

Unravelling the birl: using basic computer technology to understand traditional fiddle decorations

Stuart Eydmann

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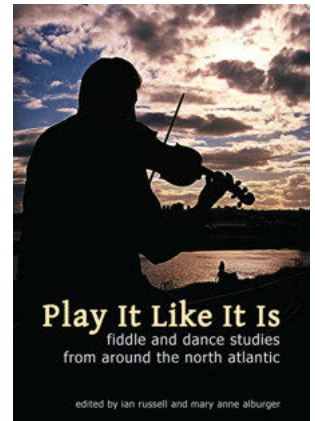
Play It Like It Is

Fiddle and Dance Studies from around the North Atlantic

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Unravelling the birl: using basic computer technology to understand traditional fiddle decorations

STUART EYDMANN

Traditional fiddle music written down in conventional Western musical notation only provides a guide to how the music is actually played. Similarly, written descriptions of technical and stylistic characteristics of a performance can help supplement the musical score but can only go so far in recording or communicating what is actually happening. In Scotland, however, the unrivalled heritage of notated and published traditional fiddle music, which was supported by an early and popular high level of musical literacy, has had long term implications for both the transmission and the content of the music involved. Consequently, for many musicians the printed page takes precedence. Through paper-centred education, formal recitals, recording, broadcasting, and competitions, notes written on staves have come to define the ‘authorized’ and to dictate the assumed ‘traditional’ ways of doing things.

A recent example from my own experience bears this out. I agreed to give a few informal fiddle lessons to a friend, a highly competent musician who has come to the fiddle after a conventional violin education. Like many late learners, he is highly enthusiastic, questions everything, and is keen to learn from any source available. He came to me because he was having trouble playing birls. The birl is a common decoration in Scottish traditional instrumental music, a motif of three short successive notes of the same pitch that is normally notated as two semi-quavers followed by a quaver (see Figure 1).



Figure 1 The Birl

The student had all the printed resources he needed, and was making progress, but was unable get the birls to sound as he wanted; something was lost between the page and the player. He had also listened to a wide range of fiddlers, but how the birl actually sounded eluded him. The players’ performances also complicated how he perceived the birls, since the musicians often added birls which were not

written down, or substituted individual notes for birls which were actually printed in the music. My friend's musical training had given him no preparation for this state of affairs, and although he could accurately sight-read at speed, that was of little assistance. I found that only by playing the birl for him on the fiddle was I able to communicate at least one way of performing it.

This experience provided the impetus for the present research, concerning how the birl might be explained and understood, and how this, and other, micro-elements of traditional fiddle performing style might be examined in order to provide insights into wider themes.

The birl

In the Scottish fiddle tradition, when the birl commonly appears within a melody the figure is often referred to as a 'birlin' [birling] note. Some Scottish fiddlers prefer the term 'shiver', which no doubt reflects the bowing action employed, perhaps related to the 'shake', an eighteenth-century term for a trill.

The birl also occurs as 'gracings', extra notes which the player can interpolate at will, in order to ornament, vary by substitution, or otherwise add interest to their playing. Since the figure is sounded very quickly, it slips into the melody without noticeably disrupting the pulse of the music, and brings liveliness and variety to it.

This does raise the problem of description: that is, whether or not such notes should be classed as ornaments in the classical sense, as additions or embellishments to a given melody. In the fiddling and piping traditions the boundaries between the melody and the ornamentation are often blurred. With the pipes, in particular, the gracings have often become thought of as, or required to be, indistinguishable from the tune itself. Many performers who have learned the music by ear, and many listeners, may not think in terms of melody and ornamentation being separate, but, instead, perceive the piece as a complete sequence of notes.

In some ways, the onomatopoeic term birl, with (in Scots) a rolled 'r', suggests the rapidly repeating notes involved in the performed figure. Birl in Scots also means 'to revolve rapidly, to whirl round, dance; make a rattling or whirring sound' (*Concise Scots Dictionary*). The word may also be a portmanteau form, blending 'birl' and 'whirl'. According to the prevailing dialect it can be pronounced as 'birl', 'birel', 'burrel' or other variants. In North America 'birling' is a lumberjack's term, probably imported from Scotland, for the sport of balancing on, and spinning, floating logs. As a gracing, the birl also exists in the bagpipe tradition. On the Scottish great Highland bagpipe, repeated notes are not possible on an open ended chanter (the fingering pipe) without introducing shorter notes of a different pitch between them, due to the continuous column of air produced by the bag. As a consequence, standardized fingerings provide groups of grace notes of different pitches, to more easily solve this technical problem. The piper's birl is a particularly distinct gracing involving the repetition or 'doubling' of the low A by twice sounding rapidly the low G note, the lowest of the chanter scale, before each A using the little finger of the lower hand.

In a well-executed birl one should hear a crisp rippling sound not unlike the 'trrr...' produced with a rolled tongue, and the playing of a birl is often taken as a measure of a piper's mastery of the instrument.

Fiddlers who follow the pipe tradition can, consciously or subconsciously, imitate the sound of the pipes in appropriate pieces through the use of birls on the A string. Being an open string, the possibility of fingering ornamentation with lower and higher notes is limited and therefore the birl is sounded through bowing. It is fascinating to speculate on where it was heard first – on fiddle, pipes or even through Gaelic or Scots speech patterns – and how it came into the native idiom, although the bagpipe seems to offer the strongest case. David Johnson argues for the bagpipes:

Fiddle and pipe birls are certainly historically connected, though it is not clear which instrument copied the effect from which. It is noticeable, however, that fiddle birls occur almost exclusively in 'pipe style' pieces up to 1750 or so. One of the pieces in 'Bagpipe humour' in the Skene manuscript of 1717, for example – *Cauld Kail* in Aberdeen – is given with three different versions of the 2nd strain, and two of these contain birls.¹

Johnson goes on to note that Skene's comments (between the lines of music) suggest that fiddlers were still experimenting with birls at that time. Elsewhere, Mary Anne Alburger has shown how the birl has long been linked to the music of the Highlands when she notes the high frequency of the figure in Angus Cumming's *Collection of Strathspeys or Old Highland Reels of 1780*, the first collection published by a person from Strathspey, where, the publisher claimed, 'this species of Scottish music is preserved in the greatest purity'.²

In considering the origin and absorption of the birl I am drawn to Hugh Cheape's suggestion³ that our traditional dance music may have developed in Medieval times from a common stock of native motifs, figures, fragments and phrases used spontaneously by the early pipers to construct or improvise highly personal 'tunes' on the spot in a manner still found in some Eastern European cultures. Thus the birl could have been just one of a number of structural motifs which, over time, became fixed in individual melodies, and also survived as ornaments. This concept might also help account for the great similarity of a number of early dance tunes and the occurrence of the same motifs in many traditional airs.

As part of the basic building-blocks of the Scottish tradition, the birl can also be heard in varying degrees in the fiddling of cultures in close musical contact with Scotland. The birl is not generally identified with the music of Shetland, but it is heard there as an ornament in the playing of some individuals on archive recordings and also present in the melodies of more recent, mainland Scotland, influenced by compositions such as Shetlander Tom Anderson's reel, 'Da Grocer' (see Figure 2).⁴

In Ireland, the birl is heard primarily in the fiddling of the most northern counties, in particular Donegal, but has since passed into wider currency with the



Figure 2 'Da Grocer'

development of a generic Irish fiddle style. There, the birl is known as the 'treble' and 'trebling', similar to the 'tripling' found in the bagpipe graces, and now also heard on instruments other than the fiddle. Interestingly, there is an Irish reel, 'The Reel with the Beryl', a version of the tune known in Scotland as 'Drowsy Maggie', recorded from concertina player Elizabeth Crotty of Kilrush, Co. Clare in the 1950s,⁵ that presumably takes its name from the Scottish term. Inevitably, birls are also heard in the Scottish bagpipe and Highland repertory of Cape Breton, where birls are termed 'burls', 'cuts', 'da-da-dums', 'doodles', or '*geàrraidhean*' (Scottish Gaelic for 'cuttings' in pipe music). Some Cape Breton fiddlers on commercial recordings appear to make a special feature of the birls in their playing, and the motif is common in the melodies of recent compositions such as 'The Trip to Windsor'.⁶

Taken together, these examples lead me to suggest that the birl can serve as an indicator of Scottish musical dissemination, one at least as valuable as repertory and tune families whose distribution has been recorded to date. It would be fascinating to investigate the incidence of the birl in other fiddle traditions, particularly those which have not been touched by the Highland bagpipes.

There is ambiguity, though about the birl, since publishers and transcribers of fiddle music, and writers on the subject, do not all agree on the nature and relevance of the figure. Although written as two semi-quavers followed by a quaver, David Johnson rightly points out that this does not properly reflect how the birl is heard, suggesting that it is more akin to two demi-semi quavers and a dotted quaver, and ethnomusicologists such as Peter Cooke and Peggy Duesenberry have found it necessary to write it this way in their transcriptions (see Figure 3).



Figure 3 Birl as notated by Peter Cooke and Peggy Duesenberry

Then there is the issue of just how the birl should be performed. According to James Scott Skinner (1843-1927) it should be played: 'near the point of the bow... don't grip the bow too tight.'⁷ James Hunter states that it is: 'like a little drum roll' and 'is best executed by playing near the point of the bow and giving a subtle flick of a loose wrist'.⁸ North-East fiddler Alastair Hardie says that it should be: 'executed

at the point of the bow and with a quivering movement of the hand, the stroke could be likened to an abbreviated form of the tremolando (the rapid reiteration of a note), particularly associated with orchestral string playing).⁹ Hardie also recommends 'a slight stiffening of the right fore-arm'.¹⁰ However, David Johnson also writes that 'A fiddle birl is taken in separate bows near the point, the bow moving less than a centimetre each way. As with the bagpipe birl, the listener hears it not as individual notes, but as a kind of ripple.'¹¹ Of the Cape Breton fiddling tradition, MacGillivray states that the birl:

may be bowed in either of two methods: (1) with alternating up and down strokes of the bow, or (2) with one stroke in a single direction. The most adept fiddlers can 'cut' as effortlessly bowing downwards as they can upward. The best 'cuts' result from the wrist action of the player, not the shoulder motion.¹²

In my opinion, no written description can capture exactly how the birl is bowed, and in any case, no two players I know do it the same way. It is just one of these things in the tradition which is best demonstrated or worked out for oneself after careful observation, listening and guidance.

The issue of just when the birl should be used is also problematic. In *The Fiddle Music of Scotland*, Hunter omits the birl from his chapters 'The Scottish Idiom' and 'Hints on Bowing Technique', relegating it to a footnote to a Scott Skinner tune.¹³ Similarly, the birl is not included in Collinson's *National and Traditional Music of Scotland*.¹⁴

Those involved in editing the earliest published collections of fiddle music would no doubt have known and assumed a wide knowledge of traditional practice and would have kept birls to a minimum in the interest of clarity on the printed page, and in the face of the difficulties of accurate notation and the prevailing technical and economic constraints of printing. Most of the collections of Scottish fiddle music currently in print have tended to recycle the settings from older collections with few containing versions taken down from actual contemporary performance. The printed collections have therefore tended to hide the true incidence of the birl in the tradition and, given its absence from the page, those who have learned and taught by the book have come to assume that they are not, and by extension, should not be there.

There is also evidence that the birl was just too traditional for some editors, players, and propagandists who sought to promote a more refined Scottish music. Thus, the revivalists and 'improvers' of the mid-nineteenth century onwards worked to iron out many ornaments and stylistic elements of the tradition they perceived as uncouth. In some cases, the birl was replaced with dotted figures, which were thought more 'modern', more classically 'violinistic' (and therefore better), and perhaps also more North-East in character. Skinner, in his *Guide to Bowing* (c. 1900), attacked the 'doodle' (in the playing of Strathspeys), that common figure where the three notes of the birl are followed by a fourth of the same pitch, as a 'quaint but senseless feature of the past ages':

In the opinion of Peter Milne and other experienced players, this auld-farrant and unnecessary 'jink' is lacking in dignity, and shows poverty of invention. We are improving and find the effect named obsolete, or rather unnecessary, on the ground of tradition. We merely say let the tree roots be left and the branches snedded off so as to give more strength and life. One can have his hair cut without losing his head.¹⁵

One telling example of Skinner's 'improving' approach was in his reworking of the opening strain of William Marshall's 'The Marquis of Huntly', in order to remove the doodle which 'robs the opening strain of its boldness'. The audacious Skinner described his new version as being of 'the modern school' (see Figure 4).



Figure 4 The Opening of William Marshall's 'The Marquis of Huntly', as interpreted by James Scott Skinner¹⁶

At the same time, Skinner noted that 'the birl is the feature of the best reels' and worked to corral the birl into a class of tunes he called 'birlin' reels, where the figure was allowed to survive as a special feature.¹⁷ In doing so he encouraged the isolation and exaggeration of the birl – preserving it as a kind of musical equivalent of the spiky turrets which typified the historically derived ornamented architecture of the time. Furthermore, playing in concert, as in the emerging reel and strathspey orchestras of his day, there was no place for the heterophony of the communal tavern or kitchen sessions, and, again, the spontaneous, highly individualistic use of the birl was discouraged, or, at best, standardized.

There may be parallels here with the bagpipe world as the late nineteenth and early twentieth centuries saw many of the characteristics of old piping styles ironed out to form a more refined and standardized music backed by publication of authorized versions. This also involved the composition of a new wave of four-part marches and showpiece reels suited to the competition and recital platforms. Consequently, some fiddlers (including Skinner) came self-consciously to adopt, and indeed contribute to, this emerging modern repertory. Thus the fiddle birl, which may have originated on the chanter, came full circle and became firmly re-associated with the music of the pipes.

What more can we learn about the birl?

Although we have recordings and live performances, the speed of the music makes it difficult to trust the human ear and to isolate individual components for comparison

and analysis. From the earliest days of ethnomusicology workers in the field sought mechanical means to aid the transcription, description and comparative analysis of the music under study. Peter Cooke, formerly of the School of Scottish Studies, Edinburgh University, was something of a pioneer in the use of the melograph (see Figure 5) in relation to traditional fiddle music in Scotland. Building on earlier work he had done on Ugandan music, he used the facilities of the University's Department of Linguistics to produce pitch and spectral envelopes of fiddle music which offered graphical comparison with his notated transcriptions. This allowed him to plot the relative duration of individual notes to discuss the infra-rhythmic structure of Shetland fiddling and in particular the characteristic 'lilt' and 'lift' in reel playing.

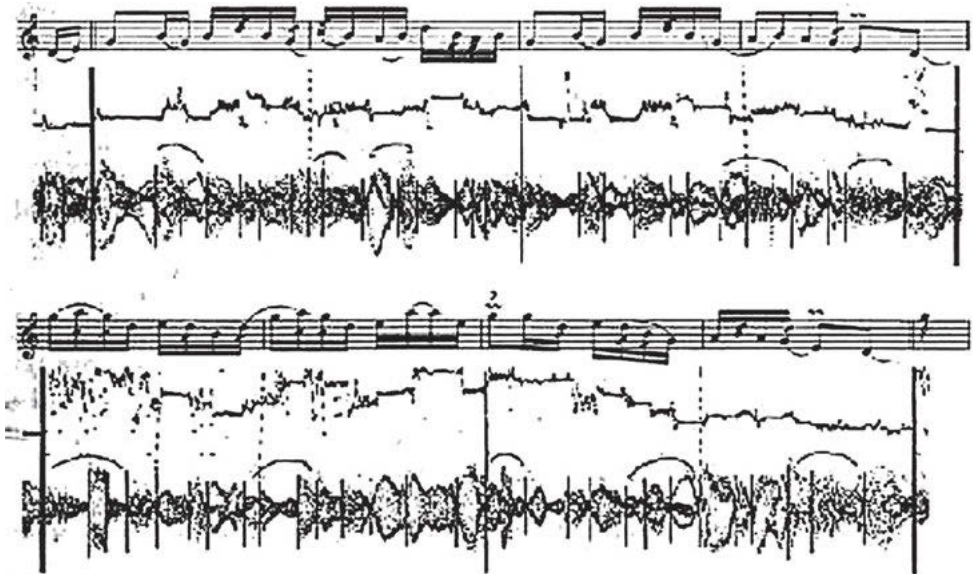


Figure 5 Peter Cooke's transcription above melograph print-out¹⁸

As a postgraduate student of Peter's in the late 1980s, I remember him showing me a print-out of a recording of Irish fiddler Tommie Potts which he had produced in conjunction with Mícheál Ó Súilleabháin's PhD study of the highly individualistic Dublin fiddler.¹⁹ The equipment used was specialized, inflexible, expensive, and wholly inaccessible to the average scholar or player. Fortunately, affordable modern computers and software now allow us many of the same facilities.

Computer analysis

Using a low specification laptop personal computer running Microsoft Windows 95 and the budget software SoundForge XP, it is possible to record digitally onto the computer's hard disk as a 'wave' file (*.wav) through the microphone or 'line-in' inputs. The wave form for the recording can be displayed on screen and the file manipulated and analysed in a number of ways.

Looking at a fragment of an early gramophone recording by James Scott Skinner playing his strathspey 'The Devil in the Kitchen'²⁰ within the computer environment one can, for example:

- Filter out the crackle and hiss of the old recording (although this is best done with other specialist software or appropriate 'plug-ins').
- Home in on an individual bar, phrase, figure or note on screen adjusting the degree of 'zoom' accordingly.
- Isolate the figure under study while discarding the remaining material.
- Loop the playback of the birl for repetitive listening.
- Slow the music down while maintaining the pitch.
- Measure the length of a note or figure with precision.
- Compare relative note lengths.
- Identify bowing changes.
- Read off average relative pitch using the 'statistics' analysis tool.

In Figure 6 we can clearly see that Skinner is actually sounding a birl of proportions closer to 1:1:4 than the 1:1:2 conventionally written in music collections.

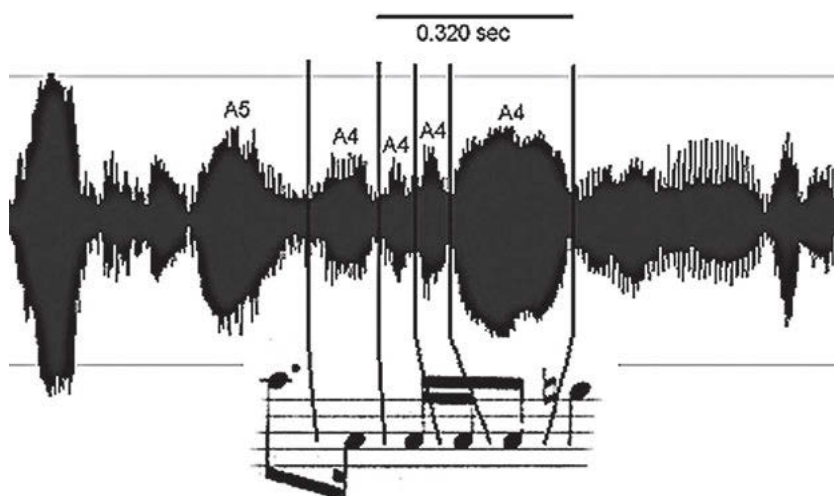


Figure 6 The Birl from James Scott Skinner's recording of 'The Devil in the Kitchen'

Conclusions

Micro analysis could be a valuable means of understanding musical character and dissemination. The birl is just one of a number of components which can and should be scrutinized. Modern, everyday computers are an accessible resource which could have far reaching possibilities in musical analysis, transcription, and education.

Notes

¹ David Johnson, *Scottish Fiddle Music in the 18th Century: A Music Collection and Historical Study* (Edinburgh: John Donald, 1984), pp. 120-121.

- ² Mary Anne Alburger, *Scottish Fiddlers and their Music* (London: Gollancz, 1978), p. 76.
- ³ Hugh Cheape, *The Book of the Bagpipe* (Belfast: Appletree, 1999), pp. 39-40.
- ⁴ Alastair J. Hardie, *The Caledonian Companion* (Woodford Green, Essex: EMI, 1981), p. 76. See also *The Silver Bow: The Fiddle Music of Shetland*, Topic TSCD469, 1995, track 6.
- ⁵ Michael Tubridy, *Mrs. Crotty of Kilrush*, leaflet (Dublin: Irish Traditional Music Archive, [n.d.]).
- ⁶ By Dan R. MacDonald, see: www.thesession.org/tunes/display/1074. Since presenting this paper I have encountered Kate Dunlay and David Greenberg, *Traditional Celtic Violin Music of Cape Breton: The Dungreen Collection* (Toronto: Dungreen, [c. 1996]), which makes reference to the birl and its execution. Recorded examples of the music in the collection which feature birls can be sampled at: www.cranfordpub.com/tunes/CapeBreton/Elizabeth'sBigCoat.htm, and www.cranfordpub.com/tunes/CapeBreton/JohnnySullivan.htm. The birl in the English fiddle tradition is referred to in Paul E. W. Roberts' paper included in this volume.
- ⁷ James Scott Skinner, *A Guide to Bowing: Strathspeys, Reels, Pastoral Melodies, Hornpipes, etc.* (London: Bayley & Ferguson, [c. 1900]; repr. edn, Edinburgh: Hardie, [c. 1984]), p. 16.
- ⁸ James Hunter, *The Fiddle Music of Scotland* (Edinburgh: Chambers, [c. 1979]), p. xxxi, fn 205.
- ⁹ Hardie, p. 75.
- ¹⁰ Ibid.
- ¹¹ Johnson, p. 120.
- ¹² Allister MacGillivray, *The Cape Breton Fiddler* (Sydney, Cape Breton: College of Cape Breton Press, [c. 1981]), p. 5.
- ¹³ Hunter, p. xxxi.
- ¹⁴ Francis Collinson, *The Traditional and National Music of Scotland* (London, Henley, Boston: Routledge and Kegan Paul, 1966).
- ¹⁵ Skinner, p. 17.
- ¹⁶ Ibid.
- ¹⁷ Ibid.
- ¹⁸ 'Jack Broke the Prison Door', Willie Hunter, senr, School of Scottish Studies Archive SA1972/112/1A, in Peter Cooke, *The Fiddle Tradition of the Shetland Isles*, Cambridge Studies in Ethnomusicology (Cambridge: Cambridge University Press, 1986), p. 99, Ex. 41.
- ¹⁹ Mícheál Ó Súilleabháin, 'Innovation and Tradition in the Music of Tommie Potts' (PhD Thesis, Department of Social Anthropology, Queens University, Belfast, 1987).
- ²⁰ The recording and manuscript can be accessed at www.abdn.ac.uk/scottskinner/display.php?ID=JSS0611.