which each measure consists of four equal lines, of which Lines 1 and 2 are always identical or nearly so. About two-thirds of these "four-lined airs" have sixteen bars in a measure, and the rest have thirty-two; and it is at once apparent that all such tunes are completely consistent with Joseph MacDonald's "Antient Rule". Here, for example, is the *Urlar* of *Cumha Phadruig Oig* (Iain Dall's *Lament for Padruig Og*) divided into four quarters, and marked off in fingers: <sup>7</sup>

The image shows a musical score for the Urlar of Cumha Phadruig Oig, divided into four quarters and marked off in fingers. The score is written on four staves, each containing four measures. The first staff is marked with f.1, f.2, f.3, and f.4. The second staff is marked with f.5, f.6, f.7, and f.8. The third staff is marked with f.9, f.10, f.11, and f.12. The fourth staff is marked with f.13, f.14, f.15, and f.16. The notation includes various rhythmic values, including eighth and sixteenth notes, and rests, all within a common time signature.



Out of the 287 tunes contained in *Ceol Mor* (with supplement), Thomason, however, classified 139 as “Three-Lined Airs”, in which each measure consists of three unequal lines of six, six, and four (or less commonly, three, three, and two, or twelve, twelve, and eight) bars each; and according to P.S. (1930:3:94) nearly all of these three-lined airs can further be classified as either “primary” or “secondary”. The first of these terms is said to have been coined by Thomason, the second by the late Mr. Angus Campbell, Kilberry; and according to P.S. they may be defined as follows: (1) A “Primary 6:6:4 Pibroch” is one which is made up of two phrases, A and B, each of two bars, arranged

A	A	B
A	B	B
	A	B

and (2) A “Secondary 6:6:4 Pibroch” is one which is made up of four phrases, A and B, each of one bar, and C and D, each of two bars, arranged

A	B	C	D
C	B	A	D
	C	D	

And, finally, P.S. also say (1936:6:167) that there are “at least eleven excellent tunes” which belong to “a distinct and orthodox class of piobaireachd in metre 4:6:4:1 (or 2)”.

Now—although, of course, it is necessarily true that all “6:6:4” tunes have sixteen bars in a measure, and that all “4:6:4:2” tunes likewise have sixteen—it is obvious that no tune in any of these metres can be regarded as regular in the sense defined in Joseph MacDonald’s statement that no pibroch was regarded as regular unless the *urlar* consisted of four quarters, each of two, four, or eight fingers. Hence—if the account of these metres given in P.S. is indeed a true account of them—it follows (1) that out of 259 pibrochs which have eight ( $= 2^3$ ), sixteen ( $= 2^4$ ) or thirty-two ( $= 2^5$ ) bars in a measure, there are only 109 in which each measure consists of four quarters of two, four, or eight bars each, but as many as 139 in which each measure consists of three unequal lines of six, six, and four (or three, three and two, or twelve, twelve and eight) bars each, and 11 others in which each measure consists of four unequal units of four, six, four, and one (or two) bars;

and (2) that out of 259 cases there are, therefore, 109 in which the traditional account of the matter preserved by Joseph MacDonald is right, and 150 in which it is wrong. All this seems, on the face of it, so unlikely that the question arises whether the accepted account of these three metres, in fact, is true. The pibrochs in the "4:6:4:1 (or 2)" metre are so much less numerous than those in the "primary" and "secondary 6:6:4" metre that they may conveniently be taken as a test case; and since they have never before been studied at all thoroughly, they will here be examined in some detail.

According to P.S. (1936:6:167), the chief characteristics of the "4:6:4:1 (or 2)" metre are briefly as follows:

The metre may be described as three lines, generally in common time, the first line consisting of four bars, the second of six, and the third of four; with one, and occasionally two, extra bars of low A "Eallach's" tacked on at the end. In every case the first two bars of each line are the same, and the first and third lines are always similar, and sometimes identical, a fact responsible, perhaps, for the addition of the extra bar or bars as a distinguishing mark.

Some of these statements are so vague that one cannot help wondering whether those who drafted them can themselves have had any clear and definite idea of the metre they were trying to describe.

In *canntaireachd* (for some account of which see below, pp. 25-7) the conventional figure here termed a "low A 'Eallach'" is called "hiharin"; and it will henceforth be so designated. Unless the present writer has completely misunderstood them, P.S. must mean (1) that in this metre each measure strictly contained only fourteen bars: but (2) that Lines 1 and 3 were "always similar, and sometimes identical", and therefore were liable to be confused; and (3) that, so as to prevent this from happening, one or two extra bars, the contents of which were "Hiharin hiharin" or "Hiharin hiharin, Hiharin hiharin", were, "as a distinguishing mark", conventionally "tacked on at the end". Even at first sight, this appears to be a most unconvincing explanation.

Mr. Archibald Campbell (1948: intro. 14) calls this the "4:6:4:2 (or 1)" metre. Although he seems to have been almost as puzzled by it as P.S., his account of it is not quite so indefinite as theirs, and he says that it is:

. . . a sort of variety of the Primary form, practically a Primary piobaireachd with phrase A played once only in line 1, and two

extra bars, or one extra bar, added at the end of line 3 to make up the numbers. These extra bars, or bar, usually consist of “eallachs”, or drumming on low A. But phrase B is subject to alteration almost every time it occurs.

As Mr. Campbell himself adopts (1948: intro. 14) exactly the same definition of a “primary 6:6:4” pibroch as P.S., this must mean (1) that in this metre each measure is made up of two phrases, A and B, each of two bars, arranged

	A		B	
A		B		B
	A		B	

and (2) that, “to make up the numbers”, one or two extra bars, the contents of which are “Hiharin hiharin” or “Hiharin hiharin, Hiharin hiharin”, are added on at the end of Line 3. Mr. Campbell does not specifically say *what* numbers he thinks these extra bars (or this extra bar) were (or was) intended to make up. He seems, however, to mean that, since Lines 1, 2, and 3 together contained only fourteen bars, two extra bars (or one extra bar) had to be added on at the end of Line 3 so as to bring the number of bars in a measure up to a total of, as the case might be, sixteen, or fifteen. This clearly is not strictly compatible with the explanation that had previously been offered by P.S., and it seems, on the face of it, at least equally far-fetched.

If either of these two accounts of the metre is, nevertheless, a true account of it, one of its most obvious formal characteristics is that each of the three unequal lines of which each measure consists begins with Phr. A and ends with Phr. B. Now, at first sight, this characteristic may, perhaps, seem to be aesthetically quite pleasing: but the pattern as a whole is decidedly unsymmetrical, and although each measure contains four occurrences of Phr. B, each only contains three occurrences of Phr. A. This discrepancy is so startling that it must seriously be asked whether either of these two accounts of the metre can really be true.

There are, in fact, at least sixteen extant pibrochs in this metre. Twelve of them have 16 (4:6:4:2) bars in a measure, and no more than four of them have only 15 (4:6:4:1): but of the twelve that have 16 (4:6:4:2), one has two measures which have 17 (4:6:5:2), and another has one measure which has 18 (4:6:6:2). Thus, Line 1 always has four bars, Line 2 always has six, and Line 3 almost always has four: but in two measures of one tune



Line 3 has one extra bar, and in one measure of one other tune Line 3 has two extra bars; and whereas no more than four of all these sixteen tunes appear to have only one extra bar "tacked on at the end", no fewer than eleven of them appear to have two. Since there may conceivably be a few more extant pibrochs in this metre which have not yet been identified, these figures must, of course, be treated with due caution, but various conclusions may, with some confidence, be drawn from them.

First, it seems probable that all regular tunes in this metre must originally have had 16 (4:6:4:2) bars in a measure: but, secondly, in course of time, the underlying principle that initially determined the metrical structure of the last six bars of the measure ceased to be fully understood; and thirdly, this caused so much subsequent confusion (*a*) that in two measures of one of these eighteen tunes, and in one measure of another, one or two extra bars were later inserted in Line 3, and (*b*) that in four others one of the last two bars was later omitted. Hence, in principle, no extant pibroch in this metre which does not have 16 (4:6:4:2) bars in a measure will here be accepted as regular; and in the following survey of all known extant examples of it all those which (in this minimal sense) are regular will be marked \*, and all those which are not will be marked †.

The tunes themselves appear to be of six distinct metrical types. These six types together form a continuous though complex sequence, and each may provisionally be regarded as representative of one of the stages that the metre went through in the course of its development.

In Type I, which is probably the most primitive, Phr. A consists of a half-phrase of only one bar (which may conveniently be designated "phr. *a*"), and another half-phrase, the contents of which are "Hiharin hiharin"; and in two cases out of three Phr. B ends ". . . hihíódin". In bars 7-8 Phr. B always is much altered, and in all three cases it is altered so as to end "Hihóródó hihóródó". In bars 13-14 Phr. B always again is much altered. The contents of bars 15-16 are: phr. *a*, much altered, + "Hiharin hiharin". Of three such tunes that we possess, two are regular, and one is partly regular and partly irregular:

\* *Ruaig air Caiptein nan Gall (The Rout of the Lowland Captain)*: P.S. (1957:9:260-1); R.L. (1867.A.2).<sup>8</sup> Has hitherto been classified as "primary 6:6:4", but also has 16 (4:6:4:2) bars in a

measure. Comparison with Var. I, bars 1 and 15, establishes that the contents of *Urlar*, bar 15, are in fact a much-altered repeat of phr. *a*, and consequently that the contents of bars 15-16 are an altered repeat of Phr. A.

\**Lasan Phadruig Chaogaich* (*A Flame of Wrath for Patrick Caogach*): P.S. (1934:5:139-40); R.L. (1864. A.3). Has hitherto been classified as "primary 6:6:4", but has 16 (4:6:4:2) bars in a measure. One unusual feature is that in bars 5-6 Phr. A is altered initially, and the same altered form of Phr. A is repeated in bars 11-12, and again in bars 15-16.

†\**Bodaich Dhubha nan Sligean* (*The Old Men of the Shells*), setting No. 1: P.S. (1938:7:207, 209); R.L. (1863. A.1):

†(a) *Urlar and Var. I*. These measures both have 17 (4:6:5:2) bars. As P.S. rightly remark, "the first of the final two bars is not a mere play upon the low A's": but, far from being "a conspicuous feature of difference from any other 4:6:4:2 tune, or at least from any of the better-known ones", exactly the same also occurs in both completely regular examples of *this type*, and indeed is one of its chief characteristics. Comparison with Var. II (Singling and Doubling), bars 1-2 and 15-16, shows that the contents of *Urlar*, bars 16-17, as given in P.S., are in fact an altered repeat of Phr. A. Thus the metre strictly is not, as P.S. allege, 17 (4:6:6:1), but 17 (4:6:5:2), and the pattern of the last seven bars may, therefore, be stated as follows:

3. A; B" (3 bars: "Hiendre hedehò, Hiendre cheòhió, Daredehò dreòhió"); A' (2 bars: "Hiendreveò hihíódin, Hiharin hiharin").

Comparison with both regular examples of Type I (and with such tunes as, for example, *Spaidsearachd Iarla Rois* and *Cumha Chaisteal Dhùn-Naomhaig*, for both which see below, pp. 11, 12) strongly suggests (1) that Phr. B" did not originally possess three bars, but only two, and (2) that the contents of these two bars were "Hiendre cheòhió, Daredehò dreòhió". Owing to the fact that Phr. B consists of a half-phrase of one bar, followed by phr. *a*, Lines 1 and 2 and bar 16 all end ". . . hihíódin"; and bar 16 may, therefore, have been mistaken for the end of Line 3. As in P.S., where bar 17 is preceded by a double-bar (which marks it off from the rest of the measure), the final "Hiharin hiharin" would then have had to be regarded as hypermetrical; and one bar would also have seemed to be missing somewhere between bars 12 and 16, as given in P.S. Bar 13, the contents of which are "Hiendre hedehò", may, therefore, have been later inserted into Line 3 in order to plug this non-existent gap.

\*(b) *Var. II (Singling and Doubling)*. These both have 16 (4:6:4:2) bars; and all further variations exactly correspond.

Thus in Type I Phr. A consists of phr. *a* + "Hiharin hiharin"; in bars 7-8 Phr. B always is altered so as to end "Hihóródó hihóródó"; in bars 13-14 Phr. B always again is much altered; and the contents of bars 15-16 are phr. *a*, much altered, + "Hiharin hiharin". Thus the contents of bars 15-16 are simply an altered repeat of Phr. A; and the phrase-pattern of the measure as a whole may be stated as follows:

1. A (phr. *a* + "Hiharin hiharin"); B.
2. A; B' (altered so as to end "Hihóródó hihóródó"); B.
3. A; B" ; A' (phr. *a*, altered, + "Hiharin hiharin").

Whether that is the best way of stating it is, as will later be shown, another question.

In Type II, which was probably derived from Type I, Phr. A likewise consists of phr. *a* + "Hiharin hiharin"; and in three cases out of three Phr. B also ends "... hihíódin". In bars 7-8 Phr. B always is much altered, and in two cases out of three it is altered so as to end "... hihóródó". In bars 13-14 Phr. B always again is much altered. But in this type the contents of bars 15-16 are "Hiharin hiharin, Hiharin hiharin". Of three such tunes that we possess, one is regular, one is partly regular and partly irregular, and one is irregular:

\**Spaidsearachd Iarla Rois (The Earl of Ross's March)*: Thomason (1900:201-2). Has 16 (4:6:4:2) bars in a measure.

†\**Bodaich Dhubha nan Sligean*, Setting No. 2: P.S. (1938:7:208-9):

†(a) *Urlar*. Has 18 (4:6:6:2) bars. As P.S. remark, "Angus Mackay's setting, No. 2, conforms, in the variations, to the pattern 4:6:4:2 . . . But in the *Urlar* the third line is 6, not 4, and there is no authority for cutting anything out". Yet the gross discrepancy between the *Urlar* and all the variations is very surprising; and P.S. themselves are obviously uneasy about it.

It may reasonably be supposed (1) that Setting No. 2 was not derived from Setting No. 1 until after one extra bar had been inserted into Line 3 of its first two measures, and (2) that *Urlar* of Setting No. 2 originally ended:

3. A; B" (3 bars: "Hiendre hedehò, Hiendre cheòhió, Daredehò dreòhió"); A' (2 bars: "Dreveò hihíódin, Hiharin hiharin").

But—presumably because he thought that all regular tunes in

this metre ended "Hiharin hiharin, Hiharin hiharin", and because he did not realise (a) that they all originally had 16 (4:6:4:2) bars in a measure, and (b) that in this particular tune the contents of the last bar but one ("Dreveò hihíódin") were essentially a much-altered repeat of phr. *a*—somebody seems later to have tried to make sense of the last line of the *Urlar* by tacking on at the end one more bar, the contents of which also were "Hiharin hiharin".

\*(b) *Var. I (Singling)*. Has 16 (4:6:4:2) bars in a measure, and therefore is regular. But comparison with Setting No. 1, *Var. II (Singling)*, from which it clearly was derived, suggests that it may originally have ended:

3. A ("Hinòdarid hihíódin, Hiharin hiharin"); B ("Himòdarid hinòdarid, Hióòdarid hihíódin"); A "Hinòdarid hihíódin, Hiharin hiharin").

If so, it seems probable (1) that when the *Urlar* was altered so as to end "Hiharin hiharin, Hiharin hiharin", one extra bar which also contained "Hiharin hiharin" was likewise tacked on at the end of *Var. I (Singling)*, and (2) that, since the contents of what had been hitherto the second-last bar ("Hinòdarid hihíódin") were so similar to those of the bar which immediately preceded it ("Hióòdarid hihíódin"), what had been the second-last bar was now wrongly thought to be redundant and was therefore omitted. All this, however, is purely speculative. As already stated, *Var. I (Singling)*, in its present form, is regular; and all further variations exactly correspond.

† *Cumha Chaisteal Dhùn-Naomhaig (The Lament for the Castle of Dunyveg)*: P.S. (1925:1:25-7), R.L. (1865. B.2). Has only 15 (4:6:4:1) bars in a measure: but contents of *Urlar*, bar 15, are "Hiharin hiharin"; and comparison with *Spaidsearchd Iarla Rois* strongly suggests that this tune, too, must originally have had 16 (4:6:4:2) bars in a measure, and that the contents of *Urlar*, bars 15-16, were "Hiharin hiharin, Hiharin hiharin". If so, *Var. I (Singling and Doubling)* would both originally have ended "Hinen hinen hinen hinen, Hinen hinen hinen hinen"; and all further variations would have corresponded exactly to this. Once the underlying metrical principal had been forgotten, all this might well have seemed unduly prolix and somewhat wearisome: and it was doubtless in order to remedy this imaginary defect that bar 16 was later omitted. (Those who are inclined to object to this on the ground that it is purely speculative should examine the known history of *Cumha Mhorair Bhraighid-Albainn*, for which see below, p. 14).

Thus in Type II Phr. A consists of phr. *a* + “Hiharin hiharin”; in bars 7-8 Phr. B always is altered so as to end “. . . hihóródó”; in bars 13-14 Phr. B always again is much altered; and the contents of bars 15-16 are “Hiharin hiharin, Hiharin hiharin”. The contents of bars 15-16 may accordingly be regarded as essentially a much-altered repeat of Phr. A; and the phrase-pattern of the last six bars of the measure may, therefore, be stated as follows:

3. A; B” ; A’ (“Hiharin hiharin, Hiharin hiharin”).

In Type III, which probably was also derived from Type I, Phr. A ends “. . . hiharin”; and in the only extant example of this type Phr. B ends “. . . hihíóendam”. In bars 7-8 Phr. B is altered so as to end “Hihóródó hihíódin”, but whether that is characteristic of the type, or only of this particular tune, it is not possible to say. In bars 9-10 Phr. B is altered initially, and in bars 13-14 the same altered form of Phr. B itself is altered terminally. The contents of bars 15-16 end “. . . hiharin”. The only extant example of this type is regular:

\**Cumha Mhic Shuain a Ròraig* (*The Lament for MacSwan of Roaig*): P.S. (1925:1:39-40); R.L. (1866. A.2). Has 16 (4:6:4:2) bars in a measure: but Angus Mackay ([1826-40]:11:53-5) sets it out as 16 (4:6:6), and Thomason (1900:85-6), P.S., and Campbell (1948: text 6) all set it out as “primary 6:6:4”. Careful comparison with Var. I (Doubling), bars 1-2 and 15-16, shows that the contents of *Urlar*, bars 15-16, are essentially a much-altered repeat of Phr. A.

Thus in Type III Phr. A ends “. . . hiharin”; the contents of bars 15-16 also end “. . . hiharin”, and are essentially an altered repeat of Phr. A; and phrase-pattern of the last six bars may, therefore, be stated as follows:

3. A; B” ; A’ (ends “. . . hiharin”).

In Type IV, which is related to Type III in much the same way as Type II is related to Type I, Phr. A also ends “. . . hiharin”; and in two cases out of two Phr. B ends “. . . hihíódin”. In bars 7-8 Phr. B always is much altered—once so as to end “. . . hihóródó”, and once so as to end “Hihóródó hihóródó”. In one case out of two, but not in the other, Phr. B again is much altered in bars 13-14. As in Type II, the contents of bars 15-16 are “Hiharin hiharin, Hiharin hiharin”. Of two such tunes that we possess, one is regular, and one is irregular:



\**Cumha Mhorair Bhraighid-Albainn* (*The Lament for Lord Breadalbane*): Campbell (1797: 1: 159-62), where it is said to be "called Lord Bredalban's March";<sup>9</sup> Mackay ([1826-40]): 11:124-5); and Thomason (1900:345-6). Colin Campbell's version, the earliest that we possess, has 16 (4:6:4:2) bars in a measure,<sup>10</sup> and the *Urlar* ends "Hiharin hiharin, Hiharin, hiharin". But Angus Mackay's version has only 15 (4:6:4:1), and the *Urlar* ends "Hiharin hiharin". The final "Hiharin hiharin" seems, therefore, to have been omitted sometime between 1797 and (at latest) 1840. Thomason (1900:iii) cites Angus Mackay's unpublished manuscripts as his only authority: but by arbitrarily directing that Phr. A should be played twice at the beginning of Line 1, he converts this tune into the semblance of a "primary 6:6:4" pibroch, with one extra bar, the contents of which are "Hiharin hiharin", anomalously "tacked on at the end". All this affords an excellent illustration of the way in which tunes in this metre were liable to be mutilated when the principle which governed the metrical structure of the last six bars of the measure had once ceased to be fully understood. Cp. *Fàilte Siosolaich Srathghlais*, for which see below, p. 00.

†*Aontlachd Mhic Neill* (*Lachlan MacNeill Campbell of Kintarbert's Fancy*): P.S. (1939:8:244-5). Also has only 15 (4:6:4:1) bars in a measure: but comparison with *Cumha Mhorair Bhraighid-Albainn* likewise suggests that it, too, must originally have had 16 (4:6:4:2) bars in a measure, and that the *Urlar* originally ended "Hiharin hiharin, Hiharin hiharin": but that the last of these two bars was later omitted.

Thus in Type IV Phr. A ends "... hiharin"; in bars 7-8 Phr. B always is altered so as to end "... hihóródó" or "Hihóródó hihóródó"; in bars 13-14 Phr. B almost always again is much altered; and, as in Type II, the contents of bars 15-16 are "Hiharin hiharin, Hiharin hiharin". As in Type II, the contents of bars 15-16 may accordingly be regarded as essentially an altered repeat of Phr. A; and the phrase-pattern of the last six bars may, therefore, be stated as follows:

3. A; B"; A' ("Hiharin hiharin, Hiharin hiharin").

In Type V, which is not very closely related to Types I-IV, and may have resulted out of an attempt to break away from their somewhat stereotyped phrase-patterns, Phr. A does not end "Hiharin hiharin" or "... hiharin", but in five cases out of six it ends on Low A; and in most cases Phr. B ends on Low G. In bars 7-8 Phr. B always is much altered,

and in three cases out of six it is altered so as to end “Hihóródó hihóródó”. In bars 13-14 Phr. B is always much altered. And, as in Types II and IV, the contents of bars 15-16 are “Hiharin hiharin, Hiharin hiharin”. Of six such tunes that we possess, four are regular and two are irregular:

\**Cumha Mhic Neill (The Lament for MacNeil of Barra)*: Thomason (1900:119-20). Has 16 (4:6:4:2) bars in a measure.

\**Bratach Bhàn nan Stiubhartach (The Stewarts' White Banner)*: P.S. (1938:7:201-2). Also has 16 (4:6:4:2) bars in a measure.

\**Fàilte Sheòrais Oig (Young George's Salute)*: Campbell (1797:1:110). This version, the earliest that we possess, has 16 (4:6:4:2) bars in a measure, and the contents of bars 15-16 are “Hiharin hiharin, Hiharin hiharin”. But Angus Mackay's version, printed in P.S. (1957:9:245-5) has only 15 (4:6:4:1). Cp. above, *Cumha Mhorair Bhraighid-Albainn*.

\**Fàilte Siosolaich Srathghlais (Chisholm of Strathglass's Salute)*: Campbell (1797:1:190-3), where it is said to be “called Marsah na Shisalach”.<sup>11</sup> This version, also the earliest that we possess, has 16 (4:6:4:2) and ends “hiharin four times”. But Angus Mackay's MS. version, printed in P.S. (1957:9:252-3), has only 15 (4:6:4:2). Cp. above, *Cumha Mhorair Bhraighid-Albainn*.

†*Dastram gu Seinnim Pìob (Proud Am I to Play a Pipe)*: P.S. (1936:6:166-7). Has only 15 (4:6:4:1) bars in a measure. But cp. above, *Fàilte Sheòrais Oig*.

†*Cumha nam Marbh (The Lament for the Dead)*: Mackay ([1826-40]:1:64). This version has only 15 (4:6:4:1) bars in a measure: but cp. above, *Fàilte Sheòrais Oig*. Although Thomason (1900:iv) cites Angus Mackay's unpublished manuscripts as his only authority, the version that he himself prints (1900:267) has some peculiar features. In a footnote appended to each of the first four measures, he says that each “generally finishes with two Eallachs”—i.e. with one bar, the contents of which are “Hiharin hiharin”. But he himself arbitrarily omits this final bar; and by directing that Phr. A should throughout be played twice at the beginning of Line 1, he converts this tune into the semblance of a “primary 6:6:4” pibroch. This Procrustean solution of the problem incidentally shows how closely the “4:6:4:2” metre and the “primary 6:6:4” metre in fact must be related to each other: but Thomason does not appear to have had any authority for it; and it also shows that nobody who cannot give a really clear and definite account of the metre of any pibroch should attempt to remedy

its apparent or actual defects merely by “mucking about” with the traditional versions of it. Cp. above, *Cumha Mhorair Bhraighid-Albainn*.

Thus in Type V Phr. A does not end “Hiharin hiharin” or “. . . hiharin”; but in bars 7-8 Phr. B always is much altered, and usually is altered so as to end “. . . hihóródó” or “Hihóródó hihóródó”; in bars 13-14 Phr. B always again is much altered; and, as in Types II and IV, the contents of bars 15-16 are “Hiharin hiharin, Hiharin hiharin”. Thus in bars 15-16 the same familiar ending still goes on being conventionally substituted for an altered repeat of Phr. A; and—subject to the reservation that there is no longer any obvious musical relationship between Phrs. A and A’—the phrase-pattern of the last six bars may, therefore, be stated as follows:

3. A; B” ; A’ (“Hiharin hiharin, Hiharin hiharin”).

In the only extant example of Type VI, which is fairly closely related to Type V, Phr. A ends “Hindarid cheen”; and Phr. B ends “Hiótraea hihadin”. In bars 7-8 Phr. B is altered to “Hiótraea hiótraea, Hiótraea hiótraea”. In bars 9-10 (most unusually) Phr. B is altered so as to end “. . . hiótraea”. The contents of bars 15-16 are “Hindarid hindarid, Hindarid hindarid”. The only such tune that we possess is regular:

\**Cogadh no Sith (War or Peace)*: Thomason (1900:\*132).  
Has 16 (4:6:4:2) bars in a measure. This is the only “4:6:4:2” tune which does not end “Hiharin hiharin” or “. . . hiharin”.

Thus in Type VI Phr. A does not end “Hiharin hiharin” or “. . . hiharin”; in bars 7-8, again in bars 9-10, and yet again in bars 13-14, Phr. B is much altered; in bars 15-16 a purely stereotyped ending is conventionally substituted, much as in Type V, for an altered repeat of Phr. A; and—subject to the reservation that, as in Type V, there is no obvious musical relationship between Phrs. A and A’—the phrase-pattern of the last six bars may, therefore, be stated as follows:

3. A; B” ; A’ (“Hindarid hindarid, Hindarid hindarid”).

Two important conclusions that can be drawn from this investigation of all extant examples of the “4:6:4:2” metre are: (1) that in bars 7-8 Phr. B always is much altered, and in twelve cases out of sixteen is altered so as to end “Hihóródó hihóródó” or “. . . hihóródó”; and (2) that in bars 13-14 Phr.

B almost always again is much altered, but not so as to have either of these endings. Subject to the reservation that in Types V and VI there is no obvious musical relationship between Phrs. A and A', the phrase-pattern of the measure as a whole may now be restated as follows:

	A	B	
A		B'	B
A		B''	A'

This way of schematising the pattern has the great advantage of making it quite clear that, admittedly in various much-altered forms, Phrs. A and B both occur four times each in the whole measure, and that no "extra bars" in fact have been "tacked on at the end". But it also has some great disadvantages. The measure has now been divided into three unequal lines of 4:6:6 bars; and, even although the whole measure now contains the same number of occurrences of Phr. A as of Phr. B, the arrangement still seems oddly unsymmetrical. For, whereas each of the first two lines begins with Phr. A and ends with Phr. B, the third line likewise begins with Phr. A but ends with Phr. A'; and whereas Phr. B always is much altered in bars 7-8 (i.e. in the *middle* of Line 2), and in twelve cases out of sixteen is altered so as to end "Hihóródó hihóródó" or "... hihóródó", Phr. A always is altered in bars 15-16 (i.e. at the *end* of Line 3), and always is altered so that the whole measure ends "Hiharin hiharin" or "... hiharin", or, in Type VI, "Hindarid hindarid". Clearly, it must conventionally have been required of all tunes in this metre that they should have one or other of these familiar endings; and that, no doubt, is why at the *end* of Line 3 Phr. A always is altered as it is. But there is no obvious explanation of the fact that Phr. B always is much altered in the *middle* of Line 2 (and again, it may be noted, in the *middle* of Line 3), or of the fact that in the middle of Line 2 it so often is altered so as to end "Hihóródó hihóródó" or "... hihóródó". All these apparently anomalous features of the "4:6:4:1" metre can, however, be fully explained in terms of Joseph MacDonald's "Antient Rule".

In this connection, three of the musical examples which he uses to illustrate his argument are especially significant. If allowance is made for certain peculiarities of notation which are sufficiently well known, the first of these three examples (J. MacDonald 1760-2: [32]) can definitely be identified as (cp.

P.S. 1925:1:25) a quotation of *Cumha Chaisteal Dhùn-Naomhaig, Urlar*, bars 1-2:

(a) J. MacD.:. *slow*



(b) P.S.:

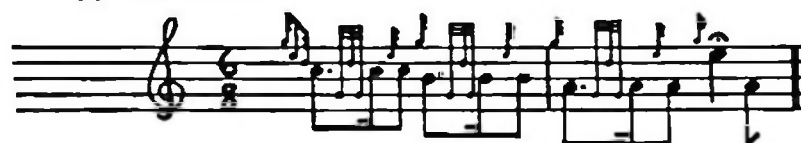


The second (J. MacDonald 1760-2: [32]) is equally clearly (cp. Thomason 1900:\*132) a quotation of *Cogadh no Sìth, Urlar*, bars 1-2:

(a) J. MacD.:

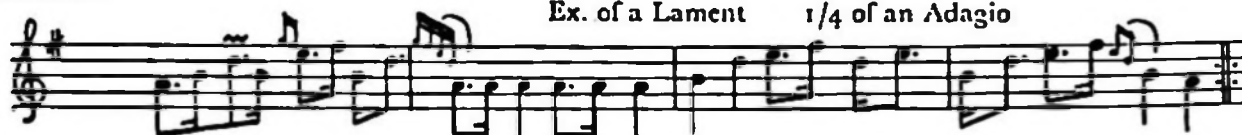


(b) THOMASON:



And the third (J. MacDonald 1760-2: [38]) is clearly (cp. Thomason 1900:201) a quotation of *Spaidsearachd Iarla Rois, Urlar*, bars 1-4:

(a) J. MacD.:



(b) THOMASON:

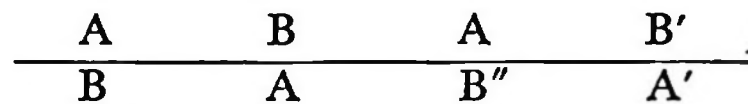


As we have already seen (above, pp. 12, 16, 11), these three tunes all undoubtedly are in the "4:6:4:2" metre.<sup>12</sup> But if Joseph MacDonald had not regarded them as regular, in the sense defined in his own statements that "their Adagios when regular commonly consisted of 4 Quarters", and that "the ordinar length of a Pipe Adagio" was "16 Fingers . . . 4 in each Quarter", he probably would not have used them to illustrate his own argument; and indeed he labels the third of them "¼ of the Adagio of a Lament". Hence we may fairly conclude that Joseph MacDonald himself regarded the "4:6:4:2" metre



as one in which each measure consisted, not of three unequal lines of 4:6:6 bars, but of four quarters of four fingers each.

Most students of pibroch are so accustomed to think of tunes like *Bodaich Dhubha*, *Cumha Chaisteal Dhùn-Naomhaig* and *Bratach Bhàn nan Stiubhartach* as “4:6:4:2 (or 1)” tunes that this may initially be regarded as a very startling suggestion. Let us now, therefore, make the experiment of taking the same basic phrase-pattern and schematising it in terms of Joseph Mac-Donald’s “Antient Rule”; and let us begin by dividing it in two:



If only because this makes it quite clear that the pattern, in fact, is perfectly symmetrical, it is at once apparent that we have stumbled on a much more significant way of schematising it. And now that the pattern has been divided into two half-measures of eight bars each, it seems not only to be symmetrical but also to have much more internal complexity than before. Phrs. A and B are alternated so that in each of the two half-measures each of them occurs twice: and, except that in the second half-measure Phrs. A and B are interchanged, the second half-measure is almost exactly the same as the first. Each half-measure is, therefore, an exact counterpart of the other: but the first begins with Phr. A and ends with Phr. B', and the second begins with Phr. B and ends with Phr. A', so that neither has *either* the same beginning *or* the same ending as the other, and neither has *both* the same beginning *and* the same ending as the whole measure, which begins with Phr. A and ends with Phr. A'. Moreover, the alteration that Phr. B always undergoes in bars 7-8 now falls at the *end* of the first half-measure and clearly is parallel to the alteration that Phr. A always undergoes at the *end* of the second half-measure. Only a tonal and metrical analysis can fully explain why Phr. B so often is altered so as to bring it about that the first half-measure ends “Hihóródó hihóródó” or “. . . hihóródó”: but this purely metrical analysis at least explains why Phr. B always is altered in bars 7-8.

Let us now take the further step of dividing the pattern into four:



This is clearly a still more powerful way of schematising it; for since the measure has now been divided into four equal quarters of four bars each, Phrs. A and B are combined always in pairs, and even on first hearing the metrical structure of the whole measure can, therefore, immediately be apprehended. Q. 1, the first of the four quarters of the measure, begins by stating Phr. A and ends by counterstating Phr. B; Q. 2 also begins by stating Phr. A, but ends by stating Phr. B', which usually (though not always) ends "Hihóródó hihóródó" or "... hihóródó"; and that is the end of the first half-measure. As we have already seen, the second half-measure is essentially an exact counterpart of the first, in which Phrs. A and B are interchanged. Q. 3 accordingly begins by stating Phr. B and ends by counterstating Phr. A. Q. 4 likewise begins by stating Phr. B (which thus falls, not in the middle of a line, but at the beginning of a quarter) and ends by stating Phr. A'; and the whole measure thus ends "Hiharin hiharin" or "... hiharin", or, in Type VI, "hindarid hindarid".

All this is very satisfying: but it is still only an hypothesis that this way of schematising the pattern is, in fact, the best way of schematising it; and since, in such cases, one concrete example carries much more conviction than any amount of "abstract reasoning concerning number and quantity", let us now complete the experiment by subjecting the *Urlar* of *Bodaich Dhubha nan Sligean* (P.S. 1938:7:207) to a fairly detailed tonal and metrical analysis. First let us divide it into four quarters of four fingers each:

The musical score is presented in four systems, each containing four bars. The lyrics are written below the notes, and structural labels (A, B, A', B') are placed above the bars to indicate phrasing. The lyrics are as follows:

- System 1: f.1 Hi-en-hò-drò hi-liò-din f.2 Hi-ha-rin hi-ha-rin f.3 Hi-en-dre he-de-hò f.4 Hi-en-hò-drò hi-liò-din
- System 2: f.5 Hi-en-hò-drò hi-liò-din f.6 Hi-ha-rin hi-ha-rin f.7 Hi-en-ò-din f.8 Hi-en-dre-ò Hi-hó-ró-dó hi-hó-ró-dó
- System 3: f.9 Hi-en-dre he-de-hò f.10 Hi-en-hò-drò hi-liò-din f.11 Hi-en-hò-drò hi-liò-din f.12 Hi-ha-rin hi-ha-rin
- System 4: f.13 Hi-en-dre dre-ò-liò f.14 Dre-de-hò dre-ò-liò f.15 Hi-en-dre-ve-ò hi-liò-din f.16 Hi-ha-rin hi-ha-rin

For reasons that have already been explained (above, p. 10), it has here been assumed that Phr. B" originally contained only two fingers, and that bar 13 as now numbered was later interpolated into Q. 4.

*Bodaich Dhubha* is a "C-tune"—that is to say, it belongs to the large class of pibrochs in which C, but not D, is used as a melody note; and, like many other C-tunes, it uses all five notes of the pentatonic scale ABC EF, but also extends it upwards and downwards by adding the two extra notes High A and Low G. In the *Urlar*, neither of these two extra notes occurs, and Phrs. A and B' only contain the notes ABC E: but Phrs. B, B", and A' contain all five of the notes ABC EF. The gives the following phrase-by-phrase distribution of notes:

F		F	F F
E E	E E	E E	E E
C C	C C	C C	C C
B B	B B	B B	B B
A A	A A	A A	A A

The tonic throughout is Low A, to which, of course, the drones of the Scots Highland bagpipe are tuned.

Q. 1, the first of the four quarters of the *Urlar*, begins by stating Phr. A, which consists of two half-phrases, each of one finger. *f.1*, the first of these two half-phrases, is the one that we have already designated "phr. a"; and its contents are "Hienhòdrò hihíódin". Since its initial cadence ("Hien . . .") directly descends from E, the dominant, to Low A, the tonic, it has a tonally emphatic beginning; since its terminal cadence (" . . . hihíódin") also descends from the dominant to B, the supertonic, but then finally to the tonic, it has a tonally fairly conclusive ending; and in so far as it thus has both a tonally emphatic beginning and a tonally conclusive ending, it is tonally self-contained. But since it does not contain F, it is not tonally complete: and, as we shall see, its ending is not tonally completely conclusive. The contents of *f.2*, the second of the two half-phrases, are "Hiharin hiharin", a double-cadence which twice directly descends from the dominant to the tonic, and therefore is tonally very conclusive indeed. Taken as a whole, Phr. A therefore has both a tonally emphatic beginning ("Hien . . .") and a tonally very conclusive ending ("Hiharin

hiharin”), and therefore is tonally completely self-contained. Phr. A, however, does not contain F, and therefore is not tonally complete.

Q. 1 ends by stating Phr. B, which also consists of two half-phrases, each of one finger. *F.3*, the first of these two half-phrases, may conveniently be designated “phr. *b*”; and its contents are “Hiendre hedehò”. This is clearly a tonally-expanded derivative of phr. *a*. As it contains the “missing note”, F, “which being struck gives all the rest their scope”, it immediately solves the tonal problem inherent in Phr. A: but it does not contain B, the supertonic, and therefore itself is not tonally complete. Moreover, although it has the same tonally emphatic beginning (“Hien . . .”) as phr. *a*, it ends on C, the middle note, and therefore is not tonally self-contained. *F.4*, the second of the two half-phrases of which Phr. B is composed, is simply, but most unexpectedly, a repeat of phr. *a*. Thus, although phr. *b* is itself derived from phr. *a*, Phr. B consists of phrs. *b* + *a*. Since it contains all five of the notes ABC EF, it is tonally complete; and since it has both the same tonally emphatic beginning (“Hien . . .”) as Phr. A, and the same tonally fairly conclusive ending (“. . . hihíódin”) as phr. *a*, it is tonally fairly self-contained. As we have already seen, phr. *b* is in itself an effective solution of the tonal problem initially inherent in Phr. A. But whereas the first half of Q. 1 ends “Hiharin hiharin”, the second half ends “Hienhòdrò hihíódin”, and “Hienhòdrò hihíódin” is not tonally quite so conclusive an ending as “Hiharin hiharin”; and, owing to the fact that phr. *a* is used both as the first half of Phr. A and as the second half of Phr. B, Q. 1 is also unduly repetitive. Hence there still is plenty of room for further development.

Q. 2 begins by restating Phr. A. Thus, just after it has been repeated in *f.4*, phr. *a* is again repeated in *f.5*; and although this demonstration of its versatility is quite a good musical joke, it makes it essential that phr. *a* should not be repeated again in the rest of Q. 2. Q. 2 accordingly ends, not by restating Phr. B, but by stating Phr. B'. Like Phrs. A and B, Phr. B' consists of two half-phrases, each of one finger. The first, *f.7*, is essentially a tonally-reduced derivative of phr. *b*; and its contents are “Hienódin hiendreò”. Since this ends on C, and does not contain F, it is neither tonally self-contained nor tonally complete. The contents of *f.8*, the second of the two half-phrases of which Phr. B is composed, are “Hihóródó hihóródó”, a double-cadence which twice begins on the dominant, but

twice directly descends to the supertonic and insistently dwells on it. Thus, although there is no repetition of phr. *a*, the cost of avoiding it is indeed a heavy one: for, taken as a whole, Phr. B' does not contain F, and therefore is not tonally complete; and, although it has the same tonally emphatic beginning ("Hien . . .") as Phrs. A and B, its ending ("Hihóródó hihóródó") is tonally very inconclusive indeed. All this serves not only to make Q. 2 more varied than Q. 1, but also to heighten the listener's awareness that this is only the end of the first half-measure, and that the whole tonal and metrical pattern of the *Urlar*, as yet, is incomplete.<sup>13</sup>

In the second half-measure, everything is, as it were, turned inside-out. Q. 3 begins by stating Phr. B, and ends by stating Phr. A. Each of the two phrases is presented in exactly the same form as in Q. 1, and neither of them undergoes any development. But, simply by thus reversing them, Q. 3 makes an entirely fresh start; for, whereas "Hienhòdrò hihíódin" first occurs in *f.10*, "Hiharin hiharin" first occurs in *f.12*, and hence it results that the first half of Q. 3 does not have tonally so conclusive an ending as the second. But the second half of Q. 3 does not contain F, and therefore is not tonally complete; and, owing to the fact that phr. *a* occurs in *f.10* and again in *f.11*, Q. 3 is just as repetitive as Q. 1. Some further development still, therefore, is possible.

Q. 4 begins by stating Phrs. B'' and ends by stating Phr. A'. Like Phrs. A, B, and B', Phr. B'' consists of two half-phrases, each of one finger, and it is essentially a tonally-expanded elaboration of phr. *b*; for in *f.13* "Hiendre . . ." is expanded into "Hiendre cheòhió", and in *f.14* ". . . hehedò" is similarly expanded into "Daredehò dreòhió". Phr. B'' thus contains all five of the notes ABC EF, and therefore is tonally complete: but, although it has the same beginning ("Hien . . .") as Phrs. A, B, and B', it ends on the supertonic, and therefore is not tonally self-contained. Phr. A' also consists of two half-phrases, each of one finger. *f.15*, the first, is a tonally-expanded repeat of phr. *a* in which "Hienhòdrò . . ." is changed into "Hiendreveò . . ."; and the contents of *f.16*, the second, are "Hiharin hiharin". Phr. A' thus has the same tonally emphatic beginning ("Hien . . .") and the same tonally very conclusive ending ("Hiharin hiharin") as Phr. A: but, unlike Phr. A, it contains all five of the notes ABC EF, and therefore is tonally complete. Phr. A' is, therefore, the only phrase in the whole measure which is both tonally complete and tonally completely



self-contained; and it thus sums up the pattern as a whole, and closes it. Taken as a whole, Q. 4 has the same tonally emphatic beginning ("Hien . . .") as Qq. 1, 2, and 3; but each of its two component phrases is tonally complete; the ending of the first is not tonally conclusive, and the ending of the second is tonally very conclusive indeed. All this not only provides an effective solution of both the problems which still remained unsolved at the end of Q. 3, but serves also to emphasise the fact that the second half-measure has now been completed, and that the whole tonal and metrical pattern of the *Urlar* has successfully reached its conventionally-appointed end.

As this somewhat technical analysis has shown, Q. 1 states Phrs. A and B, and although it thus provides a satisfactory solution of the tonal problem implicit in Phr. A, two further problems still remain to be solved—namely (1) that Q. 1 is unduly repetitive, and (2) that the ending of the second half of Q. 1 is not tonally so conclusive as that of the first. By stating Phrs. A and B', Q. 2 succeeds in solving the first of these two problems, but only at the cost of bringing it about that the second half of Q. 2 is not tonally complete, and that the ending of the first half-measure is tonally very inconclusive indeed. Q. 3 accordingly makes a new start by stating Phrs. B and A; and this reversal of them effectively solves the second of the two problems which remained unsolved at the end of Q. 1, but only at the cost of bringing it about (1) that the second half of Q. 3 is not tonally complete, and (2) that, taken as a whole, Q. 3 is just as repetitive as Q. 1. By stating Phrs. B" and A', Q. 4 solves both these problems; and the tonal expansion by which it solves them also has the effect of finally cancelling out the tonal reduction which has already occurred in Q. 2. The four-quartered pattern that both half-measures thus together make up is not nearly so intricate as the patterns embodied in many "primary 6:6:4" and in all "secondary 6:6:4" pibrochs: but it is nevertheless very well knit, and so full of metrical and tonal subtlety that—even although it only uses five of the chanter's nine notes—it is capable of giving endless æsthetic pleasure.

If we had begun by carving up the *Urlar* of *Bodaich Dhubha* in the way that all modern authorities have hitherto regarded as orthodox, we should never have been able to perceive most of the subtleties that this analysis has brought to light; and there cannot, the writer thinks, be much doubt that the best possible way of schematising all tunes in this metre is the one that we have adopted in this article. From all that has been said, the

writer is himself inclined to draw the following conclusions: (1) The way in which all tunes in this metre have hitherto been set forth on the printed page not only obscures but falsifies their true musical form; (2) All regular tunes in this metre must originally have had 16 (4:4:4:4) bars in a measure; (3) In all regular tunes in this metre, each measure is made up of two phrases, A and B, each of two fingers, arranged:

A	B
A	B'
B	A
B''	A'


Thus, (4) No tune in this metre is regular unless each measure consists of four quarters each of four fingers; hence (5), In so far as it applies to the eighteen tunes that have here been taken as a test case, the truth of Joseph MacDonald's account of the "Antient Rule for regulating Time and Composition" has fully been vindicated; and (6) In future all that he has to say about the traditional musical theory of pibroch should, therefore, be taken more seriously than it has been taken in the past.

In themselves, most of the tunes that we have examined in this article are not very interesting, and even among pipers these tentative conclusions will probably not excite much of a stir. But when we go on to re-examine the two "6:6:4" metres in the light that they afford, we shall find that they have some fairly far-reaching implications.<sup>14</sup>

#### CANNTAIREACHD

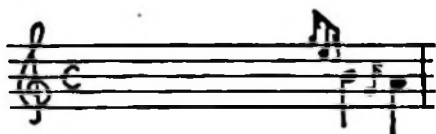
In *Canntaireachd*, the vocal notation traditionally used in pibroch, melody-notes are represented mostly by vowels (sung at the pitch of the notes they represent) and grace-notes mostly by consonants. The following list contains all pieces of *canntaireachd* used above, with their equivalents in staff notation:

P. 12:   
 Hi-ha-rin hi-ha-rin

also written   
 Hi-ha-rin hi-ha-rin

and   
 Hi-ha-rin hi-ha-rin

P. 15:



... hi-hió-din



Hi-hó-ró-dó hi-hó-ró-dó

P. 17:



Hi-en-dre he-de-hò Hi-en-dre che-ò-hió Dare-de-hò dre-ò-hió



Hi-en-dre-ve-ò hi-hió-din Hi-ha-rin hi-ha-rin

P. 20:



Hi-en-dre he-de-hò Hi-en-dre che-ò-hió Dare-de-hò dre-ò-hió



Dre-ve-ò hi-hió-din Hi-ha-rin hi-ha-rin



Hin-ò-darid hi-hió-din Hi-ha-rin hi-ha-rin



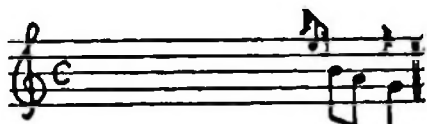
Him-ó-darid hin-ò-darid Hió-ò-darid hi-hió-din

P. 21:



Hin-en hin-en hin-en hin-en Hin-en hin-en hin-en hin-en

P. 22:



... hi-hió-en-dam



Hi-hó-ró-dó hi-hió-din

P. 28:

Hin-darid che-en

Hió-tra-ca hi-ha-din

Hió-tra-ca hió-tra-ca Hió-tra-ca hio-tra-ca

Hin-darid hin-darid Hin-darid hin-darid

This system of *canntaireachd* is practically the same as that used by Colin Campbell in his *canntaireachd* manuscript, except that ò represents C and ó represents B. For a full account, see P.S. (1925:1:v-vi).

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#### NOTES

- <sup>1</sup> Until the Disarming Act (1747) was finally repealed in 1782, no Highlander, as Miss M. A. MacDonald points out (1953:211), might lawfully possess a bagpipe. Doubtless for this reason, Joseph MacDonald always speaks of pipe-music as a relic of the past; and like most collectors of oral tradition, he much overestimated the rate at which the traditional material in which he was interested was dying out.
- <sup>2</sup> On one of the blank pages towards the end of Joseph MacDonald's manuscript, there is a charming watercolour drawing of a piper, in full Highland dress, playing his pipe. Though it shows great artistic sensibility, it clearly is not the work of a practised draughtsman; and since everything is reversed as in a mirror-image, it is probably a self-portrait of Joseph MacDonald, playing the "fine Highland bagpipe",

and wearing the "suit of Highland cloaths", that his friend "Mr. M." had sent him.

- <sup>3</sup> Miss MacDonald assumes (1953:212) that Sir John Murray MacGregor found Joseph MacDonald's own original manuscript of his *Compleat Theory*, and gave it to Patrick MacDonald; and she then suggests (1953:215), first, that "being anxious to have the Theory published", Patrick MacDonald, "an old man, and none too rich, . . . handed it over to the antiquaries"; secondly, that "they employed a 'hack' to 'dress it up' for publication"; and thirdly, that this hack, wrongly supposing that Joseph MacDonald's notation was old-fashioned, "tried to alter it into the more fashionable notation of his own day". All this may indeed be true: but what Patrick MacDonald himself says ([1803] 1927: [i]) is that his brother's treatise was discovered in Bengal by Sir John MacGregor Murray; and that, when he returned home, Sir John "forwarded the copy he had secured to the Editor, as a monument of the genius and abilities of a long-lost brother". Patrick MacDonald thus himself accepts full editorial responsibility for the text printed in 1803; and we cannot exclude the possibilities (1) that Sir John MacGregor Murray may only have secured an inferior transcript of Joseph MacDonald's own original manuscript, and (2) that it was from this inferior transcript that the printed text was set. This question cannot, however, be settled until an authoritative edition of Joseph MacDonald's manuscript is published.
- <sup>4</sup> Between "they" and "counted" the words "Adagio and Grounds" have been added above the line. But the text probably was meant to read: "they counted Adagios and Grounds upon their 4 Fingers".
- <sup>5</sup> Cp. Lorimer (1949:10): ". . . one thing that has *not* come down to us is a knowledge of the theory of music underlying pibroch. That theory was obviously a major branch of what the MacCrimmons taught, and doubtless it is because the musical theory of pibroch-composition perished with the hereditary pipers that later pibroch is so unsatisfactory. . . . Until the complete musical theory of pibroch is recovered, the tradition must be regarded as one that is slowly dying on its feet."
- <sup>6</sup> Cp. Miss M. A. MacDonald (1953:210): "A great number of leading pipers studied the work, but all were perplexed and confused by its contents. . . . The consensus of opinion was that Joseph must have been an extremely careless notation scribe—so careless, in fact, that the work was worthless."
- <sup>7</sup> Cp. P.S. (1930:3:83). Nowadays, when writing pipe-music in staff notation, it is not customary to include a key-signature. A fairly close approximation of all transcripts of pipe-music contained in this article can be obtained by playing them, e.g. on the pianoforte, in the key of A Major, but with G natural.
- <sup>8</sup> In a definitive study, it would, of course, be necessary to trace the history of each particular tune through all the various manuscripts. But this would have taken far too much space; and as the manuscripts themselves are not readily accessible to most readers, reference has, where possible, been made to the latest printed text. All R. L. references are to the Sound Recording Archive of the School of Scottish Studies.

*Fàilte Cloinn Dhòmhnuaill*, printed in Thomason (1900:178-9) is



another (probably earlier) version of *Ruaig air Caiptein nan Gall*; but its variations are very corrupt.

- <sup>9</sup> *Cumha Lachlainn Mhóir* (*Lament for Lachlann Mór Maclean*), printed in Thomason (1900:93-4), is another version of the same tune.
- <sup>10</sup> It should, however, be noted that in this version, doubtless because one of Colin Campbell's sources had wrongly supposed that *Cumha Mhorair Braighid-Albainn* was of the same metrical type as *Spaidsearachd Iarla Rois*, Phr. A does not end ". . . hiharin", but ". . . hiharin hiharin", and therefore contains  $2\frac{1}{2}$  bars. Cp. Colin Campbell's version (printed in P.S. 1925:1:27) of *Cumha Chaisteal Dhùn-Naomhaig*, in which, doubtless because one of his sources supposed that in bars 7-8 of all regular tunes in this metre Phr. B was altered so as to end "Hihóródó hihóródó", Phr. B' does not end ". . . hihóródó", but "Hihóródó hihóródó", and therefore also contains  $2\frac{1}{2}$  bars.
- <sup>11</sup> *Spaidsearachd Cloinn Mhic Aoidh* (*The Mackays' March*), printed in Thomason (1900:187), is another version of the same tune.
- <sup>12</sup> The repeat-mark at the end of the quotation from *Spaidsearachd Iarla Rois* presumably was due to a slip of Joseph MacDonald's pen.
- <sup>13</sup> Our hypothesis thus enables us to explain why, in bars 7-8, Phr. B so often is altered so as to end "Hihóródó hihóródó". That in itself is a strong point in its favour; and it is probably a safe assumption that all other alterations of Phr. B which occur in these bars are such as to bring it about that the first half-measure has, unlike the second, a tonally inconclusive ending.
- <sup>14</sup> For a tentative account of these implications, see Lorimer (1961:6-10).

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