

# **‘Tuning In’**

**Practices in tuning and pitch related inflections in the Donegal fiddle sound community.**

**Aidan O’Donnell  
B.A. (Hons). M.A. (Hons)**

**A thesis submitted for the degree of Doctor of Philosophy**

**School of Arts and Humanities of Ulster University**

**September 2019**

*I confirm that the word count of this thesis is less than 100,000 words*

## Table of Contents

Acknowledgments	vii
Note on the attached Appendices	viii
List of Figures	ix
List of Tables	xv
Abstract	xvi
<b>Chapter 1 Introduction to the topic and the sound community of the Donegal fiddle tradition</b>	<b>1</b>
1.0 Introduction	1
1.1 My ‘story’ - Personal experiences of the sound community	1
1.2 Initial experiences of tuning and intonational inflection in the fiddle music of Co. Donegal	2
1.3 Identifying a Research Question	3
1.4 Introducing the studied sound community - Geographic, political and cultural areas of Donegal	5
1.5 The history of the fiddle in Donegal	7
1.5.1 Early evidence of the instrument	7
1.5.2 Links between the fiddle tradition of Donegal and Scotland	9
1.5.3 Box fiddles	11
1.5.4 Tin fiddles	12
1.5.5 The Brass fiddle	14
1.6 Social contexts of the development of the fiddle tradition in Donegal	15
1.7 The role of the house dance tradition in the development of the fiddle tradition in Donegal	20
1.7.1 Decline	21
1.7.2 Revival	22

1.8	Other performance contexts for traditional fiddle music in Co. Donegal	26
1.9	Pedagogical Practice around fiddle music in Donegal	30
1.10	Extant sources related to the fiddle music of Donegal	32
1.11	Conclusion	33
<b>Chapter 2</b>	<b>A framework for exploring tuning within the Donegal fiddle sound community</b>	<b>35</b>
2.0	Introduction	35
2.1	In search of ‘style’ - Understanding processes of categorisation with regard to the traditional fiddle music of Co. Donegal	38
2.1.1	Problems of categorical structure and use in terms of Irish music	42
2.2	Centrality of the individual	48
2.2.1	Expressive intonation	48
2.2.2	Modal Complex and Harmonic consciousness	52
2.3	Processes and values – connecting the individual to the sound community	64
2.3.1	The Theory of Participatory Discrepancy	64
2.3.2	In search of discrepancy: The role of participatory discrepancies in the sound community.	66
2.3.3	Tuning in – The individual’s access to multiple identities (communities)	73
2.3.4	The embodiment of dance in relation to potential pitch discrepancy in the performance of fiddle music.	74
2.4	Conclusion	76
<b>Chapter 3</b>	<b>Introducing a methodology for fieldwork specific to this research</b>	<b>78</b>
3.0	Introduction	78

3.1	Examining from within: Emic vs. Etic attitudes to the tradition	78
3.1.1	The 'hermeneutic' arc	85
3.2	Methodology	89
3.3	Processes of engagement with informants	90
3.4	Selection of informants	91
3.5	Mapping of the county's fiddle music tradition	93
3.5.1	Categorical division with regard to this study	94
3.6	Using 'Melodyne' as a tool for the analysis of tuning and fingered pitch discrepancy in the fiddle music of Co. Donegal	96
<b>Chapter 4</b>	<b>Tuning in practice among a sample of Donegal fiddlers</b>	<b>101</b>
4.0	Introduction	101
4.1	The tuning process	103
4.2	Methodology – the experiment	103
4.3	Processes of Tuning - Pegs vs. Fine tuners	106
4.4	Methods of tuning the fiddle - plucking vs. bowing the strings	108
4.5	The Bow – Grip, Pressure and direction	109
4.5.1	Bow Grip	109
4.5.2	Bow Pressure	112
4.5.2.1	Examples of the relationship between bow pressure and double stops	119
4.5.2.2	Conclusions	121
4.6	Double Stops and use of fingered motifs to test tuning	122
4.7	Comparisons in actual tuning values recorded	124
4.8	Tuning up: the experiment: emerging themes and patterns	124

4.8.1	An insight into the ‘Pass the Fiddle’ event	132
4.8.2	Passing on a ‘sense’ of tuning	138
4.8.3	Tuning/ ‘sound’ preferences	139
4.9	Investigation of geographic discrepancy in tuning values	141
4.10	Use of electronic tuners	146
4.11	Tuning practices associated with playing at sessions	148
4.12	Conclusion	161
<b>Chapter 5 Finger related pitch discrepancy in the fiddle tradition of Donegal</b>		<b>165</b>
5.0	Introduction	165
5.1	Assessing finger related discrepancy in the fiddle tradition of Co. Donegal	165
5.2	Expressive intonation	166
5.2.1	Melodic Tuning	166
5.2.2	Harmonic Tuning	174
5.3	Harmonic structure, rhythm and context	175
5.3.1	Examples of discrepancy with regard to the tonic chord of a given piece	175
5.3.2	Changes in textural patterns associated with chordal progression.	176
5.3.3	Modal Complex	185
5.3.3.1	Structural/ Diagnostic tones	185
5.3.3.2	Discrepancy associated with the performance of Motifs	189
5.3.3.2.1	Case Study: Miss Drummond of Perth	189
5.3.3.2.1	Further examples of motif related discrepancy in the sample	195
5.4	Use of conscious accidentals	198
5.5	The impact of physiology on the performance of fingered pitch practice.	202

5.5.1	Issues regarding the playing of successive notes on adjacent strings using the same finger digit.	202
5.5.2	Potential issues regarding use of the fourth finger in traditional fiddle playing	213
5.5.3	Use of sharpened hand position and finger placement in general performance practice	215
5.6	Discrepancies associated with the individual's perception and imitation of the pipes	220
5.7	Ornamentation	223
5.7.1	Pitch discrepancy with regard to the use of rolls	224
5.7.2	Vibrato	227
5.8	Potential issues in the use of Melodyne in assessing discrepancies visually – An example	230
5.9	Conclusion	231
<b>Chapter 6 Transmission and context</b>		<b>233</b>
6.0	Introduction	233
6.1	Transmission	233
6.1.1	The affect of transmission processes on pitch and tuning discrepancy	236
6.1.2	Experience of participants in terms of their own instruction techniques	242
6.2	Context	243
6.2.1	Experiences outlined by the participants	244
<b>Chapter 7 Studying the 'step' of a Donegal fiddler: Aidan O'Donnell</b>		<b>250</b>
7.0	Introduction	250
7.1	Early musical development	250
7.2	FIDIL	254
7.3	Professional Career	256

7.4	My own pedagogical methods	257
7.5	My tuning process	258
7.5.1	Patterns emergent from my tuning process	261
7.6	Patterns emergent from analysis of my finger related pitch discrepancies	264
7.7	Conclusion	270

## **Chapter 8 Conclusion 271**

8.0	Introduction	271
8.1	Findings	272
8.1.1	‘Style’ vs. ‘Sound Community’	272
8.1.2	The creation of a framework, and the use of technology: Linking Individuals and the sound community through the visual representation of process and values	273
8.1.3	Idiosyncratic perception vs. the sound of a community	275
8.1.4	‘Categoric Exemplars’	277
8.1.5	Tuning	279
8.1.7	Future Work	282

## **Bibliography 284**

## **Discography 297**

## **Videography 298**

## **Appendix A: Files directly associated with each participant**

## **Appendix B: Information sheets handed out to the participants prior to the interview**

## **Appendix C: Documents related to ethical approval for this research.**

## Acknowledgments

I would like to sincerely thank all those who have made this submission possible; Dr. Anthony McCann and Dr. Brian Bridges, who both have contributed greatly with their insights to the finished product; The University and the Doctoral college for awarding me the Vice Chancellor's scholarship to embark on this study, and for understanding the circumstances surrounding why it has taken me so long to get over the line!!; Dr. Ryan Molloy, who convinced me to try for a PhD when I wasn't convinced. Also, special thanks to Caomhín Mac Aoidh, Rab Cherry, Peter Campbell and Damien McGeehan for their expertise and help in accessing materials, and Johnny Boyle and the staff of the Highlands hotel, Glenties, for donating the use of a room in the hotel for conducting some of the interviews.

My family, for their continuing love and support throughout this journey, in particular Mam and Dad. A special word of gratitude to my wife Áine. She has helped so much in every way throughout this process and I am forever indebted. I would not have finished this thesis without her. Her love and support are a constant. I can't thank her enough, but hopefully this short section will be satisfactory. Thank you!

However, one person stands above all others in getting me over the line with this PhD, my primary supervisor, Dr. Liz Doherty. I am so lucky to have had a person like her involved in my life. She is an inspiration. Her knowledge in her field is astonishing; her ability to see positives in any negative situation unparalleled; her use of language, in particular with regard to the use of the right phrase at the right time is measured and thoughtful; but above all else, she is a role model as to how we could live our lives, honest, insightful, caring and always fun. I gained more than an amazing supervisor, I hope a friend. Thanks Liz!



### **Note on the attached Appendices**

Due to their nature, size and volume, the appendices for this thesis have been submitted electronically on an external hard drive. This hard drive is attached to this thesis as per recommended University guidelines. They appear as follows:

Appendix A: Folders have been created for each individual who took part in the fieldwork of this research. All files associated with any individual who took part in this fieldwork project are situated in appendix A, in the related folder associated with that individual's name. Files include the full transcripts of interviews, all audio files, all DAW files and all examples and illustrations used, taken from the Melodyne software programme. Supplementary interviews were also conducted with some individuals who fell outside the remit of this study, but who are valuable sources in relation to the fiddle music of Co. Donegal. These folders have the audio file of the interview and the transcript of that interview only. A short biography of each individual who took part in this project is also included on a separate document.

Appendix B: This appendix includes information sheets that were handed out to the participants prior to the interview, as well as a list of the initial questions that were suggested as part of the semi structured interview.

Appendix C: Documents related to ethical approval for this research.

## List of Figures and Tables

Fig 1.0	Map of the baronies P.W. Weston’s Atlas and Encyclopaedia of Ireland (1900: 86).	6
Fig 1.1	Example of a box fiddle and a picture of Myles Tinney playing a fiddle of this kind c.1900.	12
Fig 1.2	(L ) John ‘The Tae’ Gallagher with his tin fiddle and (R) The Tin Fiddle played by Dermot McLaughlin on The Fiddle Music of Donegal Vol.3. The fiddle was made by Mickey ‘The Miner’ Byrne of Glencolmcille.	13
Fig 1.3	The Brass fiddle on the cover of the recording of the same name.	15
Fig 1.4	Map of the 'Big houses' of Co. Donegal 1857-58 (O'Donnell 2013: 244)	18
Fig 2.0	Diagram outlining the framework for the interrogation of the research Topic	36
Fig. 2.1	Diagram outlining the breakdown of stylistic category in Irish traditional music	44
Fig 2.2	Illustration of maps outlining the approximate finger positions required for achieving the ‘Irish Scale’, as crafted by Henebry in ‘Irish Music and Earlier studies’ 1903	56
Fig 2.3	Galeazzi’s maps for the syntonic fingering of the violin according to key	57
Fig 2.4	Geminiani and Campagnoli’s maps for suggested fingering of the violin	58
Fig 2.5	Framework revisited	77
Fig 3.0	Mapping the Donegal fiddle community (based on pre-2018 The Municipal Electoral area divisions)	95
Fig 3.1	A scale on d, tuned to a scale created by me in an attempt to recreate a proposed scale for Irish music by Dr. Richard Henebry, 1904.	96
Fig. 3.2	Example of a tune in the polyphonic view in Melodyne. Note the graphic	

	line representation.	97
Fig. 3.3	Example of a tune as played by Danny Meehan, presented in ‘Melodic view’. Note again the graphic line representation.	98
Fig.4.1	Plucking the fiddle with the thumb of the right hand, with the fiddle facing towards the body.	104
Fig 4.2	Adjustment of the fine tuners using the right hand (bowhand) with holding the bow	105
Fig 4.3	An example of a ‘Planetary Peg’.	106
Fig. 4.4	Example of tuning the strings by pressing the finger on the relevant string at the nut of the fiddle.	107
Fig. 4.5	Adjusting the fine tuners while bowing the strings of the fiddle Simultaneously	109
Fig 4.6	Picture highlighting the difference between the position of grip on the bow used by Mairéad Ní Mhaonaigh compared to the more standard position of grip used by Altan bandmate Ciaran Tourish.	110
Fig. 4.7	Vincent Campbell pitch values post tuning	116
Fig 4.8	Comparison of Vincent Campbell’s tuning values (plucked vs. bowed)	117
Fig. 4.9	Damien McGeehan’s tuning values during bowing the strings (while using an electronic tuner)	118
Fig. 4.10	Example of the role of excessive bow pressure in discrepant tuning of the open A string.	118
Fig. 4.11	Further example of the role of bow pressure in discrepant tuning	119
Fig. 4.12	Pitch values for Damien McGeehan’s tuning process, highlighting the comparison in values between open double stopped and singly bowed strings.	120
Fig 4.13	Iarfhlaith O’Donnell’s tuning values	121
Fig 4.14	Graph highlighting all tuning values recorded by those in this sample	126
Fig 4.15	Tuning Values recorded for those of age 65+	128
Fig. 4.16	Example of readjusting the value of ‘A’ as per the pitch values recorded as part of Jimmy Campbell’s tuning process.	126
Fig 4.17	Danny Meehan tuning values pre and post adjustment to A=440 Hz	130

Fig 4.18	Jimmy Campbell and Danny Meehan tuning values, pre and post adjustment to A= 440 Hz	131
Fig 4.19	Tuning values for those aged 65+ adjusted to A = 440 Hz	132
Fig 4.20	Jimmy Campbell's tuned values during the 'pass the fiddle' experiment.	133
Fig. 4.21	Peter Campbell's tuning values during the 'Pass the fiddle' experiment.	134
Fig. 4. 22	Photo of Jimmy (L) and Vincent Campbell (R).	136
Fig. 4.23	Jimmy Campbell's changing hand positions and corresponding impact on tuned values.	136
Fig. 4. 24	Jimmy Campbell's changing hand positions.	137
Fig 4. 25	Tuning up values for the Inishowen electoral area	139
Fig 4.26	Tuning up values for the Glenties electoral area	142
Fig. 4.27	Tuning up values for the local area of Glenties town and its environs	142
Fig 4.28	Tuning up values for Jimmy Campbell and Tara Connaghan post adjustment of Jimmy's Fiddle to A = 440 Hz.	143
Fig 4.29	Initial individual tuning values of Ciarán Ó Maonigh and Mairéad Ní Mhaonaigh	144
Fig 4.30	Tuning values for Ciarán Ó Maonigh and Mairéad Ní Mhaonaigh post adjustment to A = 440 Hz	144
Fig 4.31	Tuning values for the Inishowen electoral area	145
Fig 4.32	Tuning up values for the Stranorlar electoral area	145
Fig 4.33	Tuning values for the Donegal electoral area	146
Fig 4.34	Full tuning values for Damien McGeehan	148
Fig 4.35	Graph comparing the values recorded by Iarfhlaith and Breffni O'Donnell as part of the 'pass the fiddle' experiment conducted during their interview.	156
Fig 4.36	Tuning values for Jimmy and Peter Campbell, and myself during the 'pass the fiddle' experiment.	159
Fig 4.37	Jimmy Campbell Values during the 'pass the fiddle' experiment	160
Fig 4.38	Peter Campbell's values during the 'pass the fiddle' experiment	161
Fig 4.39	Full graph of values for Jimmy Campbell, Peter Campbell and Myself during the 'pass the fiddle' experiment.	161
Fig. 5.1	Example of Vincent Campbell's use of D' in the opening part of 'The Gravel Walks to Grannie'.	167

Fig. 5.2	Vincent Campbell's Values for D' in The Gravel Walks to Grannie	168
Fig. 5.3	Descending motif in Second part of Gravel Walks to Grannie	168
Fig. 5.4	Example of the regular sharpening of C (highlighted) when played in a descending passage.	169
Fig. 5.5	An example of the use of a sharpened D' (highlighted) when utilised as part of a descending passage in the immediate aftermath of the same note being used in an ascending passage.	170
Fig. 5.6	Example of 'Melodic Tuning' in Ní Mhaonaigh's performance of 'All the Way To Galway'.	171
Fig. 5.7	Values for E, played by Mairéad Ní Mhaonaigh in All the way to Galway	172
Fig 5.8	Melanie Houton's use of G#	173
Fig. 5.9	Example of inverted Melodic tuning as performed by Roisin McGrory in Miss Drummond of Perth.	174
Fig 5.10	Example of inverted Melodic tuning with regard to Dinny McLaughlin's performance practice.	174
Fig 5.11	Vincent Campbell's use of A' in Miss Drummond of Perth	176
Fig 5.12	Example of chordal related changes in pitch discrepancy in Tara Connaghan's performance of The Cameronian.	178
Fig 5.13	Iarfhlaith O'Donnell's scale of C	180
Fig 5.14:	Iarfhlaith O'Donnell's scale of G	181
Fig. 5.15	Breffni O'Donnell's scale of C	182
Fig. 5.16	Breffni O'Donnell's scale of G	183
Fig. 5.17	Section of Houton's performance of her self composed reel.	184
Fig. 5.18	Example of the use of an A flat accidental, played with the fourth finger in place of a crotchet value A in the Gravel Walks to Grannie as played by Breffni O'Donnell.	186
Fig. 5.19	Example of the use of a G# accidental in place of a crotchet value A in the Gravel Walks to Grannie as played by Breffni O'Donnell	187
Fig 5.20	First part of Miss Drummond of Perth as played by Breffni O'Donnell	188
Fig 5.21	Example of sharpened 'leading' note as played by Roisin McGrory.	189
Fig 5.22	An example of the sharpened G' motif (highlighted) in the performance of Miss Drummond of Perth as played by Denise Boyle (A) and Jimmy Campbell (B).	191

Fig 5.23	Tara Connaghan values for G' as part of the 2 <sup>nd</sup> bar motif in Miss Drummond of Perth	192
Fig 5.24	Martin McGinley's use of G' as part of the 2 <sup>nd</sup> bar motif in Miss Drummond of Perth	194
Fig. 5.25	Example of consistently flattened values recorded for B and E, when played with the first finger on the A and D strings	195
Fig. 5.26	Example of Cherry's use of sharpened G' during the playing of the motif in bar two of Miss Drummond of Perth.	196
Fig 5.27	Examples of Section of Tommy Peoples as played by Mairead Ní Mhaonaigh.	196
Fig 5.28	Use of accidentals as part of the main performance practice	199
Fig. 5.29	Example of Tara Connaghan's playing of the first part of 'Miss Drummond of Perth'.	199
Fig. 5.30	Example of Damien McGeehan's playing of the first part of Miss Drummond of Perth.	200
Fig 5.31	Example of sharpened D in an ascending motif to the E'.	201
Fig. 5.32	Melodyne example of Ó Maonaigh's use of glissando microtones	201
Fig 5.33	Example of the repeated flattening of the note B with regard to an immediate E, triplet	204
Fig 5.34	Example of discrepant C and G' notes (highlighted) in the final part of 'The Gravel Walks to Grannie'.	204
Fig 5.35	Denise Boyle's C notes in the last part of the Gravel Walks to Grannie.	205
Fig 5.36	Denise Boyle's G' notes in the last part of the Gravel Walks to Grannie	206
Fig 5.37	Tara Connaghan values for C in the Gravel Walks to Grannie	207
Fig. 5.38	Tara Connaghan's value for G' in the Gravel Walks to Grannie	208
Fig. 5.39	Example of 'Corrective Tuning' as played by Tara Connaghan in the final part of the 'Gravel Walks to Grannie' (round one).	209
Fig 5.40	Tara Connaghan's values for B in the Pigeon on the Gate	212
Fig. 5.41	Jimmy Campbell's demonstration of variance in basic holding position.	216
Fig. 5.42	First two bars of Miss Drummond of Perth as played by Iarfhlaith O'Donnell	218
Fig 5.43	A section of 'The 21 Highland as played by Iarfhlaith O'Donnell	218
Fig 5.44	Notated first part of Miss Drummond of Perth as played by Breffni O'Donnell	219

Fig 5.45	Highlighted A' notes in performance of 'Lough Isle Castle'.	221
Fig. 5.46	Excerpt of Danny Meehan's version of 'The Enniskillen Dragoons'	222
Fig. 5.47	Example of visible vibrato as used by McGeehan in the first part of 'John Watter's Polka'	228
Fig.5.48	Example of vibrato used when playing the note D'	229
Fig.5.49	A visual example of the values of the note A' as played by Ó Maonaigh in the second and third parts of 'The Flood on the Holm'.	230
Fig 5.50	Further example of the discrepant performance of notes executed with the third finger, played in the second part of 'The Flood on the Holm' as performed by Ó Maonaigh.	230
Fig. 7.1	Value for the strings of my fiddle post tuning process.	261
Fig. 7.2	Recorded values for the strings of my fiddle post tuning process.	262
Fig 7.3	Values recorded for the tuning up process with regard to those in the Donegal electoral area, including myself.	262
Fig 7.4	Tuning values for the Donegal electoral area, including myself, adjusted to A = 440HZ	263
Fig 7.5	Tuning values pre and post performance practice.	264
Fig 7.6	Example of inverted Melodic tuning in the Gravel Walks to Grannie.	265
Fig 7.7	Example of Melodic Tuning in 'The Girl that broke my Heart'.	265
Fig 7.8	Example of discrepancy with regard to the execution of a G roll.	266
Fig. 7.9	Values for C played with the second finger on the A string.	267
Fig. 7.10	Example of corrective tuning in 'The Cameronian' where the F natural played with the second finger on the D string is flattened and then sharpened to usual values.	267
Fig 7.11	Example of the A' (played with the third finger on the E string) being sharpened from -3 to + 26 cents.	268
Fig. 7.12	Example of the sharpening of G' as part of the same motif in Miss Drummond of Perth.	269
Fig 8.0	Established framework revisited.	274
Fig 8.1	The recorded tuning pattern for each member of the sample, with my own values also included.	280

## List of Tables

Table 4.1	Values recorded for the 6 successive bows discussed above as played by Cherry	111
Table 4.2	Table highlighting the discrepancies (in bold) associated with change in bow direction	112
Table 4.3	Tuning values for Damien McGeehan, highlighting the bow as a factor of change	118
Table 4.4	Tuning values recorded for Damien McGeehan.	120
Table 4.5	Tuning values recorded for Iarfhlaith O'Donnell.	120
Table 4.6	Tuning values for Jimmy Campbell during the pass the fiddle experiment	133
Table 4.7	Tuning values for Peter Campbell before and during the 'pass the fiddle' experiment.	134
Table 4.8	Values for Jimmy Campbell's example of sharpened hand positions	137
Table 4.9	Values for Damien's fiddle post tuning with the electronic tuner (iphone app)	148
Table 4.10	Tuning values for Iarfhlaith O'Donnell, including initial values recorded and adjustment to Breffni's fiddle	152
Table 4.11	Tuning values for Iarfhlaith O'Donnell during the 'pass the fiddle' Experiment	153
Table 4.12	Tuning values for Jimmy Campbell, Peter Campbell and Aidan O'Donnell during the 'pass the fiddle' experiment.	159
Table 5.1	Values for Jimmy Campbell's example of sharpened hand positions. On this occasion, note the sharpened values with regard to hand movement and sharpened finger related pitch discrepancy	217



## Abstract

The research for this thesis was centred on an examination of tuning and fingered pitch discrepancies as apparent in the fiddle tradition of Co. Donegal. This tradition has long been acknowledged as an important sound in terms of the make-up of the wider Irish tradition, a fact supported by the body of literature and other media in the public domain directly engaging with it. However, to my knowledge, this is the first research aimed at investigating whether discrepancies in tuning and /or fingered pitch discrepancy may be directly related to the categorisation of a certain sound community. The primary research questions are based around whether a Donegal ‘sound’ is apparent, and what is the relationship of the individual in contributing to the creation of that sound. Aspects of regionalism in traditional music are also challenged, and therefore geographic variance, as well as generational variance are also investigated. The research was achieved by way of a dual approach; through qualitative and quantitative means. A sample of fiddle players from County Donegal were interviewed in order to fully understand their particular personal experiences, and so as to understand any potential processes that they engaged with as part of the performance of tuning and fingered related pitch discrepancy. This was coupled with the recording of the tuning process and musical examples performed by these fiddlers as part of the same interview recording. Each was asked to tune to the same tuning fork (A 440 Hz). By uploading these aspects of their performance practice to a sound software programme (Melodyne), data was then cultivated that allowed for analysis and comparison between the fiddlers. This identified specific patterns and lines of inquiry. Idiosyncratic perception emerges as a central aspect of understanding the processes and product of tuning and fingered pitch discrepancy. Central to the research questions investigated are the relationship between the sound of the individual to that of the wider sound community. A specific framework was forwarded to analyse the processes and values at play in that interaction. The paradigms of ‘Participatory discrepancies’ (Keil 1994) and ‘Tuning in’ (Thacker 2011) emerge as important tools in understanding that relationship, across varying contexts. Mechanical aspects of tuning and finger pitch discrepancy are also discussed, in particular with regard to the use of Harmonic, Melodic, Colouristic, and Corrective tuning (Fyk 1995), as well as ‘structural/ diagnostic tones’ and motivic analysis (McKerrell 2005). The bow is highlighted as a factor in the performance of some discrepancies. This research also presents findings that assesses whether the emergence of certain patterns associated with tuning and finger pitch discrepancy can be categorised geographically or generationally.

## Chapter One

### Introduction to the topic and the sound community of the Donegal fiddle tradition

#### 1.0 Introduction<sup>1</sup>

This thesis is based on an examination of the sound community<sup>2</sup> of traditional fiddle players of Co. Donegal, with particular regard to their issues surrounding tuning and intonational inflection. Key to this thesis is the centrality of the individual as a contributor to that sound community. To this end, much of the literature reviewed examines the role of the individual in music traditions. Discrepancies (from each other's tuning and performance practices) are examined both in terms of the tuning of the instrument itself, and in fingered pitch values for performed notes (intonation). It is suggested that pitch discrepancies may be performed both consciously and subconsciously, and that issues of context, identity, harmonic consciousness and membership of sonic community/ (ies) are central to the examination of the topic. As part of that particular discussion, this thesis crosses the disciplines of ethnomusicology, anthropology, cognitive science, music history and Irish traditional music history, as well the application of music technology and physics. I shall also present my personal motivation for embarking on this study, as I feel it may assist in understanding my relationship to the sound community of which I have studied, and of which I am a member.

#### 1.1 My 'story': Personal experiences of the sound community

I am from Dunkineely in south Donegal and have been playing the fiddle since the age of 12. I have been performing professionally since the age of 16. Since then, I have released 4 albums; two duet albums<sup>3</sup> and three with my band FIDIL (a fiddle trio, of which all members are from Co. Donegal), and have also performed as a guest artist on many other recordings.<sup>4</sup> I perform professionally (in a part-time capacity) both internationally and at home, playing in

---

<sup>1</sup> This thesis is based on the general subject of Irish traditional music, a multi-instrumental folk music based on the island of Ireland. This has been subdivided into various categories of performance within the umbrella term Irish Traditional music, a subject on which much academic literature exists. See 'The Companion to Irish Traditional Music' (Vallely, 2011) as this serves as an extremely useful atlas to all aspects of the tradition. Common terms associated with the tradition will be dealt with in the run of the text.

<sup>2</sup> This term is based on the community of practice model offered by Lave, Wenger (1991; 1998) and will be developed in Chapter 2.

<sup>3</sup> 'In Safe Hands' (2006) with flute player Kieran Munnely and 'Fidil' (2008) with Ciarán Ó Maonaigh

<sup>4</sup> Examples include 'Louder than Words' (2014) by the Henry Girls, and 'Guailibh a'chéile' (2010) by Doimnic Mac Giolla Bhríde and Griogar Labhraidh

venues from concert halls to the local session<sup>5</sup> in my home village of Dunkineely. I am an active member of the tradition, and also someone who has used that identity associated with it in order to pursue a career in music. From this point of view, I was keenly aware of the varying nature of performance contexts within this sound community and had achieved a high level of proficiency in terms of achieving a sound accepted by the community. As such, I feel that my experiences within the sound community itself leave me well placed to conduct such a study. These are dealt with in particular detail in Chapter 3, where emic/ etic issues are raised with regard to the methodology applied to the research project, as is the practice of auto-ethnography, which I feel influences aspects of this work (and should, given my position within the studied community). I will present additional personal experiences that may prove useful in an illustrative capacity as separate ‘boxed in’ elements of the text, much like those presented by Melin (2012). This is so as to separate my personal experiences to the academic argument being presented. While I intend to use myself as an informant, and have used some of my personal experiences to illustrate some aspects of the text, this work is not an auto-ethnography. In my opinion, these examples offer personal and valuable insights into my own experience in relation to the topic and the studied sound community, and relate specifically to the literature interrogated and the specific research questions outlined below.

## **1.2 Initial experiences of tuning and intonational inflection in the fiddle music of Co. Donegal.**

I first became curious about issues of tuning and intonation in terms of the fiddle music of Co. Donegal at a ‘Pass the fiddle’ session. This type of event is spontaneous in nature, but occurs regularly at various gatherings of Donegal fiddlers, particularly those associated with Cairdeas na bhFidiléirí, a major organisation that promotes the fiddle traditions of the county.<sup>6</sup> The practice has at its roots the context of solo performance, and the fact that at one time, there were more fiddlers than good fiddles in the county, therefore fiddles were shared. In the modern context, the practice is related more to social gatherings where more than one fiddler may be present, but that social convention may prevent some or all of these taking out their fiddles to play in a session format (itself a recent development in traditional music – see Foy, 2008). In my experience, the practice is closely related to the Campbells of Glenties<sup>7</sup>, who have practiced

---

<sup>5</sup> This is the most common performance context for modern Irish traditional music, where individuals gather informally to play music together. This can happen in a variety of venues, most commonly the private home or a public house (pub). See Foy (2009) for more.

<sup>6</sup> for more see [donegalfiddlemusic.ie](http://donegalfiddlemusic.ie). This organisation will be discussed in more detail later in Chapter one.

<sup>7</sup> Vincent, Jimmy and Peter Campbell. A famous fiddling family from Glenties of Co. Donegal. See Mac Aoidh (1994) and <http://donegalfiddlemusic.ie/the-campbells/> for more info.

this since I have known them. At such an event, one fiddle is taken from its case and passed between the fiddlers who are present, each one taking their turn to play a tune when the fiddle is passed to him/ her. This generally happens in a bar or hotel where Cairdeas na bhFidiléirí typically run events, but can happen in any venue or context where multiple fiddlers are present. What struck me during my initial experiences of such an event was the vast differences that occurred in terms of each individual's performance, especially with regard to tuning and intonation.<sup>8</sup> Tuning seemed to be a personal preference, where some fiddlers tuned the instrument upon being handed it; others simply started to play and did not adjust the tuning at all. A second layer of complexity around tuning then came into play, where to my ear, finger placement was also individualistic in terms of achieving a personal sound. It also struck me that these differences were not seen as problematic in any way (i.e. were not deemed to be 'out of tune'), but rather were embraced as elements that were integral to the sound of the tradition and to that of the particular performer. I wondered where my own particular performance practice was situated within this tradition. This in turn led me to formulate the research questions outlined below.

I believe this element of celebrated difference is one that is central to the discussion of performer/ performance in Irish traditional music, and is one that can be central to issues of identity, experience, and performance practices within studied sound communities generally. This is also true of the performer/ listener dynamic in Irish traditional music, where one set of aesthetic discrepancies favoured by some may not be shared, valued or appreciated by others. I found myself asking questions about the individual, the 'style' of Donegal fiddle music, the contexts of performance and how tuning is related to each?

### **1.3 Identifying a Research Question**

The 'Donegal style' has been, since the 1980s, an increasingly globally recognised brand of fiddle playing (Feldman and O'Doherty, 1980; Mac Aoidh, 1994; Vallely, 2013; Caldwell, 2013). The term was foregrounded by organisations such as Cairdeas na bhFidiléirí (discussed later in Chapter 1) and artists such as Altan<sup>9</sup> in an effort to preserve and celebrate the distinctive repertoires and stylistic features that characterised the (almost exclusively) fiddle tradition of the south-west of the county. The fiddle music of the county has been robustly documented

---

<sup>8</sup> A simple yet clear definition of tuning and intonation can be found at <https://trainer.thetamusic.com/en/content/intonation-and-tuning>

<sup>9</sup> One of Ireland's foremost traditional music ensembles. See [www.altan.ie](http://www.altan.ie)

and analysed (Feldman and O’Doherty, 1980; Mac Aoidh, 1994; Vallely, 2013; Caldwell, 2013). To date, the focus on the distinct sonic properties associated with the county have been for the most part centred on bow idiosyncrasies and bow related regional commonalities. Other elements of ‘style’ categorisation (dealt with in detail in Chapter 2) such as repertoire and tempo have also been used to account for stylistic difference. This has led me to consider if another dimension has been overlooked, and if instrument tuning and intonational inflection also contribute significantly to the creation of a distinct Donegal ‘sound’.

From this central research question – how do instrument tuning and fingered pitch discrepancies contribute to the Donegal ‘sound’? – a number of other questions have emerged that have been explored over the course of this study. One of these concerns the role of the individual. What is the role of the individual in the studied sonic community, and the relationship of the various dynamics through which the individual can interact with the said community?

Another question that arises concerns the longitudinal view of the tradition, specifically, if change in terms of tuning/intonation practice can be identified across generations, and if so, why such changes have occurred. This question is particularly relevant in terms of the wider conversation on ‘glocalisation’ (Robertson, 1995), where communities previously perceived as isolated now readily engage with music recorded as part of an industry, to an industry standard.

The question of geographic variance and how regionalism impacts on musical style is also of interest. Geographic variance is discussed informally within the county with regard to the fiddle music of the county, (as evidenced by some of the interviews recorded as part of this work), and there is a perception that there are perceptible nuances of styles attributed to different geographic regions. However, this research aims to examine whether there is any evidence to suggest that such smaller sound communities can be identified based on criteria around tuning and pitch discrepancies. This focus is applied to the Irish fiddle v Donegal fiddle question; re-interrogating the Donegal fiddle sound and identity vis a vis the wider Irish fiddle. Issues of identity, revival and transmission are central to this conversation.

I also ask what are the processes/shared values through which individuals engage with the sound community. These are to be examined through the lens of tuning and intonational inflection. Potential processes are contextualised with other academic work discussed in

chapter 2 in order to create appropriate avenues of enquiry with regard to the mechanical nature of playing the violin/ fiddle.

#### **1.4 Introducing the studied sound community - Geographic, political and cultural areas of Donegal**

At the 2016 census, Donegal recorded a population of 158,755. This population is spread over an area of 4,861km, the 4<sup>th</sup> largest county in Ireland. Geographical, educational and economic pressures are the primary reason for the present diffusion of population throughout the county. In terms of geography, Donegal is divided naturally by two mountain ranges. The Bluestack mountains cover an area between the towns of Ballybofey, Glenties, Ardara, Mountcharles and Donegal Town, and the Derryveagh mountains further north, cover an area between the towns of Kilmacrennan, Termon, Falcarragh, Bunbeg and Dungloe. Such natural divisions have led to issues in terms of infrastructure. It has a scenic coastline, linked inextricably with its rural economy, traditionally by way of fishing, and in modern times in terms of tourism (MacLaughlin and Beattie, 2013). The Wild Atlantic Way has made Donegal an accessible destination, while it has been dubbed as ‘the coolest place on earth’ by National Geographic in 2017. The main population centres of the county are Letterkenny, (pop. 19,274), Buncrana (pop. 6,785) and the twin towns of Ballybofey/ Stranorlar (pop. 4,852). At the 2016 census, 62 towns<sup>10</sup> existed in Co. Donegal. Of this number, 43 towns (69.38 %) showed a decline in population, 16 (25.8%) showed an increase, 2 (3.22 %) had no change, while 1 new town was recorded (1.6 %). When examining those towns that recorded increases, it is evident that the majority of these towns are in close proximity to urban centres such as Letterkenny and Ballybofey. A clear line exists in terms of towns that lie west of the Bluestack and Derryveagh mountains in terms of population decline, with the majority of towns west of this line recording decreases in population. Notable exceptions to this are Kilcar, Glencolmcille and Ardara, which each had small raises in population (10, 5 and 1 respectively).

Historically, there are eight baronies in the county, Banagh (the area stretching from Glencolmcille in the west to Donegal town in the east, and from St. John’s point in the south

---

<sup>10</sup> Defined as having a minimum of 50 occupied dwellings, with a maximum distance between any dwelling and the building closest to it of 100 metres, and where there was evidence of an urban centre (shop, school etc). (Census.cso.ie).

to Ardara in the North, Boyleagh (these were combined as the barony of Boyleagh and Banagh pre the Act of the Parliament of Ireland Act 1791), which stretches from Ardara in the south to the islands of Gola and Aranmore, and the Rosses area of Donegal in the North, and to Glenfin in the east, Raphoe, which stretches from Barnesmore in the south to Derry in the North and from Glenfin in the west to Lifford in the east. The Barony of Kilmacrennan was bordered in the most part by the ocean, but its southern boundary ran from Letterkenny, to Glenfin on to the Rosses, where it met the barony of Boyleagh. Inishowen was divided into two Baronies, East and West Inishowen, with west Inishowen bordering the barony of Raphoe in the south and a line dividing the baronies from Carrowkeel to Slieve Sneacht on to Lenan Head. North of this line was East Inishowen. In the south of the county, the Barony of Tir Hugh ran from Barnesmore in the north to Bundoran in the south, and from Donegal Town in the west to Pettigo in the east.

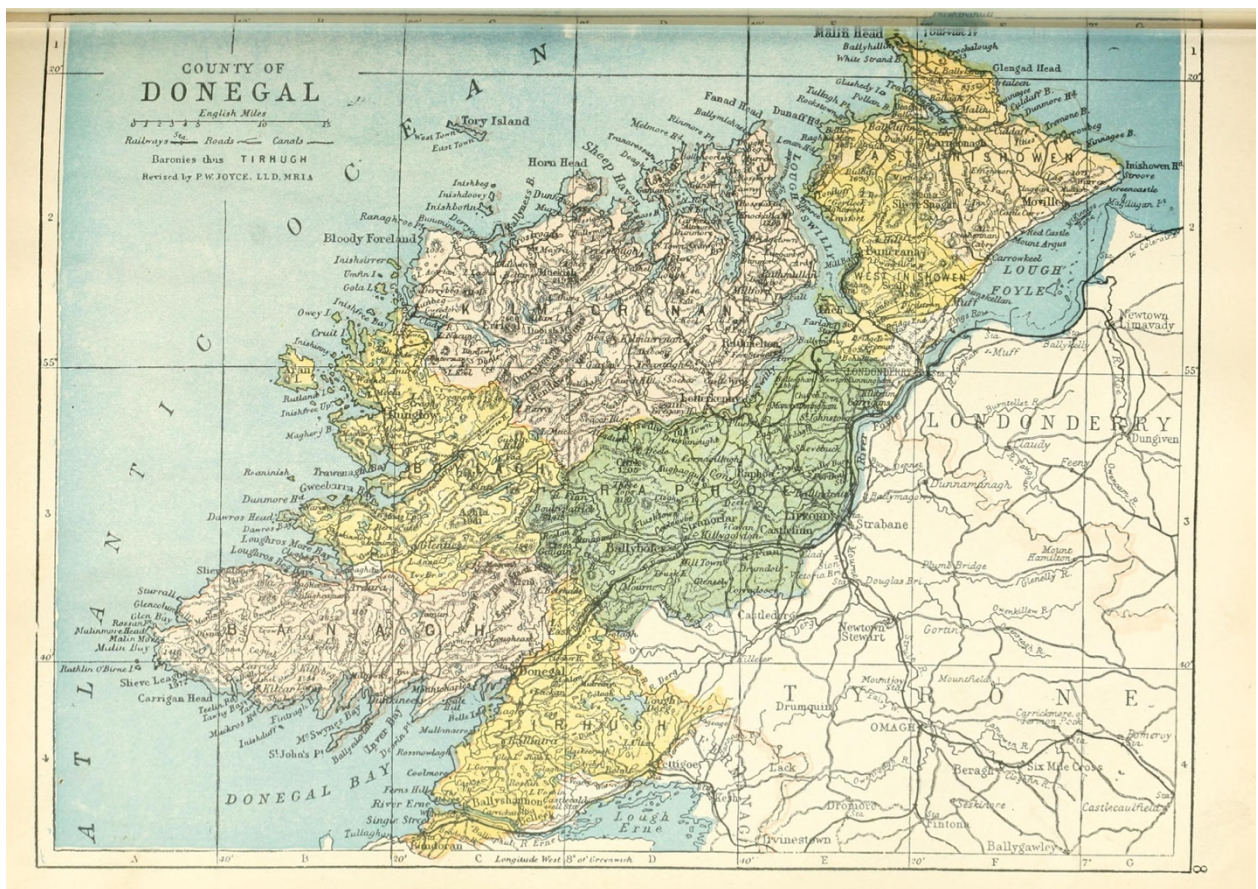


Fig 1.0 : Map of the baronies P.W. Weston’s Atlas and Encyclopedia of Ireland (1900, p. 86).

The county has also been informally divided into districts, commonly used in the vernacular of Donegal people themselves. These include The Rosses, located west of the Gweebarra

river towards the urban centre of Dungloe, Gaoth Dobhair, a Gaeltacht region in the west of the county centred on the twin villages of Bunbeg and Derrybeg, Cloghaneely, further north than Gaoth Dobhair and also a Gaeltacht region, centred on the town of Falcarragh, Finn Valley, an area of fertile land which stretches from the twin towns of Ballybofey and Stranorlar east towards Killygordon, and The Laggan, situated close to the Finn Valley, in the east of the county, centring on population centres such as Raphoe and Lifford. This area was traditionally an area to which seasonal migration for work took place, and many were 'hired' to farmers from this area from the poorer districts of west and south west Donegal. The Inishowen peninsula's main population centre is Buncrana, but is a large area in itself (309 sq. miles) (Doherty 2010, p. 184).

Politically, the county had been divided into 5 municipal districts, (Donegal, Glenties, Inishowen, Letterkenny and Stranorlar) up to 2018, when 2 further divisions were made, where Letterkenny was divided into Letterkenny and Milford, and Inishowen was divided into Carndonagh and Buncrana.

## **1.5 The history of the fiddle in Donegal**

### **1.5.1 Early evidence of the instrument**

While there is no concrete evidence as to when the first bowed instruments appeared in Co. Donegal, we can look to existing academic works to offer an approximation in terms of date. Documented evidence points to early bowed predecessors to the modern fiddle as we know it in its present form in existence in Ireland. These were documented in some early literature, as illustrations on stone carvings and by the early collectors of Irish music including Edward Bunting (MacAoidh 1994, p. 22; Valley 2011, p. 257). The earliest evidence of a bowed instrument in Ireland is an eleventh century bow which was excavated in Dublin and which is the earliest example of a medieval bow in Europe (Valley 2011, p. 257). The earliest known reference to a *fidil* (the term still used in the Irish language for fiddle/violin today) in Ireland is at Aonach Carmen (The Fair of Carmen). This fair is documented in 'The Book of Leinster'. While 'The Book of Leinster' is dated approximately 1160, the fair is believed to have taken place in the 8th century. In 'A History of Irish Music' Grattan Flood suggests that this must mean the *fidil* is of a similar age (1905). Mac Aoidh (1994, p. 23) suggests that this implies that by the 1100s a bowed instrument similar to the violin was known and played in Ireland, and most probably would also have been played in Donegal.



In 1674, traveler Richard Head writes that while visiting Ireland “in every field a fiddle, and the lasses footing it until they were a foam” (Breathnach 1971, p. 57; Valley 2011, p. 257). While the term 'fiddle' is used by Head, it may be unclear as to which instrument he is referring; the older predecessor of the instrument or the modern fiddle (or violin) which was developed in Italy in 1550, which may have travelled to the country by that time due to its widespread popularity (Mac Aoidh 1994, p. 24). However, by 1721, modern fiddles were advertised as for sale in John and William Neal's music shop in Dublin and advertised as being made by John Neal in 1729 (Carolan 1986; Valley 2011, p. 257). In his memoirs, harpist Arthur O'Neill mentions that there were “plenty of pipers and fiddlers” in the Rosses area of Co. Donegal in the 1750s (Valley 2011, p. 257) and that there were also large numbers of fiddle players at a wedding at Woodhill house, Ardara in 1760 (O'Neill 1912; Mac Aoidh 1994, p. 25; 2013, p. 450). What these references can confirm is that the modern fiddle was certainly being played in Ireland by the late seventeenth/early 18<sup>th</sup> century and that the newer modern instrument at the time was present in reasonable numbers since they were being commercially sold and made by the 1720s. This would also suggest that there was a healthy tradition of fiddle playing in Ireland. While the example above details high numbers of fiddle players in Ardara in Donegal at the time, and that it was used to accompany dancing in Donegal, we cannot be entirely certain as to the strength of the tradition in Donegal at the time despite its popularity in the capital. It should be noted that Donegal's distance from such developments was surely a factor in the development of national trends reaching and impacting on the local population. However, it does confirm the fiddle's existence in the county, and suggests certain popularity. In terms of the repertoire played by these fiddle players, it should be noted that many published works of this time centre on the repertoire of the ancient harp tradition (e.g. 'A Collection of the Most Celebrated Tunes' by John and William Neale in 1724, 'The Ancient Music of Ireland' by Edward Bunting in 1796). Interestingly, at the same period in Scotland, Bryson's 'A Curious Selection of Favourite Tunes with Variations; to which are added upwards of fifty Irish Airs for the Flute or Violin with a Bass for the Harpsichord or Violoncello' was published in 1790, while in 1793 Cooke published 'A Selection of Twenty-one Favourite Original Irish Airs arranged for Pianoforte, Violin or Flute', suggesting a certain popularity for the fiddle in Scotland at the time. While this does give us some insight into a portion of the repertoire played on the island, it can be difficult to account conclusively for the repertoire which may have been played by those without the ability to buy and read music published in such collections. What is certain is that dances from the courts of Europe would have arrived in Ireland in the 16<sup>th</sup> -17<sup>th</sup>

Century, with forms of dances including *The Hey*, *An Rinnce mór* and the *Rinnce fáda* (Brennan, 2001; Foley, 2013). These forms of dance were inextricably linked to the music played due to social function. As a result, it is reasonable to suggest that the repertoire would have certainly included jigs and reels, with older variants also extant, such as some clan marches and laments (as suggested by Grattan Flood (1905). Breathnach (1971) suggests that it was in this period that most Irish traditional music took its modern forms due to the speed of development of the dance tradition in the country. O’Doherty also suggests that “ The dancing craze seems to have been central to it’s development” (Feldman and O’Doherty 1979, p. 7).

### **1.5.2 Links between the fiddle tradition of Donegal and Scotland**

With particular respect to the musical history associated with its fiddle tradition, Co. Donegal has long been linked to Scotland. This was due to the seasonal migration by people from the north of the island of Ireland (particularly Donegal) to Scotland for seasonal labour (O’Dowd 1995 pp. 625 – 649; Bradley, 2013 pp. 349 – 358). Through social interaction and the cross-fertilization of culture during these seasonal periods, the development of musical practices and traditions in Scotland became linked to practices on our island, particularly in Co. Donegal. For this reason, a brief examination of the development of the fiddle in that country is of particular importance in any musicological historical account of Co. Donegal.

In terms of a basic common cultural experience, both Ireland and Scotland traditionally had a clan system, in which each clan court had a *file* (poet) and a *cruitire* (harpist). Both countries shared the same Gaelic language which made commerce, trade and cultural exchange an easier prospect, and both countries had a common military enemy in invading English forces which were also actively culturally invasive. Records from collectors and memoirs from some of the ancient harpers<sup>11</sup> show that cultural exchange was quite common between the two countries up to the mid-late 1700s. Irish harpers enjoyed favour in many of the Scottish courts and likewise, Scottish harpers have been recorded as touring Ireland to learn techniques and repertoire associated with the Irish Harp. This practice was not confined to Scotland either, with some evidence to suggest that Welsh practitioners were similarly influenced by what was seen as the superiority of Irish musicians of the time.

---

<sup>11</sup> (for example Arthur O’Neill (<http://billhaneman.ie/AIH/MemoirsOfArthurONeill.html>) and Denis Hempson (in Young 1895, Ulster archaeological society, <http://www.libraryireland.com/articles/IrishHarpersBelfast1792/5.php> )

“...this importation of Irish music had been habitually practiced on a larger scale, and from an earlier period. – “Even *so late* as the eleventh century the practice *continued* among the Welsh bards of receiving instructions in the bardic profession in Ireland”.

“The influence of Irish music was felt in Scotland from a still earlier and to much a later date. In the second century, Irish musicians were so prized that King Etholdus I, retained an Irish harper in his bed chamber, The Scottish writers recently cited, trace the origin of their instruments and best tunes to the Irish of later times: and it is confessed, that “till within the memory of persons still living, the school for Highland poetry and music was Ireland and thither professional men were sent to be accomplished in those arts.”

(A History of Music, 1858 p.161)

It is likely that some level of cross-fertilisation would have also occurred in terms of the bowed instruments of the day although these are not as well documented. The harp in ancient society held a special place in the social construct of both Gaelic Ireland and Scotland and therefore was the preferred and most documented instrument of the tradition at the time. However, examples of older bowed instruments from both countries suggest some level of shared musical knowledge, and certainly that similar bowed instruments existed parallel to each other in the neighbouring countries (see Purser, 1992; Hunter, 2009; and Johnson, 1984, 2000). One example of this is the existence of *an fídéal cham* as described by Mickey Bán Ó Beirne of Kilcar in south-west Donegal (Nic Suibhne, 1995 p.715). This instrument was a predecessor to the arrival of the modern fiddle in Co. Donegal and according to Ó Beirne was one of the first fiddles in existence in Donegal (Feldman and O’Doherty, 1980 p.142). In his description, the fiddle is said to have had:

“a stoop to the neck...and the neck was sort of bent. They used to call them the crooked-necked fiddle...They kept at those till these (violins) came across the water from Scotland...They couldn’t play the style of music they are playing now. Those fiddles were like the pipes, they couldn’t change scale.”

(Feldman and O’Doherty, 1980 p.142)

This description correlates with that of a similar instrument documented on the Shetland

Isles, the *Gue* (Cooke, 1986 p.4; Nic Suibhne, 1995 p.715) while also possessing similarities to other predecessors of the instrument from elsewhere around the North Atlantic rim including the *fidla* in Iceland and the rebec in Spain<sup>12</sup>.

### **1.5.3 Box fiddles**

Other noted developments in relation to the fiddle in Donegal are the use of non-standard materials and structures in constructing instruments for tuition and performance. Box fiddles were used in Donegal as a replacement for the standard violin where sourcing a violin was problematic.<sup>13</sup> Of course, this was a common issue in rural Donegal due to the poor infrastructure and relative poverty. Instead, locals made basic box shaped fiddles, utilizing spare parts from dismantled violins which fulfilled the functions needed for music production. These were played under the chin as with the standard fiddle and bowed in the same way. A recent example of a box fiddle has been made by Eoin O' Shaughnessy under the tutelage of Rab Cherry (fiddle maker based in Dublin and chairperson of Cairdeas na bhFidilíirí). This example proved viable in terms of playability; in terms of volume it projected quite well when compared to a standard violin. No differences were noticeable in terms of intonational variance or tuning. The fiddle was based on the example observed in a photograph of Myles Tinney, playing a box fiddle in Mouncharles c. 1900.

---

<sup>12</sup> (see <http://crab.rutgers.edu/~pbutler/rebec.html> ).

<sup>13</sup> See <http://donegalfiddlemusic.ie/history/>



*Myles Tinney of  
Mountcharles with his box  
fiddle.*



Fig 1.1: Example of a box fiddle and a picture of Myles Tinney playing a fiddle of this kind c.1900.

From the example above, it can also be viewed that Myles Tinney is using an unconventional bow, more akin to a baroque bow, where the length of the bow is shorter, and the bow's form is convex in nature, rather than the usual concave aspect that modern bows have today. It is logical to suggest that this was also homemade. Box fiddles are present in other musical traditions on the North Atlantic rim, in particular in North America, where cigar box fiddles are particularly popular. In terms of its visual make up, it also resembles a Joika, a type of three stringed bowed instrument traditionally played in Finland.

#### **1.5.4 Tin fiddles**

Metal was also used to fashion fiddles for learning on. These were predominantly made from tin (MacAoidh, 1994). These fiddles were usually made by members of the travelling community, in particular those famous for musical performance such as the McConnells and the Dohertys. Tin was a cheap substance, and was readily available. It was used by the

travelling tinsmiths (whitesmiths) to make farmyard utensils such as pandaís<sup>14</sup>, and also for repairs in farm implements. Tin fiddles could be made in a short space of time, in some reported instances, under a day. However, these fiddles did have issues. The metallic sound produced by the fiddles were not favoured by many of the fiddlers who played them. They were also quiet, and projection was a significant issue, particularly with regard to house dance performance, the primary social performance outlet in Donegal until the 1950s. The weakened nature of tin meant that tuning to standard concert pitch was not possible. Under such tension, the fiddle would fold and be rendered unusable. Instead, fiddles were tuned to a lower pitch of circa B-C (i.e. the D string would be tuned to B or C and tuned accordingly in fifths). The upkeep of the instrument was another consideration, where rust was a particular problem. Few examples are still extant today. One good example can be seen hanging on the wall in Oideas Gael<sup>15</sup> in Glencolmcille.



Fig 1. 2: (L) John ‘The Tae’ Gallagher with his tin fiddle and (R) The Tin Fiddle played by Dermot McLaughlin on ‘The Fiddle Music of Donegal Vol.3’. The fiddle was made by Mickey ‘The Miner’ Byrne of Glencolmcille.

---

<sup>14</sup> Pandaís were farmyard utensils, used as containers for carrying water, milk and other fluids. John Doherty can be seen making a pandaí outside a house in the 1974 programme ‘The Fiddler on the Road’ (UTV).

<sup>15</sup> An Irish Language centre synonymous with the Cairdeas na bhFidilíirí fiddle week in Glencolmcille each year. See <http://www.oideas-gael.com/en/> for more info.

This fiddle can also be heard being played by Dermot McLaughlin in ‘The Fiddle Music of Donegal’ Vol. 3 (CNF 003) and also on a recording by Damien McGeehan entitled ‘The Tin Fiddle’ which was released in 2017 (own label). This album was recorded entirely using a tin fiddle (owned by Peter Oliver of Ardara, made by the Dohertys<sup>16</sup>). Subsequently, Damien has commissioned Rab Cherry to make a tin fiddle, and this project is now completed. The tin fiddle made by Cherry differs from its predecessor in that it is made using a supporting frame which runs through the interior of the fiddle, which enables the fiddle to support the tension needed to achieve standard tuning.<sup>17</sup>

### 1.5.5 The Brass fiddle

A fine example also exists of a brass fiddle. The fiddle in question was made in the 1920s by John and Frank Cassidy in Teelin from a barrel that had washed up on the shoreline. A picture of the Brass fiddle was published on the front cover of the seminal recording of Donegal fiddle music of the same name (1987). The liner notes of that recording relate that:

‘It was made in the 1920s by Frank and Johnny Cassidy, both Teelin fiddlers. The body of the fiddle is beautifully made from heavy brass obtained from a brass drum washed ashore at the bottom of the cliffs at Bun Glas near Sliabh Líag, site of some of the highest sea cliffs in Europe . The fiddle is quite heavy and has a quiet, soft – almost dull – tone, due to the acoustic properties of the brass. It is, by any standards, an outstanding piece of craftsmanship’.

Like the tin fiddle, the fiddle was generally tuned to a lower pitch, and because of the dull tone described was not used for playing for dancing. Therefore, it did not feature in social performance regularly.

---

<sup>16</sup> Historically, probably the most famous family of Donegal fiddlers, of which both John and Mickey Doherty were members. See [www.donegalfiddlemusic.ie](http://www.donegalfiddlemusic.ie) for more.

<sup>17</sup> An example of Damien playing the fiddle with the band FIDIL is available here <https://www.facebook.com/2005617919760636/videos/310092013124087/>. An example of Vincent Campbell playing his own tin fiddle, made by Mickey Doherty can be found here <https://www.youtube.com/watch?v=MNP3iqCkTuM>

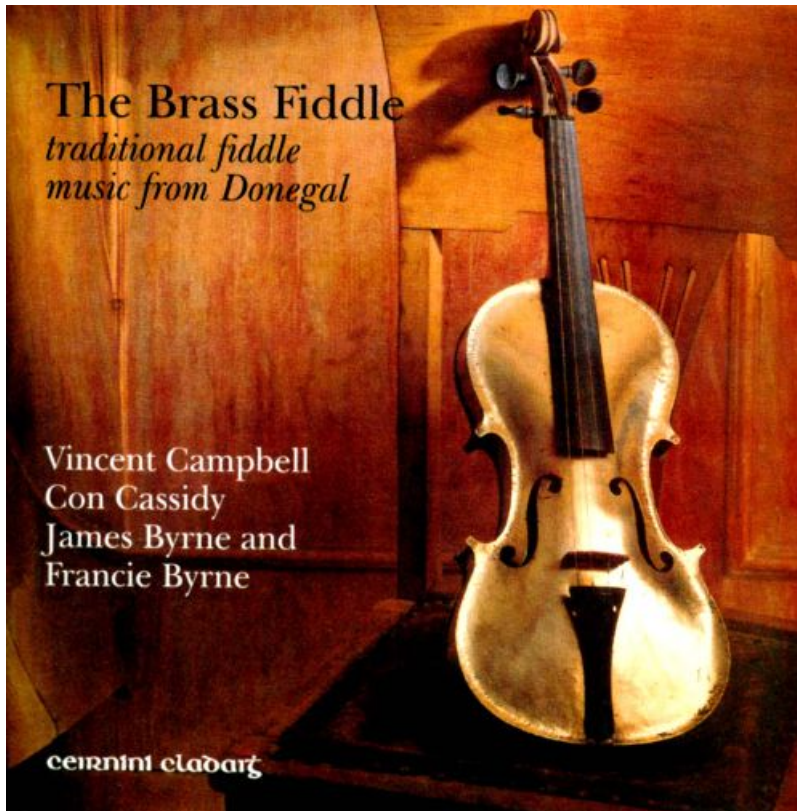


Fig 1.3 : The Brass fiddle featured on the cover of the recording of the same name.

In relation to the topic as it relates to this thesis, of note is the fact that in each of these instances (box fiddle, tin fiddle and brass fiddle), fiddles were pitched significantly lower than their standard equivalents because the tension of tuning to a higher pitch would have had detrimental affects on the instrument.

### **1.6 Social contexts of the development of the fiddle tradition in Donegal**

Again, developments in Scotland in relation to the fiddle, aid understanding of the development of the instrument in Donegal. The modern fiddle arrived in Scotland in the 1680s. It was introduced through the English court in the hope that a certain degree of cultural imperialisation could be achieved by making it an instrument of the higher classes, but it was quickly absorbed into the indigenous tradition (Johnson 2003, p. 35). Old names were adopted for the new instruments which makes tracing early definitive references to the modern instrument somewhat difficult. As an example, David Johnson offers that evidence from a 1715 manuscript from Aberdeen instructs the player to “tune the four strings of the 'Treble viol' to GDAE” (Johnson, 2003 pp. 24, 25), the treble viol having already been in Scotland as a predecessor to the modern instrument.



As a result of the violin/fiddle's popularity with all classes in Scottish society, two general tiers of practice emerged: one based primarily in urban areas, which was heavily influenced by high art music of the time and western art technique, and one rural, based on the older form of music which existed prior to the introduction of the modern violin (Johnson, 2003). Mac Aoidh suggests that while both traditions shared similar lines of development, one key difference was the absence of any such higher class in Donegal:

Scotland during the 1700s could be divided into two populations, first the geographically dominant rural communities and secondly the populations of the cities, like Glasgow and Edinburgh which then were amongst the largest and most cosmopolitan urban centres in the western world. At this time Donegal certainly would have had strong kinship by virtue of its rural setting but was utterly lacking in cities or towns of considerable population. It is hard to imagine, in the total absence of 'high society' which existed in Scottish cities, any demand for unaltered European art music amongst Donegal's rural population, with the possible exception of the dispersed, rare big house. The absence of art music in the repertoire of the Donegal fiddler of this time is also suggested by the complete failure of any such music to survive either intact or in memory to the present day."

(Mac Aoidh, 1994 p.28)

However, while this may indeed have been the case for many parts of Donegal, and in particular the rural areas of Donegal, west of the Bluestack and Derryveagh mountain ranges which have come to represent that sound of the 'Donegal' style of fiddle playing for many (discussed below), I believe that this view may be not wholly accurate. From a socio-economic perspective, obvious differences are apparent when comparing different areas of the county. For example, the geographically remote and infrastructurally isolated south-west and west is historically in contrast to the rest of the county, in particular the area known as 'The Lagan' in the east of the county. This area, which has some of the most fertile land in the county, was planted by lowland Scottish Presbyterians during the plantation of Ulster of 1610. The families chosen for plantation were loyal to the English crown as well as English/Scottish cultures (Baraniuk and Ferguson, 2013 p.175). These families became well established in the area, bringing with them tenants from Scotland to work their newly acquired lands. This area, rich in fertile agricultural lands and later industry was completely different to the areas in the west of the county.

"...South-west Donegal was a region of severe poverty. It was composed of scattered farming communities of small holdings devoted to subsistence farming...The growing of oats, potatoes and the raising of small quantities of livestock and poultry were the

main agricultural activities. The weaving of tweed, and sometimes fishing, were the only activities pursued locally that brought in any hard cash. It was a virtually moneyless society...”

(Feldman and O’Doherty, 1979 p.117)

In 1908, Rev. G. A. Leckey highlighted the existence of:

“two Donegal’s...one, almost wholly Catholic and Gaelic, concentrated in the mountainous districts and along the western seaboard, while the other was confined to the Laggan where the bulk of the county's Protestants and Ulster-Scots were to be found”

(Baraniuk and Ferguson; 2013 p.177)

The presence of more abundant wealth and 'big houses' (houses owned by the wealthier land owning classes)(detailed in Fig. 1.4) in the east, along with greater access in terms of infrastructure and, later, emerging media (such as the gramophone etc.) indicate a completely different set of influences than those apparent in the rest of the county. As a result, external influences were accessible with greater ease, and in many cases favoured as a means of retaining or aligning with a certain cultural identity.

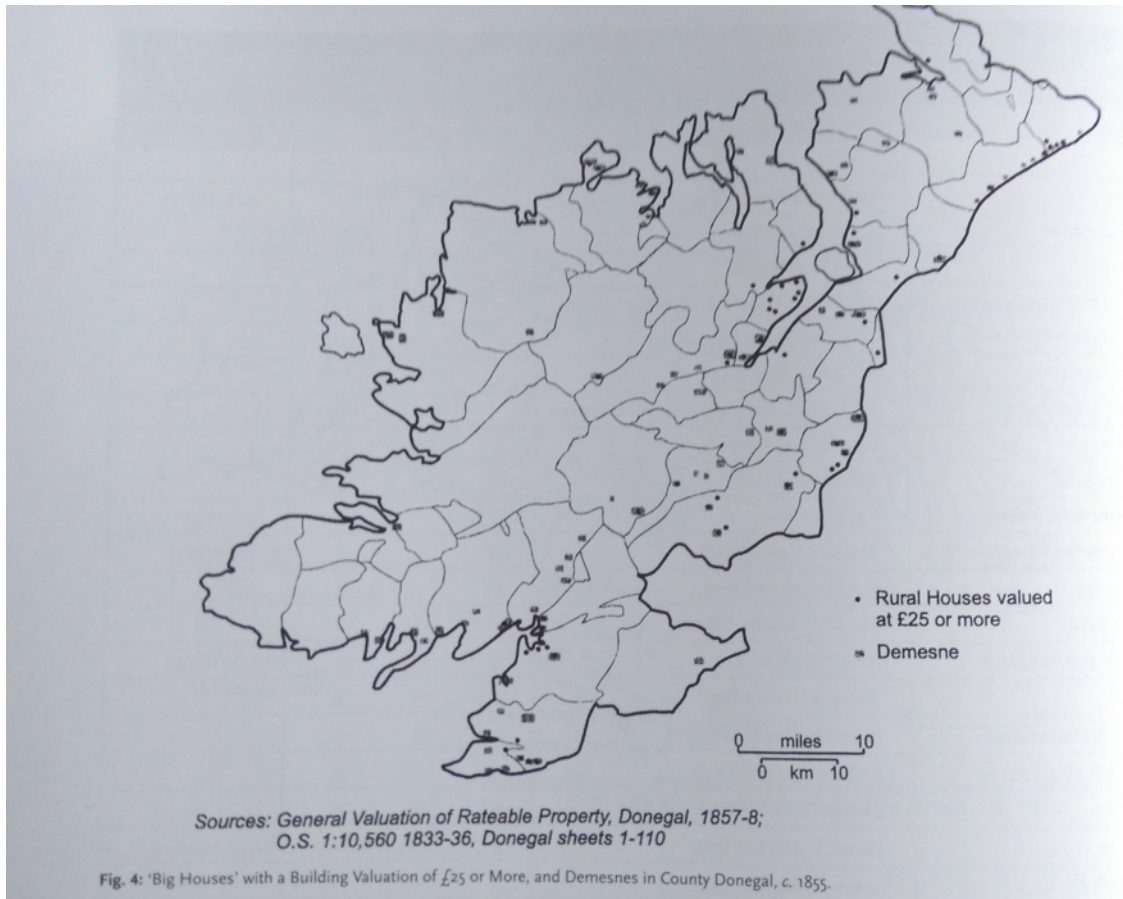


Fig 1.4 : Map of the 'Big houses' of Co. Donegal 1857-58 (O'Donnell, 2013 p.244)

It must also be acknowledged that during the many waves of migration from Ireland for seasonal labour abroad, the city of Derry became the major port in the North West of Ireland and so became one of the wealthiest areas on the island of Ireland. The city of Derry was also within the geographical jurisdiction Co. Donegal until 1610 (Lacy, 1983). Its fortunes had a direct impact on the population of Donegal, in particular those from the North of the county, primarily due to the fact that, as the closest large urban centre, it was a centre of commerce and was the chief port through which emigration and trade took place. The city itself also sits on the Donegal border, and to this day draws many from the county for purposes of employment, education and leisure. While on a visit to the city in 1796, French traveller De Latocnaye commented “Londonderry does not have the air of an Irish town”, due to the already well established level of commerce and industry in the town. (McAllister Hart, 2012 p.26). McAllister Hart details the early development of the public performances of music, dance and drama in the city, outlining the popularity of ballad opera among the higher classes, and the visitations of ‘Dancing masters’ which were of particular importance (2012 pp. 20-26). In terms of traditional dances “Folk dances were particularly popular, with

Highland flings, clog dances, reels and strathspeys drawing huge applause and calls for encores.” (McAllister Hart, 2012 p.29) Of course filtration from these types of musical performance did happen, in particular with the repertoire of dances/ tunes mentioned above. What is documented however is a bi-musical tradition, one based on the fashionable music of the day, (opera, classical music) and one more aligned with our current traditional music (Highland flings, reels etc.). Even today, the continuance of such a tradition is still in evidence (Doherty, 2006); some of the informants for this project, for example, from Inishowen, make reference to classical music classes which took place in their nearest 'big' town, Derry (for example Dinny McLaughlin and Roisín McGrory; see Appendix A). This suggests a plurality of tradition in the northern area of the county which is at least in part influenced by the notion of dual society alluded to by Mac Aoidh and Johnson above. While this may be forwarded as a potential factor in the development of the musical traditions of the north of the county, no such evidence exists to further the argument for the south of the county in terms of the larger urban centres such as Donegal town, Ballyshannon, or Glenties in central Donegal. As Mac Aoidh suggests (1994 p.28):

“It would seem most likely therefore that the local equivalents of the ethnic type music described by David Johnson from eighteenth century Scotland were the order of the day in Donegal and possibly only in the rare, exceptional cases ... would art music have been played”

One further interesting insight into this duality of tradition is the experience of Honoria Tomkins Galwey (1829 – 1925). Galwey was born in Derry but moved to Moville in Inishowen in 1830 where she grew up, and was trained in music. She was a celebrated collector of Irish folk songs, publishing her collection entitled ‘Old Irish Croonauns and other tunes’ in 1910. She also suggested that ‘The Londonderry air’ was in fact associated with Donegal rather than Derry, as from her experience, the air was associated with west Donegal, and was also collected from a fiddle player called Simon O’Doherty in Antrim, but whose father was a piper from Letterkenny. The point here is that Miss Galwey was trained in the western art tradition, and came from an entitled position within the community (her father was a local Reverend). Her experiences of collection from the traditional musicians of the

area further indicate that they were not educated musically in such a way. Therefore, she is an example of where these two traditions meet in the context of Donegal (and Derry).<sup>18</sup>

### **1.7 The role of The House Dance Tradition in the development of the fiddle tradition in Donegal**

Central to the performance of the fiddle music of Co. Donegal has been the fortunes of the house dance tradition in the county. Academic work on the topic has been sparse. Grace Orpen's 'Collection of Donegal dances' in 1931 was the first work published dedicated to the subject. Feldman and O'Doherty make reference to the importance of the house dance as a socially important aspect of the cultural fabric of rural Donegal in 'The Northern Fiddler' (1979). Nic Suibhne (1994) examines the repertoire associated with the performance of these dances, while Caldwell (2014) examines the decline and revival of the house tradition in South-west Donegal. Traditionally, the custom of 'Ceilí-ing' (the congregation of people at various houses of neighbours and friends) was extremely popular in rural Donegal. Dances in the houses where such ceilí-ing took place were inevitable. The term Ceilí-ing as it is used here is not to be confused with the term 'ceilí' or 'ceilidh' used to describe a particular style of group dance. Local musicians played for the dances, with performance of song, recitation and lilted interspersed through the fiddle music which was the main vehicle for performance for the dancers. Lilted was also used to a lesser degree and was generally performed by local women as opposed to men, who instead were encouraged to play an instrument. An example of such a practitioner was Cítí Séan Uí Chuinneagáin, from Teelin, a well known singer and lilter who, while not playing the fiddle herself, was able to transmit the older tunes of the tradition to many of the younger players of the area through the medium of lilted. On a personal note, my grandmother, Bridie Uí Dhomhnaill (nee Campbell, from the Glen of Glenties) remembers starting the fiddle, but being discouraged from that practice and encouraged to dance instead, which was a more suitable mode of expression for a lady. She also recounts many of these 'Big Nights' (a term that seems to have been used countywide for these events (Doherty, 2010; Nic Suibhne, 1994) from her youth, where the fiddle players present were greatly valued, in particular, the travelling fiddle players such as John and Mickey Doherty.

---

<sup>18</sup> The Irish Traditional Music Archive has provided public online access to Miss Galwey's works. For more on Miss Galwey herself see <https://donmcginley.wordpress.com/2018/02/27/honoria-tomkins-galwey/> (accessed 2 July 2019 17: 02)

### 1.7.1 Decline

It is generally accepted (Mac Aoidh, 1994; Caldwell 2013) that in the period following the introduction of the Public Dance Hall Act (1935) that the fiddle tradition entered a period of decline in Co. Donegal. Caldwell (2013) suggests that between 1935 and 1950 a duality of dancing traditions became apparent, one rooted in the traditional house dances, where repertoire included Highlands, Mazurkas, Barndances and more, while the other, located in the larger dance halls comprised set and ceilidh dancing, as prescribed by organisations such as Conradh na Gaelige<sup>19</sup> as ‘authentic’ Irish forms of dancing. These particular forms of dance also allowed for more people to take part than the two-hand couple dances associated with ‘big nights’. Dance halls also provided an outlet for people to engage with newer forms of music not previously present in rural areas, such as Jazz and later Showbands. This directly changed the performance environment for the fiddle players of local areas. Their music was becoming less socially relevant and therefore was suffering decline. Younger people gravitated to new instruments and music that were widely available, most notably the guitar, used in the Showband, Country and Western and Jazz genres, while few younger individuals in the county at the time took an interest in the fiddle traditions of their respective localities. The older generation carried on the practice of the tradition. However, that is not to say that all individuals of a younger age in various areas across the county did not engage in any way with the older tradition. For example, individuals such as James Byrne in Glencolmcille, The Campbells from Glenties, Dinny McLaughlin in Buncrana<sup>20</sup> and others from outside the county, e.g. Dermot McLaughlin (From Derry) and Paul O’Shaughnessy (From Dublin, but whose mother was from Donegal) all learned from older players in their immediate social environments. However, by the time that the seminal publication ‘The Northern Fiddler’ was written in 1979 (published 1980), it was generally accepted that the fortunes of the fiddle tradition in Donegal were declining. This was a fate shared by the house dance tradition, which was still practiced, but in an irregular, and declining fashion. It is interesting to note that ‘The Northern Fiddler’ deals with the fiddle tradition of Co. Donegal (and other fiddle traditions in Ulster at that time), and for many symbolised a positive anthropological tool in understanding the cultural traditions of those of the county. However, the fiddlers collected from were exclusively from south of the Bluestack mountains, ignoring the simultaneous traditions of east Donegal and Inishowen, which boasted fiddle players such

---

<sup>19</sup> An organisation founded in 1893 to promote the use of the Irish Language and all aspects of Irish culture. See [www.cnag.ie](http://www.cnag.ie) for more.

<sup>20</sup> See [www.donegalfiddlemusic.ie](http://www.donegalfiddlemusic.ie) for more on each of these players.

as Pat Mulhern, Seamus Grant and Tommy Peoples. Each of these areas also boasted a similar dance tradition, affected by the same outside forces of decline.

### **1.7.2 Revival**

In 1983, a group was established to stop the decline in active participation in the fiddle tradition of the county. This was Cairdeas na bhFidiléirí. Its aims are:

- To strengthen Donegal fiddle music at its roots,
- To improve standards of fiddle playing,
- To promote participation in all aspects of Donegal fiddle music
- To encourage the transmission of the Donegal style and repertoire.

The organisation has achieved unprecedented success, with an abundance of young players having come through their structures enjoying various levels of success as professional and non-professional performers. Many of the informants of this research project have come through their ranks, including myself. I am also a current committee member of the organisation. The organisation has been used as a model for cultural revival by other organisations<sup>21</sup>. It hosts two major events annually, a week-long fiddle school in Glencolmcille during the first week of August, and a fiddle weekend based at the Highlands Hotel in Glenties on the first weekend of October. Each event foregrounds the transmission of the fiddle music with classes held for all abilities at each event. Lectures and public interviews with some of the older members of the tradition are also included. Concerts are a feature of both events, with a fiddle player from Scotland invited to play each year at the concert in Glenties to celebrate the links in terms of the shared fiddle culture between Donegal and Scotland. Other events are held throughout the year, although these are not regular. Instead, the committee liaises with local music teachers to financially support events to promote local learning. Cairdeas na bhFidiléirí has also published print, audio and visual media, including a successful series of recordings documenting the fiddle traditions of Co. Donegal. This series is simply called ‘The Fiddle music of Donegal’ and consists of live recordings taken from concerts at their events through the years, as well as a successful series of recordings of some of the seminal fiddle players of the County, including Neillidh Boyle,

---

<sup>21</sup> See Campbell et al. (Edinburgh 2014).

Mickey Doherty, Vincent Campbell and Danny Meehan. The revival of the house dance tradition is also important to the organisation (Caldwell 2014), and each fiddle week in Glencolmcille, students are taught how to dance the dances traditionally danced in this context. This proves to further contextualise the tunes learned throughout the classes during the week. They have published a DVD, *Damhsai Cupla Thir Chonaill* (2011) which gives a historical context to the tradition, and also provides examples of how to perform some of the dances. The organisation has similarly worked with fiddle player Ronan Galvin on a project entitled 'A Musical Landscape', where sections of Donegal, largely based on parochial boundaries are mapped out with access to any and all information regarding any musician that lived in that particular area.

In terms of the early work of the organisation, it mainly centred on the areas of south, south-west and central Donegal. This was most probably due to the high number of elderly fiddle players from those areas who each acted as iconic examples for their local sound communities. Examples of these players included Francie Dearg and Mici Ban O Beirne (Kilcar), Con Cassidy (Teelin), James Byrne (Glencolmcille) and Vincent Campbell (Glenties). Each of these players featured on a recording of Donegal fiddle music called 'The Brass Fiddle' (Claddagh Records, 1987). These were players of exceptional calibre, each possessing a unique idiosyncratic sound. Doherty (2010) suggests that the foregrounding of these individuals was central to the success of revival, as was a collective label (that of 'Donegal') to align with.

"The process of foregrounding is also in evidence in the revival of the 'Donegal style', where the generic label of Donegal was adopted to refer to what was indeed the music of only a small geographic portion of the county. The reality, of course, is that 'quite often, a particular performance happens to get collected or transcribed first, possibly because ...particular regions had been declared geographical centers of cultural authenticity. "

(2010 p.188)

This point has some currency in a historic analysis of the organisation, although currently, the organisation strives to embrace the fiddle traditions of the whole county, with programmes in place in Inishowen, including a scheme where instruments are donated for local young people to start the fiddle. However, the point is conceded that by centring early aspects of the revival in the areas of South, Central and South-west Donegal, coupled with the abundance of



collection and media attention that individuals of the area had received (e.g. ‘The Northern Fiddler’ (1980), Peter Kennedy recordings of John Doherty and Neillidh for the BBC) that the collective sounds produced by the iconic players of that area came to encapsulate what the ‘Donegal’ sound was.<sup>22</sup> The idea of ‘authenticity’ as suggested by Regina Bendix in her seminal work ‘In search of Authenticity: The formation of Folklore studies’ (1997) is particularly relevant in this context. Bendix suggests that the loss or potential for loss of a particular part of culture is inherently linked to the idea of an authentic experience being sought. Therefore, ethnographical publications such as ‘The Northern Fiddler’, that suggested that it was capturing the last remnants of an aspect of the northern fiddle tradition, served to validate a sense of what was authentic in the Donegal sound at that particular moment in time. Caldwell (2014) suggests that Tamara Livingstone’s (1999) work on revival is of particular relevance to the revival of the house dance tradition by Cairdeas na bhFidileiri in the 1990s. He suggests that the core elements needed for cultural revival outlined by Livingstone were all present with regard to the dance revival. These are:

1. an individual or small group of "core revivalists"
2. revival informants and/or original sources (e.g. historical sound recordings)
3. a revivalist ideology and discourse
4. a group of followers which form the basis of a revivalist community
5. revivalist activities (organisations, festivals, competitions)
6. non-profit and/or commercial enterprises catering to the revivalist market.

I suggest that similarly, with regard to the original revival of fiddle music in particular in south-west Donegal, these core ingredients were present, in particular a core group of individuals, for the most part people from outside the county, such as Rab Cherry, Caomhin Mac Aoidh, Mairéad Ní Mhaonaigh, Dermot McLaughlin and Paul O’Shaughnessy, and appropriate revival informants such as Francie Dearg Ó Beirne, Vincent Campbell, James Byrne and others (Caldwell, 2014).

With regard to using such iconic players as examples of a style (in this case the ‘Donegal’ style) Dowling offers that:

“Authenticity in traditional music is tied to the identification of an individual player

---

<sup>22</sup> An in depth examination of labels associated with the sound community of Donegal can be found in section 2.1.

with an ensemble of characteristics – the nature of embellishment, tempo, syncopation, instrumentation and repertoire – which are themselves attached to counties or small inter-county regions. Most musicians are aware that regional styles are in fact derived from the characteristics of a dominant virtuoso who serves as a prototype for the region with which they are identified. But the identification is with the region, not the musician. As a result, one of the most powerful structuring myths of Irish traditional music is that it exists as a collection of regional styles.”

(2006 p. 129)

Coinciding with the establishment and success of Cairdeas na bhFidiléirí came the success of some professional touring bands from the county which had their styles firmly rooted in traditional music, foremost of which are Altan and Clannad. In particular, Altan draw their music from the fiddle music repertoire of Co. Donegal, and have been the lens through which many from outside (and from within) the county have engaged with the fiddle community. Such success<sup>23</sup> on a national and international level in no small way contributed to the idea of a Donegal ‘style’ of music and reinforced the brand identity of the Donegal fiddle. It encouraged many of the younger generation within the county to engage with the older players of the tradition through Cairdeas na bhFidiléirí. A figurehead in this regard is Mairéad Ní Mhaonaigh, who is the lead singer of Altan and fiddle player; the fact that she is female is also significant, as this was not common in terms of lead instrumentalists in bands of that era (late 80s early 90s).

Through the 1990s, the fortunes of Donegal fiddle music seemed to progress as artists from Donegal became a common feature in any media associated with traditional music in Ireland, in particular the newly formed T na G (now TG4) which gave a unique platform to traditional music in Ireland, particularly from the Gaeltacht regions of the country. Bands such as Altan and fiddlers such as James Byrne, Liz Doherty, Mairéad Ní Mhaonaigh, Paddy Glackin, Dermot McLaughlin and the Campbells became regular contributors to programmes on fiddle music. The tradition was also given a unique place in terms of world fiddle music, earning a special programme on the BBC series ‘Rhythms of the World’ and the seminal documentary ‘The Magic Fiddle’, which had contributions from Stephane Grapelli, Yehudi Menuhin, Mark O’Connor and other leading figures in world fiddle music of the time. Alongside these, not one, but two fiddlers from the sound community were featured, Vincent Campbell and Mairéad Ní Mhaonaigh. I feel that this highlights the position that Donegal fiddle music came

---

<sup>23</sup> For example, Altan were the first traditional Irish band signed to a major label, Virgin records, in the mid 1990s

to hold in the 1990s, a decade after Cairdeas na bhFidiléirí had been set up to counteract its demise.

The Inishowen Traditional Music Project (ITMP) was founded in 1999 to promote the fortunes of traditional music in the county. ITMP was founded with the specific remit of promoting and preserving the traditional music of the Inishowen peninsula. Much like Cairdeas na bhFidiléirí, it achieves this through regular music classes, workshops, concerts and events. Their website also documents important historical musical figures of Inishowen, dividing the peninsula into north, south, east and west.<sup>24</sup> They work closely with Cairdeas na bhFidiléirí to promote the development of the traditions associated with the county, including the fiddle. However, the focus is firmly on the Inishowen peninsula, which implies that there may be a distinct identity in relation to tradition in that area. It is interesting to note that the organisation was set up despite Cairdeas na bhFidiléirí already being in place to promote the traditions of the county.

Comhaltas Ceoltóirí Éireann<sup>25</sup> have historically had a lesser presence in the county in terms of the local fiddle tradition. This was directly as a result of the fact that historically, for some within the organisation, Donegal music was not seen as Irish music and therefore was not accepted as an authentic mode of traditional expression. Mac Aoidh highlights this fact, stating explicitly that Donegal music was seen as not traditional Irish music, and therefore shunned by some within the organisation (1997 pp. 67, 68). However, the organisation does run classes and sessions through their branches in the county. This is dealt with in section 1.11.

## **1.8 Other performance contexts for traditional fiddle music in Co. Donegal**

As is the case with the rest of Ireland, the primary performance context for Donegal fiddlers today is the local session. These sessions are located in many towns and villages in the county. Some are informal, where participants gather solely for recreational purposes, while some are more formal, with core members of a session being paid to play. In many cases this is a direct result of the success of tourism in Donegal (in particular, the recent success of ‘The

---

<sup>24</sup> See <https://inishowenmusic.ie/itmp/>

<sup>25</sup> Comhaltas Ceoltóirí Éireann (CCÉ) is a voluntary organisation founded in 1951 to promote Irish traditional music, dance and associated culture. It consists of a branch structure where local classes, sessions and other events are organised by branch members. The organisation also has provincial and national committees. CCÉ also hold annual competitions (Fleadhanna or the fleadh) at county, provincial and national level, with the annual All Ireland Fleadh taking place in August each year.

Wild Atlantic Way' has boosted this economy). In towns that enjoy particular success with regard to tourism, (for example Donegal town or Bundoran) amplified sessions are the norm. Sessions in most areas of Donegal are multi-instrumental. Sessions that take place at Cairdeas na bhFidiléirí events often involve only fiddle players, but this is not the norm in general practice. Sessions also form a major core of the various festivals that take place in Donegal throughout the year. Major festivals include The Cup of Tae festival, based in Ardara, The Scoil Geimhridh Gaoth Dobhair in Gaoth Dobhair, Ceol na Coille based in Letterkenny, The Kilcar Fleadh, and The Glenties fiddlers weekend and Glencolmcille fiddle week, both run by Cairdeas na bhFidiléirí. A large aspect of these festivals is also concert performance, where performers from inside and outside the county perform. For example, the Earagail Arts Festival has hosted numerous concerts over the past number of years celebrating the Donegal fiddle tradition, including 'Mná na bhFidileachta'<sup>26</sup> at the 2018 festival and 'Ó Ghlúin go Glúin /From Generation to Generation' at the 2019 festival. This highlights that the music has a platform for such performances and that concerts have become a regular feature of the performance practice of many artists in the county. The fact that these concerts are curated suggests that there is an appetite in the county for performances of this kind. However, the performance contexts of the local session and a curated concert are very different. The informal nature of the session is diametrically opposed to the formal nature of concert performance. Therefore, many fiddlers within the county weave between these contexts, playing for free (in the majority of cases) in a local session context for recreation, and playing in a formal paid context with regard to concert performance.

'Pass the fiddle' events also take place, in particular in central, south and west Donegal. These are informal gatherings, where more than one fiddle player may be present One fiddle is taken out only, and shared amongst the fiddlers present. As stated earlier, this is a spontaneous performance context, but has been used as an advertised form of performance recently, for example at events ran by Coiste Chúltútha Dhún Cheannfhaolaidh<sup>27</sup>, a cultural committee based in Dunkineely in the south of the county. The practice is a direct embodiment of the values associated with the ceilí-ing system. In this context, music is shared through a shared instrument. In many cases, traditionally only one fiddle existed in a

---

<sup>26</sup> Translates as 'The women of the fiddle'.

<sup>27</sup> Translates as 'Dunkineely Cultural Committee'.

house,<sup>28</sup> so when an individual(s) called, that fiddle was shared accordingly. Rather than being an elitist experience, which has been suggested by some to me personally, my experience and opinion of this is a celebration of a shared musical experience, where each individual voice is heard. It is a celebration of individuality of expression, within the structure and context of that performance environment. This was also a common practice in the Cape Breton fiddle tradition in Canada, where singular fiddlers were the norm until the advent of Celtic Colours international festival and the introduction of Irish and contemporary Scottish session practices (see Doherty, 2015).

As Caldwell (2014) suggests, the house dance revival spearheaded by Cairdeas na bhFidiléirí means that at certain events associated with the organization, playing for dances also occurs, but despite the revival in the dance tradition, it is still in no way one of the primary contexts for performance in the county. Instead, it is a specialized context and performed by some members of the tradition on occasion rather than frequently as is the case with session and concert performance.

A growing number of fiddlers in Donegal now play music professionally in either a part-time or full-time capacity, both within the genre of Irish traditional music itself and in other genres. Some also weave between genres, in particular with regard to country<sup>29</sup> music, which is extremely popular in Co. Donegal across a large part section of the community, regardless of age or social status. For example, a simple google search for ‘Country weekends Donegal’ highlights the large number of these events, from Clonmany to Donegal, Ardara to Bundoran. The fiddle is also a regular feature in the line-up of many of the bands in this genre. Few mainstream country and western singers are from the county, with the notable exception of Daniel O’Donnell. However, the fiddlers playing with many of these bands across the country are from Donegal. Fiddlers involved in this sample such as Damien McGeehan, Denise Boyle, Iarflaith O’Donnell and Ciarán Tourish have all played in some capacity with a country band (be that as a guest performer, or regular fiddler). Also of note is Matt McGranaghan, from Castlefinn, who is also a highly regarded country fiddle player.

---

<sup>28</sup> Vincent Campbell states this clearly in the documentary ‘Musical Traditions’ (2002), indicating that there might be only one fiddle in a house, but three fiddlers.

<sup>29</sup> The term ‘Country’ as a genre of music mentioned here refers to the music of the same name popularised in North America. Within Ireland, the genre is also sometimes referred to as ‘Country and Western’, or ‘Country and Irish’, and is one of the most popular genres of music on the island of Ireland at present. Also see Maguire (2012)

Emigration from the county is also an important consideration when assessing the fiddler in Co. Donegal at present, as many fiddlers have left Donegal to access third level education or work. This means that many of the fiddlers associated with the county no longer live there, and of those that do, many have spent periods living away from the county. This is not a new phenomenon when assessing the Donegal fiddler. Evidence from Henebry's 'Irish Music' (1903) suggest that two brothers from Glencolmcille, Jim and Pat Boyle, had moved to Denver, Colorado. In Henebry's opinion, they were noted fiddle players and an influence on his own playing. This is cemented by their inclusion in 'Irish Music', especially considering the content of the work, where Henebry is actively appealing for the conservation of the Irish scale when playing Irish music on the fiddle. Unfortunately, no recordings of these players exist, despite a number of wax cylinders being recorded by Henebry (which are held for the most part in the Henebry collection at UCC<sup>30</sup>, while some cylinders have been digitised and published online by the Irish Traditional Music Archive<sup>31</sup>). In terms of this sample, older fiddlers such as Danny Meehan and the Campbells emigrated for work to the U.K. during the 1950s and 1960s where they became involved in the emerging session and folk club scenes before retiring back to Donegal. Younger fiddlers such as Melanie Houton, Iarfhlaith and Breffni O'Donnell, Aisling Drost Byrne and Ciaran Tourish all currently live outside Donegal, while of those left in the sample who currently reside in the county, a majority have lived outside the county at some stage for the purposes of work or education.

Discussion around gender is also an important consideration. This is due to the high number of female performers practicing to a high standard in the county. Historically this was not the case. Females were generally discouraged from playing the fiddle, as this was regarded as a male pursuit. Anecdotal evidence of this is from my own grandmother, Bridie Bn. Uí Dhomhnaill (néé Campbell, from Glenties). She is reported to have been a talented dancer, and to this day has a very keen interest in fiddle music. She started the fiddle at a young age. Her brother (James Campbell) also played the fiddle and accordion. However, Bridie was discouraged from playing the fiddle, despite (according to Jimmy Campbell) showing great promise. Instead, she was encouraged to focus on the dance, as this was more 'ladylike'. Some female performers did break through the social constraints implied. These included

---

<sup>30</sup> Access was requested to these recordings but unfortunately was denied.

<sup>31</sup> See ITMA.ie

Kitty Seán Uí Cuinneagáin (d. 3<sup>rd</sup> June 2018, aged 98 years) a lilter from Teelin and Kathleen McGinley (d. November 2011) a fiddle player from St. Johnston. In particular, Maireád Ní Mhaonaigh has become a major role model for younger female fiddle players in the county and beyond. Through her role as the lead fiddle player with Altan she has encouraged many young girls to participate and broken any perceived taboo in playing the fiddle. Others like Liz Doherty, Bríd Harper and Roisín McGrory have similarly become visible performers and exemplify the change in gender related exemption that was at one time apparent in the tradition.

All these strands of the fiddle tradition and its performance as it stands in Donegal today make an examination of the sound community as a whole more complex. It is observed that multiple contexts (historical and contemporary) can affect formal / informal approaches to the music and that the fiddlers in the county can wear different performing identities dependent on the particular needs of a performance (including playing in a different genre altogether). Also, the Donegal fiddler at present need not be in Donegal, but in many cases is likely to reside outside of the county boundary for reasons of education or work.

### **1.9 Pedagogical Practice of fiddle music in Donegal**

McCarthy (1999 p. 174) suggests that the transmission of music in Ireland, in particular during the 19<sup>th</sup> Century, varied according to ‘subculture’. It is suggested that for Anglo-Irish families, emphasis was placed on ‘the science of music’ whereas for lower classes, music transmission happened as a normal part of the socialisation process. I suggest that this further contextualises the point made earlier with regard to a potential duality of tradition as outlined by David Johnson with regard to traditional fiddle music in Scotland. Traditionally, aural transmission was the predominant pedagogical method for traditional music in Co. Donegal. More formal musical education did take place occasionally, in particular in the east and north of the county, closer to the urban centres of Letterkenny and Derry (for example, such as the case of Honoria Tompkins Galwey discussed above). However, this has changed considerably in the last 40 years. Formal music lessons are now the common mode of transmission in Co. Donegal.

The main organisation for the teaching of traditional Irish music nationally and

internationally is Comhaltas Ceoltóirí Éireann<sup>32</sup>. Historically, this group had little presence in south-west and central Donegal. However, the organisation lists 10 branches active in Co. Donegal at present. These branches have varying levels of activity. Some have aligned with professional music teachers, such as Theresa Kavanagh in Cloghaneely (CCÉ Cloch Cheann Fhaola) and Roisin McGrory in Inishowen (CCÉ Seamus Mac Giolla Bhríde), and are enjoying much success, with students competing at provincial and national competitions with positive results<sup>33</sup>. Private music schools, run by dedicated individuals, have also been an integral part of the Donegal fiddle transmission experience. For example, in south and south-west Donegal, Seamus Sweeney, from Ballyshannon is an influential figure in this capacity. Seamus still teaches in the Ballyshannon area, but before his retirement, travelled as far as Glenties (53.4 km) and Kilcar (61.8 km) providing lessons. By covering such a large area, Seamus' influence is hard to quantify, but many of the fiddlers who are now active within the tradition started the instrument with Seamus. Interestingly, Seamus' repertoire and experience was predominantly of music from outside of Donegal, especially repertoire associated with Sligo and Clare traditions. He was actively involved in the annual CCÉ competitions through CCÉ Phil Rooney, the local branch in Ballyshannon. Lessons were also provided to many by Prionsias Ó Maonaigh in Gaoth Dobhair and Dinny McLaughlin in Inishowen, who each exerted their influence over fiddlers from their immediate communities.

Today, private music schools are the norm in terms of traditional music education across Donegal. The O'Donnell school of traditional music operates a successful music school from Donegal town to Killybegs (approx. 70 students), with Dunkineely as its main hub. Denise Boyle runs a successful music school in Glenties (also approx. 70 students) in conjunction with Ronan Galvin, who has recently moved to the area. Connie Drost, Mick Brown and John Byrne each teach in the Glencolmcille, Stephen Gallagher teaches in Kilcar, while Caoimhín Mac Aoidh teaches in the Ballyshannon area, as does Seamus Sweeney. An Crann Óg<sup>34</sup> is an organisation in Gaoth Dobhair which promotes Irish traditional music and song, founded in 2008, and an outcome of the success of the Frankie Kennedy Winter School/Scoil Gheimhridh Frankie Kennedy. In Letterkenny, Paul Harrigan has enjoyed success with the

---

<sup>32</sup> see <https://comhaltas.ie> for more info on its branch network at national, provincial and national level.

<sup>33</sup> Many young students from these groups have won prizes at provincial and National level and are very successful in the county competitions too.

<sup>34</sup> <https://www.youtube.com/watch?v=gFK-ogwmzmE> - accessed 23/06/20. An example of An Crann Óg performing.



Ceol na Coille<sup>35</sup> group, and runs a week- long series of workshops and concerts each July in conjunction with the Earagail Arts festival. His sister Roisin McGrory teaches across Inishowen, as does Clodagh Warnock (based in Moville). Both are involved with the Inishowen Traditional music project. Liz Doherty and Jim Woods run Scoil Trad Buncrana.<sup>36</sup> None of these schools are exclusively fiddle schools, but teach a wide range of instruments. However, fiddle is still a popular instrument within these schools. For example, 45 of the approximately 70 students attending the O'Donnell school of traditional music in the south of the county play fiddle.<sup>37</sup>

With regard to an online presence to transmission, little is extant with regard to the fiddle music of Donegal. Cairdeas na bhFidiléirí have some classes that were recorded at Glencolmcille fiddle week available free to download online, on their website and on YouTube. Liz Doherty runs 'The Fiddle Clinic'<sup>38</sup>, a unique online service that allows those who wish to improve their fiddle playing to take lessons with her online. The Online Academy of Irish Music (OAIM) have also dedicated a course module to Donegal fiddle music, featuring Aidan O'Donnell as tutor.

The purpose of the detail in this section is to fully contextualise what is actively happening on the ground in Donegal at the moment. This comprehensive list of teachers and lessons from across the county serves to highlight that the tradition is in a relatively healthy state, and that other instruments are also taught in these situations. This may prove to impact on the experiences of the fiddlers of the county in terms of their tuning and intonational practices. It also further highlights the development of music as a commodity in the county, where there has been a growth in formal paid lessons. Of interest is to what extent the commodification of the pedagogical context may have on tuning and intonational practices.

### **1.10 Extant sources related to the fiddle music of Donegal.**

---

<sup>35</sup> <https://m.facebook.com/ceolnacoille/>

<sup>36</sup> <http://scoiltradbhuncranncha.com/>

<sup>37</sup> This number was given to me by the director of the music school, Kevin O'Donnell.

<sup>38</sup> <http://fiddleclinic.ie/>

Donegal, as a commonly verbalized geographic category in Irish traditional music, has been well represented and discussed as part of the modern discourse on Irish traditional music. Authors who have contributed to the conversation on the county's traditions include those already discussed as part of the main narrative, such as Feldman and O'Doherty (1980), Feldman (2002) Caldwell (2013; 2014), Mac Aoidh (1984; 1994; 2011; 2014), Nic Suibhbne (1995), Doherty (2006; 2010), as well as Neff (2008), and Dorrity (2016). Also of note is the lecture 'The Long Road to Glenties' by Conor Caldwell and Danny Diamond which details the meeting of Pete Seeger and John Doherty, and has enjoyed much success at various events in Ireland over the past number of years.

Similarly, the fiddle music of the county has been the subject of many audio and visual recordings, both in terms of solo professional artists or bands associated with the tradition, and recordings of individuals selected from the tradition by the various producers involved in recording. These recordings include international TV programmes such as BBC's 'Rhythms of the World' (1990), 'The Magic Fiddle' (1991), 'Musical Traditions' (BBC) (2002), 'The Fiddler on the road' (1972), as well as many programmes on terrestrial television such as 'Canúintí Cheoil' (2002), 'John Doherty – Ar lerg na gaoithe' (2016) and others. Details of a complete discography of each recorded performance of Donegal fiddle music may be futile with regard to this project because of the volume of recordings extant. However, fine examples include some that are regarded as seminal recordings in traditional music generally, including 'The Floating Bow' (1996), and the 'The Brass Fiddle' (1987), while Cairdeas na bhFidiléirí have released a catalogue of recordings dedicated to the traditions of the county. Further to this are artists who have enjoyed commercial success such as bands Altan, FIDIL, and solo artists such as Liz Doherty, Paddy Glackin and Tommy Peoples (among others) each who have numerous releases to their name.

Of note is the fact that the majority of these publications are presented from the established viewpoint of the tradition, where the 'Donegal style' of fiddle music essentially refers in the main to the music from the south, west and south west of the county.

## **1.11 - Conclusion**

This chapter introduces the main research questions that have shaped this research, and provides a historical and contemporary overview of the sound community of traditional fiddle

music in Co. Donegal, in order to establish a context for this study.

Donegal fiddle music is an entity in its own right. Following a period of decline, the identity of the fiddle tradition was consolidated in the 1980s (in particular by organisations such as Cairdeas na bhFidiléirí), where the fact that the tradition was seen as ‘different’ by others in terms of the larger Irish fiddle tradition was celebrated and capitalised upon. Since the 1980’s a flurry of cultural activity, spearheaded by Cairdeas na bhFidiléirí, has resulted in Donegal fiddle music being one of the most easily recognisable ‘brands’ in Irish music. Professional bands/ artists such as Altan, Paddy Glackin, and more recently FIDIL, have raised the profile of the tradition. More young people also have the opportunity to learn the music, which is helping to strengthen the tradition.

However, in my opinion, while this chapter clearly highlights the nature of the Donegal fiddle tradition as an entity in its own right, the role of the individual within that tradition is of huge importance. I suggest that issues of tuning, intonation and inflection may be of significance in examining the role of the individual in the community. To this point, no academic study that I am aware of has examined the role these attributes of individual performance may have on traditional fiddle performance. Instead, most studies (and conversation within the tradition) centre on differences in bowing. By focussing on tuning and intonational inflection, this research marks a departure in traditional academic study regarding the relationship of an individual fiddle player to a specific fiddle style. It is also possible to centre the role of the individual in terms of creating an individual ‘sound’ while also examining what aspects of the ‘sound’ may be important in identifying with a specific style or community.

Finally, as a recognised exponent of the fiddle music of Donegal, I shall weave my own personal experiences of the tradition into this narrative. I feel that these experiences can help illuminate some of the potential questions that may arise as part of the research. I am also interested to assess what my ‘sound’ says about me, whether I am purely an individual, and how I relate to the tradition as a whole.

## Chapter 2

### A framework for exploring tuning within the Donegal fiddle sound community

#### 2.0 Introduction

In chapter one, the Donegal fiddle tradition has been presented as a viable community of practice (Lave and Wenger, 1991; 1998). As evidenced, ‘Donegal fiddle music’ is a well-established brand and is widely recognised as a distinct regional style within Irish traditional music. However, the singularity of sound and practice that is implied by such a label was, in fact, quietly acknowledged as being more complex and varied (Feldman and O’Doherty, 1980; MacAoidh, 1994); indeed the concept of an all-encapsulating ‘Donegal style’ has been challenged (Doherty, 2010). For the purposes of this research I propose moving away from the regional style approach (where the geographical aspect is prioritised) to one where the individual is foregrounded. For the purposes of this project, I propose the term the ‘Donegal Fiddle Sound Community’ as an alternative to the ‘Donegal style’ or ‘Donegal fiddle style’. The ‘sound community’ is generated by the practice of individuals; the uniqueness of each is recognised while the community is created by each of these individuals engaging (to lesser or greater degrees) with a set of shared values and processes. This more inclusive ‘sound community’ still maintains distinct features and characteristics that distinguish it from other ‘sound communities.’ The idea of developing a term directly associated with a sound community is not new, but based on existing scholarship in traditional music practices and the development of virtual sound communities of practice (see Jordan Smith and Horton, 2001; Waldron, 2012 and in particular, Kenny’s (2016) work on the traditional music community of Co. Clare). The use of a specific term serves to highlight the complexity of the community of practice, while also underpinning the specific aspect of community that is the subject of study.

In establishing a framework for the interrogation of my research question around tuning within the Donegal fiddle tradition the connection between the individual and the sound community is key. The framework offered here represents the individual fiddle player and the collective of fiddle players that make up the Donegal fiddle ‘sound community’ through engaging with some (or all of the) identified processes and values (to be discussed in 2.3). This has led to me adopting an inclusive approach to identifying informants for my research from a range of geographic areas of the county.

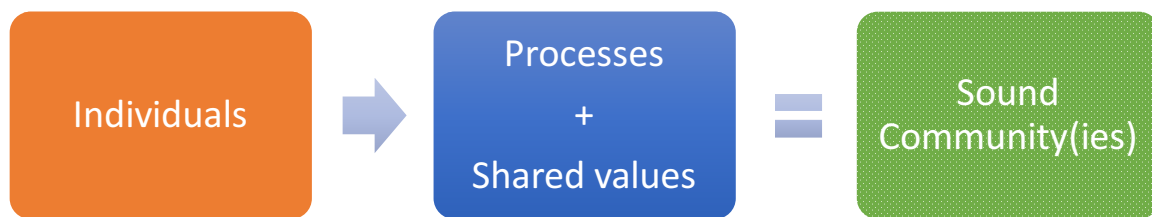


Fig 2.1 : Diagram outlining the framework for the interrogation of the research topic. It should be also noted that the direction of flow suggested in this diagram can be reversed, starting with the sound community, of which the individual is a member, and of which the shared values and processes may have become embodied. However, in relation to this research project, the action of the individual is key in understanding the individual actions performed, and how they perceive their performance practice in relation to the wider sound community. It is also noted that in contemporary music performance that an individual may also be a member of multiple sound communities, and therefore may filter through different processes and values to access membership of each.

Simon Zagorski-Thomas suggests “that the study of the musical surface is the study of the footprint rather than the step.” (2007 p. 328). While this may be true, the 'footprint' in question must still be the first point of reference for any study. That is why the framework suggested is essential to the study of tuning and finger related pitch differences in the fiddle music of Donegal. I suggest that using such a method enables me as the researcher to effectively deal with each of the research questions regarding tuning in the Donegal sound community, the role of the individual (and collective of individuals) within that community, and the processes that they engage with in order to achieve a communal ‘sound’. The individual is central to each of these questions, and also to the collective sound of the community. Therefore, any technological data recorded and analysed in order to understand tuning differences *must* be contextualised with the experiences of the individual in order to fully comprehend the processes at play.

The research questions outlined in chapter one ask whether the effect of potential tuning differences between the fiddlers of the county may support or challenge the notion of Donegal as a coherent sound community and ask what role the individual has in the creation of a communal sound. Therefore, in addressing the research questions associated with that experience, a multi-pronged approach is necessary in accounting for, in a meaningful way, issues surrounding the importance of the individual (both as a cultural actor in his/her own right and their relationship within the wider sound community context). Identity is a key consideration, where the role an individual may have in a sound community, or context of the

role, may affect their idiosyncratic perception of their sound. For example, playing in a ‘Pass the fiddle’ event in Donegal may lead an individual fiddle player to act in a different way to when they may play in a different context outside the county. Mechanical issues of tuning, temperament and mode are also investigated and contextualised with regard to other studies on western art and folk traditions. In particular, tools and concepts used by others in the examination of violin/fiddle performance are discussed, with those appropriate for use in this study highlighted as potential tools for the mechanical examination of any tuning and fingered pitch discrepancies observed.

Further to this, the varied performance contexts of that individual also play an important role in assessing any potential tuning differences observed. The processes by which the individual relates to varied contexts is a key consideration also. It is understanding these processes that allows for an examination of the step rather than the footprint. I suggest that my own personal experiences may also help illuminate this issue, as I am a member of this sound community, but have lived more of my musical life outside of the county.

Similarly, labels associated with the categorisation of the sound community itself are interrogated, in particular in relation to such idiosyncratic perceptions of the sound experienced.

As is evidenced in chapter one, my personal experiences of tuning and fingered pitch discrepancy within that community are central to my motivation leading to this project. As evidenced by my own experiences (by way of the ‘Pass the fiddle events’ alluded to earlier among others), individualism is a key consideration in understanding the processes at play in the potential creation of a ‘Donegal’ sound. Therefore, in considering how best to establish a framework to examine the relationship/ importance of the individual fiddle player with/ to the wider sound community of Donegal fiddlers, I suggest that understanding the processes engaged in by the individual fiddle player is of significance. These processes may change from individual to individual based on experience. Consequently, investigating the processes involved in the creation of sound by the individual and how the collective sounds of a group of individuals may be moulded into a larger ‘sound’ community is of particular importance in developing the proper tools for the interrogation of the topic. This project is not to ascertain whether fiddlers in this sample are in tune or not. It is to attempt to understand the processes that allow them to be individuals while also potentially being members of a larger sound

community. This is a new departure in the research of styles in Irish traditional music, where discussion has generally centred on aspects of stylistic performance such as repertoire, articulation and ornamentation (among others; a comprehensive list has been offered by Keegan (2011), which is discussed in more detail in section 2.2). To my knowledge, this is the first offering that examines the processes through which the individual adapts from context to context, allowing for an exploration of the relationship between the individual and the sound community, rather than just an examination of a specific performance or group of performances with regard to an already defined narrative.

This chapter shall use this framework to interrogate the literature apparent in relation to the topic, starting with issues regarding the categorisation of the studied sound community. Subsequently, aspects relating to the actions of the individual are explored, followed by an introduction to the processes and shared values through which an individual may filter their performance practices.

## **2.1 In search of ‘style’ - Understanding processes of categorisation with regard to the traditional fiddle music of Co. Donegal**

The term 'Donegal style' is one that has been commonly used by academics and practitioners of Irish traditional music, both inside and outside of Donegal itself (e.g. Nic Suibhne, 1995; Mac Aoidh, 1994; Keegan, 2011; Caldwell, 2013; Dorrity 2016). As has been documented in many other traditions such as Scotland and Shetland in particular (Cooke, 1986; 1994), labels which have been applied to regional communities may not necessarily account for the complexity of local dialects and traditions. Style is a concept. Its direct breakdown as defined in the Oxford English Dictionary is “ a manner of doing something; a way of painting, writing, etc. characteristic of a particular period, person etc...” (Oxford Dictionary, 2008 p. 1433). By extension 'style' is the similar way in which a certain group commit to a certain action. In almost every aspect of human existence, ‘stylings’ of some sort or another exist, be it in fashion, sport, art or music. With regard to the research question informing this dissertation, such a definition would imply that the fiddle players of Co. Donegal will share characteristics with other people of the ‘style’ or ‘category’, thus a group of individuals (fiddle players) will produce a style based on common characteristics in the way they carry out a certain action or task (playing Donegal fiddle music, in particular in relation to tuning and intonational difference).

However, an all-encompassing definition of musical style is much more problematic in terms

of accounting for musical reality. In the history of ethnomusicology, few academics have offered contributions in terms of outlining a constructive, working definition of style with regard to the music we study. O’Suilleabháin (1990; 2000) suggests that technique is central to the definition of style, as those actions we use to create and perform music are the interface through which we communicate an identity. Crannitch states that:

“In the world of Irish traditional music, the term ‘style’ is generally used in place of ‘style of playing’ or ‘playing style’ – however it is taken to have the same meaning. It may have sub-categories concerned with specific aspects of the playing, for example ‘style of bowing’ or ‘bowing style’. It can also refer to how a particular instrument is played, for example, the ‘press and draw’ style of playing the melodeon or accordion, or the ‘open’ style of playing the uilleann pipes. The context in which the term is being used will usually indicate the intended meaning in any particular situation. However it is most generally taken to mean ‘style of playing’ or ‘playing’”

(2006, p. 29)

In specific relation to fiddle style in Irish traditional music, Crannitch outlines three categories by which style is referred to. These are (i) Personal Fiddle style, which relates to the stylistic differences between one individual and another, (ii) Regional fiddle style, which “denotes those distinguishing features of playing which identify musicians (a) from a particular geographic area, and (b) as playing in the style of that area. For example, ‘Sligo style’ can refer not only to those players from the Sligo area who play in that particular style, but it can also include those who no longer live there, or perhaps never did, but play in that style.” (2006, p. 32) and (iii) The Irish fiddle style, which is the stylistic paradigm under which each of the stylistic categories of (i) and (ii) can exist.

Doherty (2015) foregrounds the fluid nature of stylistic definition with regard to music, where she states that:

“Collectively, shared elements of style among a cohort of players – for instance, Cape Breton fiddlers – contribute to the wider definition of a local or regional style...an individual style may be thought of as the realization of the greater generic style which, while incorporating the stylistic universals of the idiom, also shows personal discrepancies. Conversely, the starting point for consideration might be the individual style, and the macro or generic style may be viewed as the result of combined individual styles, where sufficient commonalities are achieved in order to justify a collective categorization.”

(2015, p. 361)



This quote in particular intrigued me due to its reference to the 'individual'. In each case, 'style' acts as a classifier of the sonic properties created by and attributed to an individual. It is this central role of the individual which makes forming any concrete definition challenging. However, more recent studies (discussed below) have moved away from attempting such a definition of style for the purposes of analysis, instead concentrating on the language readily used by musicians and academics, as well as cognitive systems of categorical structure and influence. In particular, Keegan's work on the verbal contexts and parameters of style are of significance. It is highlighted that the language used in relation to Irish traditional music is essentially descriptive rather than prescriptive (Keegan 1997, p. 121). I suggest that this is directly related to the individual nature of performance style, and the problems predicting stylistic output may encounter. In reality, applied (and implied) parameters regarding 'style' as outlined by Keegan (and discussed in more detail in section 2.2 with regard to the individual) do not work as a perfect tool of categorisation in accounting for cultural diversity. We cannot define style in strictly academic terms. It is abstract. It exists as a categorical tool in relation to sounds that we hear and interpret based on knowledge. These categories can be related through use of old knowledge (experiences experienced) or new knowledge (experiences which are new, leading to new definitions and metaphors). The balance between new (experiences both inside and outside the usual parameters of the Irish traditional experience) and old knowledge (experiences within the historical context of Irish traditional music) is one that is difficult to gauge in terms of the contemporary Irish tradition. This is due primarily to the fact that labels initially established to account for the music of certain sound communities have become banners of identity in many instances (particularly with regard to revival as evidenced by Doherty (2010) and Caldwell's (2014) contributions to the Donegal conversation). Individuals may attempt to conform to the idea of their (that) sound. In practice, their musical experiences may (or may not) be the same as those who established the use of the associated label, but regardless, the label has gained cultural currency and as a result power. Therefore, the idea of a label can be strong, and these labels fight for space within our contemporary musical environment. As a stem from the ubiquitous availability of music and information, 'global cultural flow' (Appadurai 1990, p. 296; Hannigan 2002) is an inevitability, and by extension through the naturally occurring process of memetics (Jan 2000; Hennessy 2012, pp. 62,63), ideas develop and change. Hennessy suggests that through 'epidemiology of representation' (Sperber, 1996):

“Stylistic stability results from “basins of attraction” within the culture that are affected by genetic, environmental, and historical factors. In other words, certain

mental representations will be similar enough and useful enough within the cultural context to attain stability”

... “individuals retain their own mental representations of a musical form, but gravitate in groups through basins of attraction which are ultimately linked to the power of the sonic groove to unify disparate individuals”

(2012, p. 63)

I suggest that the ‘basins of attraction’ model is useful in not only accounting for variance in individual and communal 'performance practices' but also in accounting for processes of categorisation. Individuals, and in turn the sonic communities of which they are a part form sets and sub- sets of which an individual can be a member. In relation to the traditional Irish question, 'conceptual units' through which style can exist are outlined by Keegan. These are:

1. The style which is the Irish musical tradition
2. The style associated with a particular instrument
3. The style of any one of the musical 'dialects' which are characterised by the different levels of predominance of certain techniques, methods and repertoire. (*in this case, the Donegal style*)
- 4. *The style of an individual musician.***
5. The style of an individual performance.

(Keegan 1997, p. 117 (italics and font by author))

It is clear that each style/ category considered after the acceptance of the initial style which is the Irish tradition itself is a subset, which based on experience of that tradition can be divided, categorised and subdivided until a single entity exists. Therefore, through various modes of exposure to newer forms of cultural ideas and potential change in terms of cultural identity, individuals can exist stylistically as both the exception and the rule. My own personal experience is a good example of this, where I am readily referred to as a Donegal fiddle player, and have used that label to describe myself. However, the label does not account for the complexity of my experience, where in actual fact, more of my musical life has been spent outside the county playing with traditional musicians associated with other regional styles and none, as well as musicians from other genres of music, from Jazz to African kora music. I am

a member of the Donegal sound community, and share characteristics with many others in the community, but am also an individual with individual experience, and have a performance practice that is unique to me.

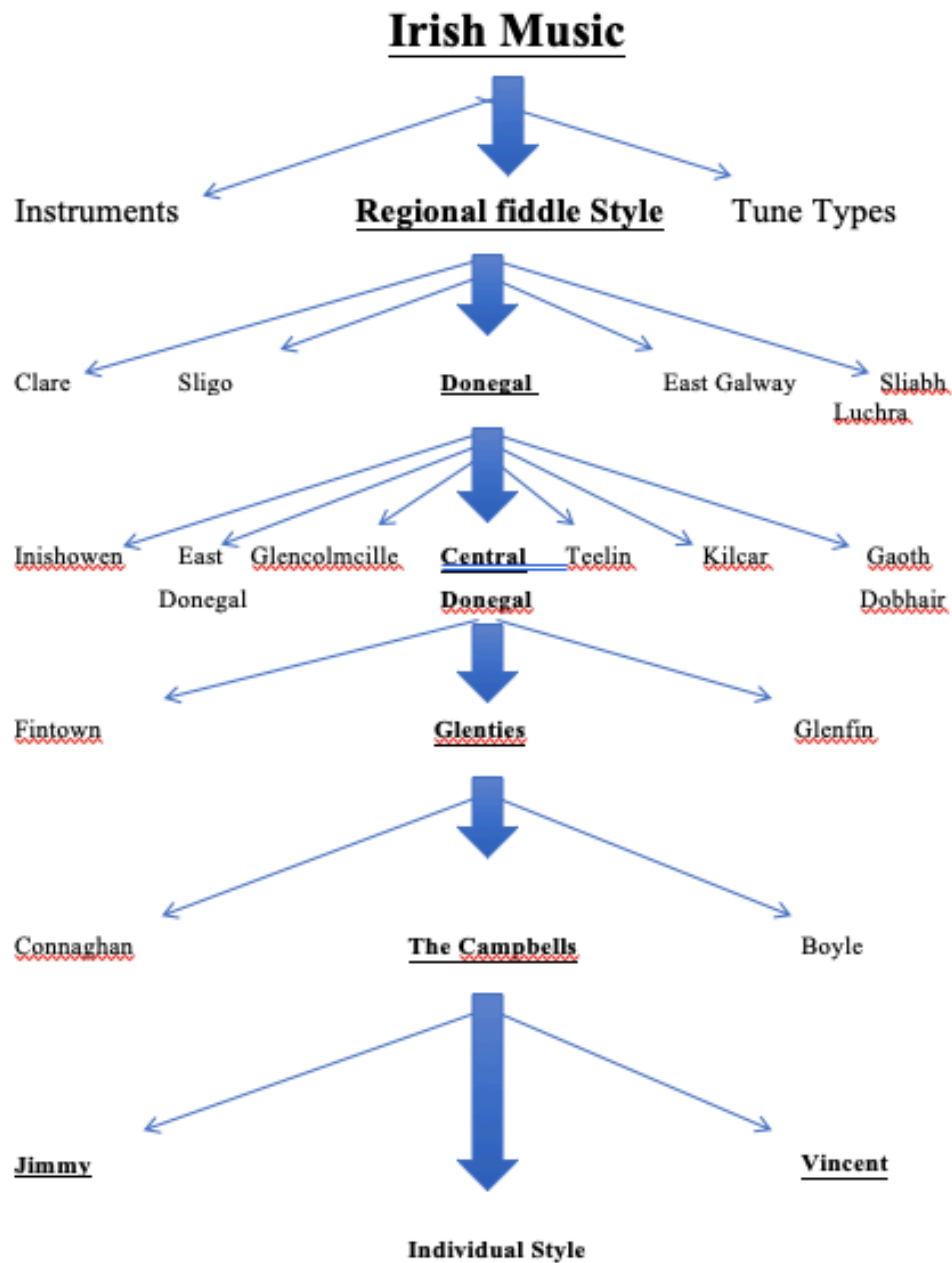
### **2.1.1 - Problems of categorical structure and use in terms of Irish traditional music**

Categorization of style has long been an issue in Irish traditional music discourse (e.g. O’Riada 1962). Of course, within the modern world, the Irish traditional music label is also commercially viable. Use of commercial labels in accounting for the diversity of music in our world has been well documented and discussed by many academics (Cooke, 1994; Keil, 2003). For example, Keil (p. 7) discusses ‘Riverdance’ briefly as an example (among others), where the commercialised product is far removed from the root of the traditional performance, but has become synonymous with the notion of ‘Irishness’. He also alludes to the success such a commercial product may have, informing us that the chief choreographer of ‘Riverdance’ made more money than Michael Jackson in 2 years! The point implied here is that these labels act as a reference point for consumers to account for the cultural activities of entire groups of nations and peoples. Sweeping generalisations can be made about authentic performances, with many commercial record labels favouring albums where ‘collaboration’ has taken place with practitioners of other traditions, thus further diluting the initial cultural artefact. The main issue here is categorisation, dependent on the acquired knowledge of the categoriser. The more experience and knowledge attained in relation to a category, the more likely is the need for further categorical breakdown to denote difference. In my opinion, this is directly relatable to the research at hand, where experience and context may prove to be central in understanding and accepting potential tuning and intonational difference, and where ‘tuning in’ (Thacker, 2011; expanded on below in section 2.2) to a performance is facilitated. Granted, such facilitation can occur with the primary instance of engaging with the commercial product (‘Riverdance’ among other commercial acts), but it is only through further experience of traditions and an understanding of their particular contexts that truly meaningful categorisations can be made, if at all.

As suggested above, ‘music’ (which exists as a categorical moniker in its own right) is readily broken down by humans to denote differences in the sound experienced. This can be for reasons of description, identity and commercialism. I suggest that ‘basins of attraction’ and

global flow are useful tools to account for categorical division. Through such categorical division 'genres' emerge. Based on new experiences further divisions of these categories can be made, in the case of Irish traditional music into regional styles, different instrument groups, different tune types (Keegan 1997, p. 117). With regard to regional styles, categories usually include Donegal, Sligo, East Galway, Sliabh Luachra, and East and West Clare (Mac Aoidh, 1994; Breathnach, 1971; Vallely, 2011). These categories are not exclusively aligned with county boundaries, but can equally refer to geographic regions, such as is the case with 'Sliabh Luachra', an area situated around the Cork, Kerry and Limerick borders. Based on experience and familiarity these geographic areas, categories can generally (and have been) dissected again, for example in Donegal, into the south-west, the south, the north-west, Inishowen, central Donegal and east Donegal (e.g. Mac Aoidh, 1994). These categorical divisions and breakdowns continue to parish, townland and family styles until ultimately, the individual 'style' is the only apparent category (Keegan 1992, p. 10).

Fig. 2.1



When certain things are abstract from categorisation, our natural cognitive response is to categorise such things by relating them to what they are ‘like’ in terms of our experience, usually something that already sits comfortably within the parameters of categorisation. In the case of the geographic metaphor (see Sternberg, 1990; Couclelis, 1998), the idea of place is transported to represent an abstract concept. The geographic metaphor takes on a different function in description. Donegal is the name of a place. People use this word as a means of describing accurately a defined area. ‘Translating’ (Keegan 2006, p. 1) this usage of the word

is a direct instinct of the mind to relate bodily experience and the conceptual system of the mind. As a basic human function we need these metaphors to organise our world<sup>39</sup>. This is problematic in a contemporary study of the fiddle music of Co. Donegal for two reasons:

1. Musical styles are not confined by any geographical or political boundary that a descriptive metaphor may infer. Donegal music and Donegal fiddle players can (and do) exist outside any potential descriptive label of their individual sounds. Also, as discussed earlier, affects of revivalism may also place added value to some labels over others in accounting for the sound of the community.
2. Most classifications of regional categories were based in a large part to the collection of music from a number of key individuals who in turn became prototypes (Keegan 2012, p. 171) for the style. As will be discussed later in chapter 2.2 in relation to the individual, Keil suggests that we engage with our world on three levels; our 'primary reality', which is the physical world around us, 'cultural reality', which is how we instinctively engage with this world, especially in terms of culture and nature, and 'civilized reality', which is how these other realities are defined and systematised (Keil, 1995). Keil's civilised reality affects cultural reality over time. The classification of regional styles using 'prototype' players is a good example of this, where a cultural reality is collected, labelled, and subsequently held up as the authentic experience of a sound community. This does not account in a meaningful way for what may be the actual reality of a sound community, but rather projects an individual's reality (sound) at a point in time. Therefore these categories need to be re-examined as a result of cultural change in the interim period.

Keegan alludes to 'prototype theory', which was initially developed by cognitive scientist Eleanor Rosch. This theory suggests that one example of a category may prove to account in a more meaningful way than another. Also, more central to our topic at hand, he makes reference to work carried out by Roger Brown, referred to as '*Basic-level categorisation*' (Keegan 2013, p. 316). He states:

“Prototypes, though important are ultimately superficial, can change between various cultural contexts and ultimately...cannot provide a comprehensive and universal alternative structure for the understanding of meaning. However, their presence as a factor in processing, representation and learning is undeniable and give us an potentially exceptional tool in understanding the musicological juncture.”

---

<sup>39</sup> See Corneilissen 2005 for more on metaphor and organizational theory; also Rice 2001 and 2005 in relation to music and geographic metaphor.

(Keegan 2012, p. 63)

By relating Keegan's interpretation of 'prototype theory' and basic level categorisation to our examination of style and geographic metaphor (where the moniker of place has been translated to account for the sonic properties of some associated with the geographical place) in Irish traditional music, it is apparent that members of any sound community defined under a stylistic category do not exist in isolation within a singular paradigm, rather they are members of multiple sets. For example, Vincent Campbell's<sup>40</sup> individual style could as easily be referred to as a family style since his brother Jimmy shares some basic characteristics of his playing constituting that the two are members of a category (Lakoff 1987, p. 8). In turn this style is also a prototype of 'Glenties' style, which is also within the 'Central' Donegal fiddle style, and so is also inside the parameters of the 'Donegal' style, which in its widest context is a style of Irish music. Vincent Campbell therefore is an Irish Musician, a Donegal style fiddler, a central Donegal style fiddle player, Glenties style fiddle player, a 'Campbell' style fiddle player, and of course is an individual. A member can belong to many categories, styles and sets and each time he or she is categorised, by anyone from an academic to a seasoned listener or fiddler, a different geographic metaphor may become apparent. This applies to all conceptual units described by Keegan above. Therefore, traditionally in examinations of fiddle playing in county Donegal, the over-arching definition of 'Donegal' is the prototype example and served for basic level categorisation. Even though the term can be broken down into various regional, familial and individual contexts, the term 'Donegal' is the most commonly used (in particular since the establishment of Cairdeas na bhFidileirí in 1980 and through its subsequent revival). It is through this prism that many people within and outside the county have come to the music (including myself). The label has gained currency, and has successfully become associated with a brand, (be that for the purposes of revival, or commercially where bands such as Altan and FIDIL are firmly associated with Donegal repertoire and traditions).

Keegan details this quite successfully with regard to common tune types in the Irish traditional repertoire, where through his research his informants had a very complete understanding of what categories such as 'reel' 'jig' or 'hornpipe' were to denote. He highlights the term 'Highland' in contrast to this.

---

<sup>40</sup> Well known fiddle players from the Central Donegal area of Glenties. Both brothers are members of this sample of participants. See [www.donegalfiddlemusic.ie/thecampbells](http://www.donegalfiddlemusic.ie/thecampbells) for more info on them.

... 'jig' is a basic level category showing prototype effects. 'Highland' however is not a basic level category as it is not as easily recognized, has not got a commonly perceived shape, hasn't got a common motor programme (many traditional musicians would not know or be happy that they know the form well enough to play convincingly or dance it).

(Keegan 2012, pp. 315, 316)

Interestingly, with regard to the sound community of Donegal, the highland is a core element of the repertoire, and easily identifiable. Therefore, in a different context, based on experience, what is 'common' may change.

I offer that the term 'Categoric Exemplars' may serve as a more practical term with regard to the examination of prototype theory in relation to Irish Traditional music. Categories, whether defined through prototypes ('central' exemplars, which contain the most similar or ideal features), or through difference (boundary conditions, which are the markers of how particular categories differ) are ways in which we help ourselves navigate our world. The most intuitive way of navigating this is probably via the prototype/'central' condition. I am suggesting 'categoric exemplar' rather than 'prototype', (as may be more common in the psychology literature (Rosch, 1973; Lakoff, 1987)), because with regard to music, a particular issue is temporality. By using 'categoric exemplar', rather than 'prototype', the categoric example may have occurred at any time, rather than being implied to have occurred in the past, as the first instance. Central to this argument is also categoric perception (Hansard 2003), which can be fluid dependant on the basic conditions of existence of the initial category or a learned perception of it. However, with regard to the field of traditional music, in my opinion, a categoric exemplar can influence perception of a category. Categoric perception is measured against a baseline of probability (in this case the sound of the sound community itself), and from that the perception of the category (in this case Donegal fiddle music), a community makes a value judgement, and will validate an exemplar as a positive example of the sound of the community. The communal perception validates the categoric exemplar, while the exemplar similarly influences the categoric perception of the sound community also. Instead, I suggest that those who exert the influence suggested by Keegan's prototype theory are the best example of their category, but rather than acting as a primary instance, are a continued embodiment of tradition. I suggest that categoric exemplars should also be related to 'Typicality' (Rosch, 1973; Van Hedger et al. 2016) of performance practices, in the case of this research to aspects of tuning and intonational difference. This may prove to more accurately describe the actual instances of variance, without framing the



research definitively within the conceptual categories already extant in relation to the fiddle tradition of Donegal. Instead, by examining categoric exemplars, and in particular, typicality, we can assess what is typical in the studied sound community as a whole, but also what is typical for the individual within it. Therefore, the individual can easily weave between categorical definitions and labels to be a member of numerous sets (communities), tuning in (or out) as is necessitated by the range of varied performance contexts within the tradition. Experientialism is key. Our experience as researchers, listeners but most importantly, the experiences of those individuals studied. I suggest that such an approach in relation to this research will undoubtedly will give us a clearer picture of their particular ‘basin of attraction’, while allowing us to compare and contrast each individual’s experiences. Through that system, it is clear what experiences have been constant for each member of the sound community, and therefore may be deemed truly influential in terms of the overall sound of the community.

## **2.2 The Centrality of the individual**

This section examines the importance of the actions taken by individuals as part of their performance practice. These relate to the mechanical aspects of the actual playing of the fiddle, while also centring the creative process that the individual takes part in, without the filtration of processes and values associated with the immediate sound community. Rather, research from other traditions is foregrounded as suggested as a tool for the examination of the Donegal fiddle sound community. Ó Suilleabháin (1990) acknowledges the creative processes engaged by the Irish traditional musician in performance, but that study focuses primarily on aspects of creativity within the structural elements of the form of Irish traditional music (the rounds associated with the tune types, rhythmical variation and melodic contour). While accented tones are offered as a means of offering a particular ‘setting’ of a tune (1990, p. 123), at no stage is tuning or intonational inflection offered as a factor in this creativity and expression. Therefore, while Ó Suilleabháin’s study has opened the gates to access the general creative thought processes engaged by the individual traditional musician, this research is more focussed on the specific area of individuality in relation to tuning and intonational inflection.

### **2.2.1 - Expressive intonation**

Germinet (2014) suggests that a mechanical study to ascertain the existence of participatory differences may be futile. Instead, he believes that the participant must be at the centre of any study of variance, through which interaction can be observed and in turn understood. Kearney (2013) highlights that geographic categories traditionally used to account for Irish traditional music are changing, and instead newer 'spaces' are to the fore in defining Irish traditional music. These include, but are not limited to, solo performance, or group performance, either as part of a session or as part of an ensemble/ band. Similarly, Turino (2008) divides the performance of live (as opposed to recorded forms) music performance into two categories, presentational music making, in which the artist (musician) interacts and performs for an audience, and participatory music making, where the division between audience and performer becomes non-existent, instead focusing on a joint performance experience. These include teaching/ learning music, and also the process of musicians playing with each other. The context of performance is foregrounded by such a view, championing the fact that collective 'participatory discrepancies' (Keil, 1994) in music create power, affecting emotion, and ultimately performance practices. Central to each context is the individual as the cultural actor, the one who ultimately tunes or plays in a particular way at a given time.

Keller (2014, p. 260) refers to the 'expressive intentions' of a musician in communicating with an audience (or other musicians in an ensemble). This affects various aspects of musical performances, including structure and context. Such a term highlights a conscious approach by a performer to deviate from a particular set of structural rules (or values) such as tune structure, temporal signatures or tuning (melodic or harmonic) in order to highlight those very structures. In essence, by deviating from a given structure, the musician highlights it's (the structure's) existence and importance to the music. I suggest that while such activity is a core element of Irish traditional music performance (in particular with regard to variation and ornamentation – see Morton (2005)), the performance of many such differences are enculturated and so performed on a less conscious level by many. However, younger members of the tradition may 'express' aspects of their performance in different conscious ways, as they readily engage with numerous sound communities simultaneously, according to their varied realities as Keil suggests. A well known example of such deviation can be found in Micheál Ó Súilleabháin's work with Tommie Potts (1987). Potts, a fiddle player from Dublin, has been well documented as an individual who readily changed the structures of Irish music, including restructuring the form of certain tunes, quoting melodies from other genres of music as variations in traditional Irish pieces and performing personal and unique

variations as part of his fiddle playing. By changing these structures Potts evidenced his own creative process and expression, but also highlighted the very (embodied) structures that he was deviating from. He also overtly evidenced his experience and knowledge of others genres of music, outside of a singular traditional Irish musical existence. Expressive intention allows for each musician to express their particular membership of numerous sound communities when necessary, while not sacrificing membership of any.

As it relates to tuning and intonational difference, central to pitch discrepancies performed on the fiddle in terms of mode, scale and harmonic consciousness, is the fact that the fretless nature of the fiddle makes the performance of pitch discrepancies facile, and abundant. These are performed both consciously and sub- consciously. This has been documented by Geminiani, Galeazzi and Campagnoli in the 1700s (Boyden, 1951; Barbour, 1952) and in subsequent studies (e.g. Barbieri, 1991). Underwriting any of the favoured systems of fingering is the individual and humanistic nature of violin performance, where interpretation of music by the individual performer is central to authentic musical performance.

Kanno uses the term ‘expressive intonation’ in an effort to meaningfully describe how violinists’ performances are discrepant from each other in concert performance contexts. His primary focus is not aspects of scalar, modal or microtonal theory. Instead focus is on the aspects of performance which are readily interchangeable for the performer, depending on the varied context of performance and performer (i.e. contexts from practice room to concert hall, or individuals from orchestra leader to world class violinist). Through this study, he offers an examination of expressive tuning by way of study of various performances of western art compositions, comparing how they are performed vs. how they were intended to be performed by the composer. Historical and modern contexts are discussed, for example, contemporary micro tonal compositions vs. conventional compositions for violin such as Mendelsohn or Paganini. Of note is his indication that less space is left for the violinist for the performance of expressive intonation in modern composition, as both composers and performers alike are hyper-aware of the possibilities in terms of the sound of the instrument, and as such, due to the high levels of professional performance practice, performers can execute such micro incremental discrepancies as required. This is particularly the case with regard to atonal music (2003, p. 49):

“Issues of musical intonation are often considered totally outdated, an area of practice that died with tonality. All in all, new music has rendered musical intonation to be one of the most peripheral issues in performance.”

(2003, p. 49)

“The paired parameters of pitch and intonation are like those of rhythm and motion: the first term in both pairs is an abstract concept, while the second in both pairs is a real entity. The process of “playing in tune” is an empirical search for the optimum musical expression in a configured sequence of notes. One does not simply read notated pitch: one interprets it.”

(2003, p. 48)

In an effort to examine the expressive nature of intonational discrepancy in violin music, Kanno turns to a study of melodic intonation in violin performance by Janina Fyk (1995). Through this extensive study, Fyk has furnished us with tools through which a formulaic study of violin playing may be executed. I suggest that these tools can be directly used in the study of tuning and intonational difference in Irish traditional (and Donegal) fiddle music. She offers that four distinctive types of intonation emerge (1995, pp. 215–219):

*1. Harmonic tuning:* It is suggested that the violinist will attempt to conform to pulls of harmonic structure when performing with (equal tempered) harmonic accompaniment. This suggests a pitch hierarchy within a scale as a consequence of gravitational pitch centres. This in turn dictates the size and direction of intonational variants, in particular with regard to notes that are not important in terms of the pitch hierarchy. I suggest that harmonic tuning relates closely to structural tones and elements of the motivic structure suggested by McKerrell, and therefore may play an important role in assessing certain performed discrepancies in the traditional fiddle music of Donegal.

*2. Melodic tuning:* Intonation sharpens when performed as part of an ascending melody and flattens when played as part of a descending melody. I suggest that this particular type of intonational deviation may be of particular use in the examination of Irish traditional fiddle music, in particular the fiddle music of Co. Donegal primarily due to the structure of the tunes involved, where a wide range is observed with regard to performed notes. Traditional tunes in the repertoire of the county regularly feature ascending and descending motifs as part of the general structure of composition (See Caldwell’s (2013) work on the repertoire of John Doherty where full transcriptions of a catalogue of Doherty’s music can be examined).

*3. Corrective tuning:* It is implied that this type of pitch deviation is intentional, as pitch must first be referenced by the ear before it is deemed ‘correct’. Similarly, context is central to the

study of this classification of discrepancy. For example, while assessing corrective tuning with regard to western art music or other modern equal tempered musics, the question of which pitch is ‘correct’ may be more problematic for some and not others. In this way, this particular type of intonational tuning may have many variables, both for the performer and the researcher alike. I suggest that like all music, corrections are a normal part of playing music, and therefore that it is likely that some element of corrective tuning will be employed by the fiddle players recorded in this sample.

*4. Colouristic tuning:* This deals with the sharpening of certain notes (in particular the octave) when played immediately free of a double stopped context, for example the sharpening of the higher note in an octave immediately after it has been played in unison with the lower equivalent. I suggest that this may be applicable to the use of double stops in the fiddle music of Co. Donegal also. Kanno suggests that these changes relate to a “brightening up” of the note and are directly related to changes in tonal “colour” (2003, p. 37). The speed of execution of the performance of motifs are also alluded to by Fyk (1995). When playing passages of a slower nature, “note to note” melodic tuning is generally predominant over harmonic tuning, while passages played at a higher speed are more likely to conform to the harmonic progression of the piece.

I suggest that these tools may be central in assessing tuning and intonational variance in the sound community of Donegal. As evidenced in Chapter one, some aspects of the fiddle tradition in Donegal are related to its western art cousin, including aspects of tuning, mode and temperament. Speed of execution is also synonymous with the performance of the fiddle music of Co. Donegal (Vallely, 2011; Caldwell, 2013) and so may play a role in why the fiddle music of the sound community sounds the way it does. Therefore, I suggest that Fyk’s study is a logical springboard for an interrogation of the fiddle music of Donegal in an effort to ascertain whether similar processes are employed by the fiddlers in this sound community.

### **2.2.2 Modal Complex and Harmonic consciousness**

As evidenced in Chapter one, changed harmonic contexts were an important development in relation to the temperament of certain tuning and intonational differences associated with Irish traditional fiddle performance. In his study of ‘modal complex’ in competition bagpiping in the Scottish tradition, McKerrell similarly highlights the C and F notes of the

scale as being those that were most discrepant from tempered scales and that historically, in terms of the tuned pitch of the chanter and the changes that have happened in respect of its development, that these notes were sharpened to a considerable degree. The initial scale studied by Ellis (1885; cited by McKerrell p.108, 109) is likened to what is described as ‘The Damascus temperament’ developed for lute.

The figures that Ellis gives in cents would suggest that the C and F of the bagpipe scale are 50 cents (i.e. a quarter tone) flat of the modern major third and sixth, respectively, of equal temperament. My own experience of playing with other instruments confirms that the C is certainly flat of the major third in equal temperament, but certainly not as flat as a quarter tone. Ellis actually points out that the C was slightly flat and the high G slightly sharp.

(2005, p. 108, 109)

This is of particular interest to my study of Donegal fiddle players where I intend to explore if potential tuning and intonational issues may be indicative of the influence that bagpipe music has had in shaping aspects of the sound associated with the fiddle players of the community (building on the suggestion by Flynn (2010) discussed later in chapter 5). This quote, however, illustrates further the problems that may arise from early studies of pitch and intonation in terms of uncovering the actual sound of the studied music. The findings are generally contextual, and depend heavily upon context and interpretation of the results by the researcher.

According to McKerrell, examining scale in Scottish competition bagpipe music in terms of the overall modal structure is futile. He suggests that:

No traditional musician I have met thinks in terms of church mode attributes, furthermore, many do not even classify tunes according to their key. In my experience, today's traditional musicians primarily group tunes through genre (e.g. jigs, marches, reels etc.). Because more complex musical attributes are not verbally articulated, it makes it particularly difficult to understand how we (traditional musicians) conceptualise tunes; however I believe that ... the motivic analysis is more sympathetic to the performance practice of traditional music than for example, church modes.

(2005, p. 127,128)

The same is true of my experience of Irish traditional music, both in terms of how tunes are conceptualised and performed in terms of the use of motivic analysis. McKerrell instead offers new methods of interrogation, in particular the notion of ‘modal complexes’ (2005, p.

140). A modal complex is the set of tools through which it is suggested a comprehensive study of the studied music can be achieved. It includes identifying and examining;

1. a pitch set and hierarchy
2. patterns of range
3. a phrasing structure
4. structural or diagnostic tones
5. double-tonic (in some tunes)
6. motifs
7. rhythm-contour motifs

I propose that elements of such a ‘complex’ could prove useful in the study of the fiddle music of Co. Donegal, and could/ should be tailored to each individual study of a sound community, specific to a research question (not just in terms of tuning as is the case here, but equally could be used for studies that are stylistic, or temporal etc. in nature). For the purposes of this research, my analysis of the repertoire will focus on ‘Structural/diagnostic tones’ and the motivic nature of the tunes performed in order to account for aspects of pitch discrepancy. Elements of this complex are also a development of Ó Suilleabháin’s (1990) suggestion that accented tones and repeated motif contours are employed by traditional musicians as part of their individual creative processes. Elements of McKerrell’s complex are specifically designed for the study of bagpipe music and not applicable here, such as ‘double tonics’ or are not directly associated with the question of tuning or intonational difference (such as phrasing structures, rhythm- contour motifs or patterns of range).

I suggest that such aspects of fiddle music and its performance may be directly related to issues of harmonic consciousness, and chordal changes within the structure of certain tunes. Dillane highlights issues of standardisation, an outcome of the introduction of fixed pitch instruments to Irish traditional music, suggesting that the introduction of the piano brought together two separate musical systems (older Irish scales and equal temperament) and that this was later compounded by the introduction of stringed accompaniment instruments such as guitar, bouzouki in the 1960s and ‘70s (2000, p.183). Similarly, Spencer (2010, p. 447) outlines the effect that the early recording industry had on Irish traditional music, where musicians whose usual traditional practice was to perform either solo or in small groupings in a monophonic fashion, adapted their practice to include forms of orchestration as is

evidenced on those recordings. A good example of this is the use of the piano in standard Ceilí bands in Ireland to this day. I suggest that the introduction of these instruments undoubtedly had a role in changing the sonic values of Irish traditional music. Furthermore, the introduction of harmony (harmonic consciousness) in its own right, be it on fixed pitch instruments or otherwise, was of more consequence. I suggest that, due to its isolation on the edge of Europe and the class structure associated with Irish traditional music at the time, that harmonic change as was happening on mainland Europe was inevitable, but perhaps took longer to take hold amongst the poorer classes in Ireland, due to the monophonic nature of the tradition, and also major social events such as the great Famine.

For this project, the work of Rev. Richard Henebry (1863 – 1916) on scale in Irish traditional music is of particular interest. Henebry suggested that the authentic sound of Irish traditional music at the time (c.1900) was in serious peril, as musicians were, as he saw it, moving away from the traditional ‘Irish scale’ to the ‘vulgar’ scale of the Western art music tradition (1903). Henebry outlined what he suggested was the Irish scale, where to his ear

...the great body of our music is constructed on a scale where four of the intervals differ from the modern scale and three coincide with it.

(1903, p. 10)

He also offered that four Irish scales existed, and that to achieve their authentic sound, corrections had to be made to certain notes as they were transcribed by some of the leading collectors of the day. Dillane gives a good example of this with relation to Henebry’s assertion that in a D scale in a G mode

that the F# should be played a quarter tone lower and the C natural (also known as the flattened 7<sup>th</sup>) was more correctly located  $\frac{3}{4}$  of a tone above B and  $\frac{3}{4}$  of a tone below D. This change of two notes resulted in the difference of 4 intervals, illustrating Henebry’s theory of coincidence.

(2000, p. 29)

Henebry also drew fingering maps of the fiddle, where suggested finger positions were outlined with regard to where a fiddle player should finger the fingerboard to achieve the Irish scale. These maps are reminiscent of maps drawn by Geminiani (c. 1751) Galeazzi (1791) and Campagnoli (c.1797) when trying to solve issues of tuning and intonation with regard to violin playing in the 18<sup>th</sup> Century (Boyden, 1951; Barbour, 1952). Discussion



surrounding such fingering maps centres on the problems of harmony and intonation. To this end, Henebry is clear that

“The melody was supreme in Irish Music whereas in the case of modern ? harmony won the upper hand. The Modern scale suffered by this for I have been told that it was in obedience to the demand for a more florid accompaniment that Mi and Si of the vulgar scale were made to assume their present un-natural positions.”

(Henebry 1903, p. 23,24)

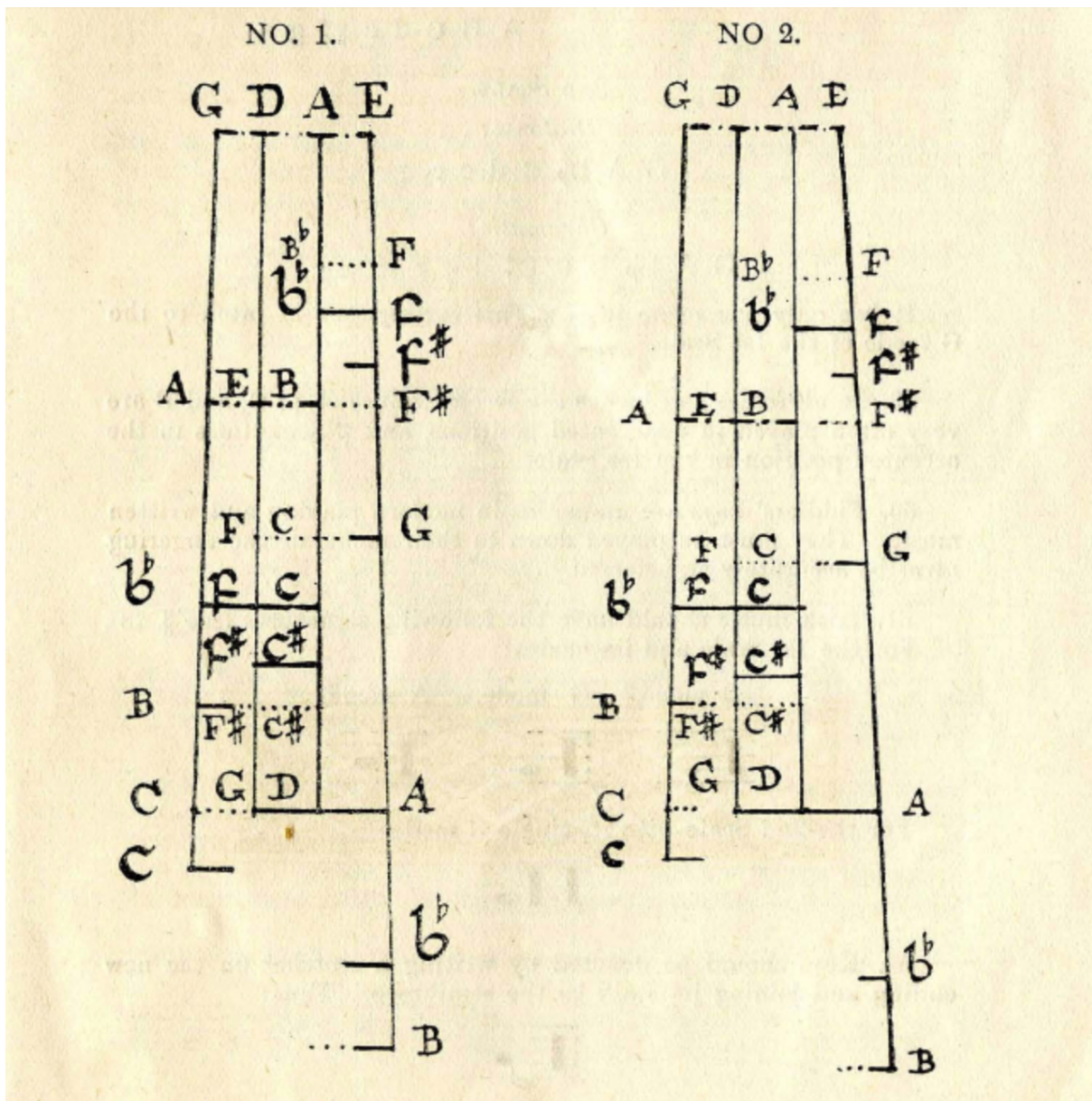


Fig. 2.2 : Illustration of maps outlining the approximate finger positions required for achieving the ‘Irish Scale’, as crafted by Henebry in ‘Irish Music and Earlier studies’ 1903. Two examples are presented by Henebry, as drawn from his performance of the desired scale on two different fiddles. Note the diesis between what Henebry deems the Irish scale and the ‘vulgar’ scale.

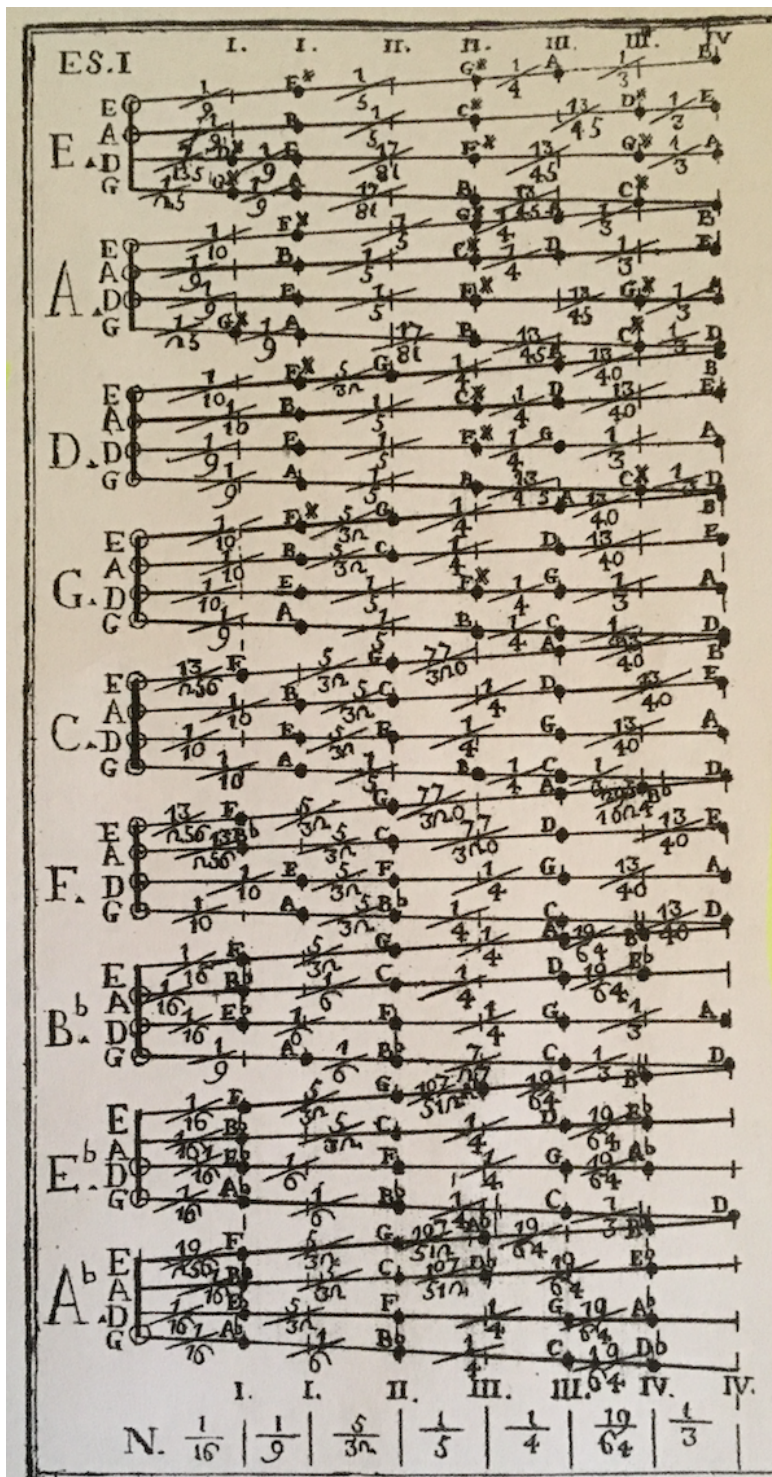


Fig 2.3 : Galeazzi's maps for the syntonic fingering of the violin according to key (up to four flats and sharps). Of note is the suggestion of multiple locations for the intonation of certain notes, relevant to the particular key. This relates directly to Henebry's notion of an Irish scale where fingering is particular to key and mode.

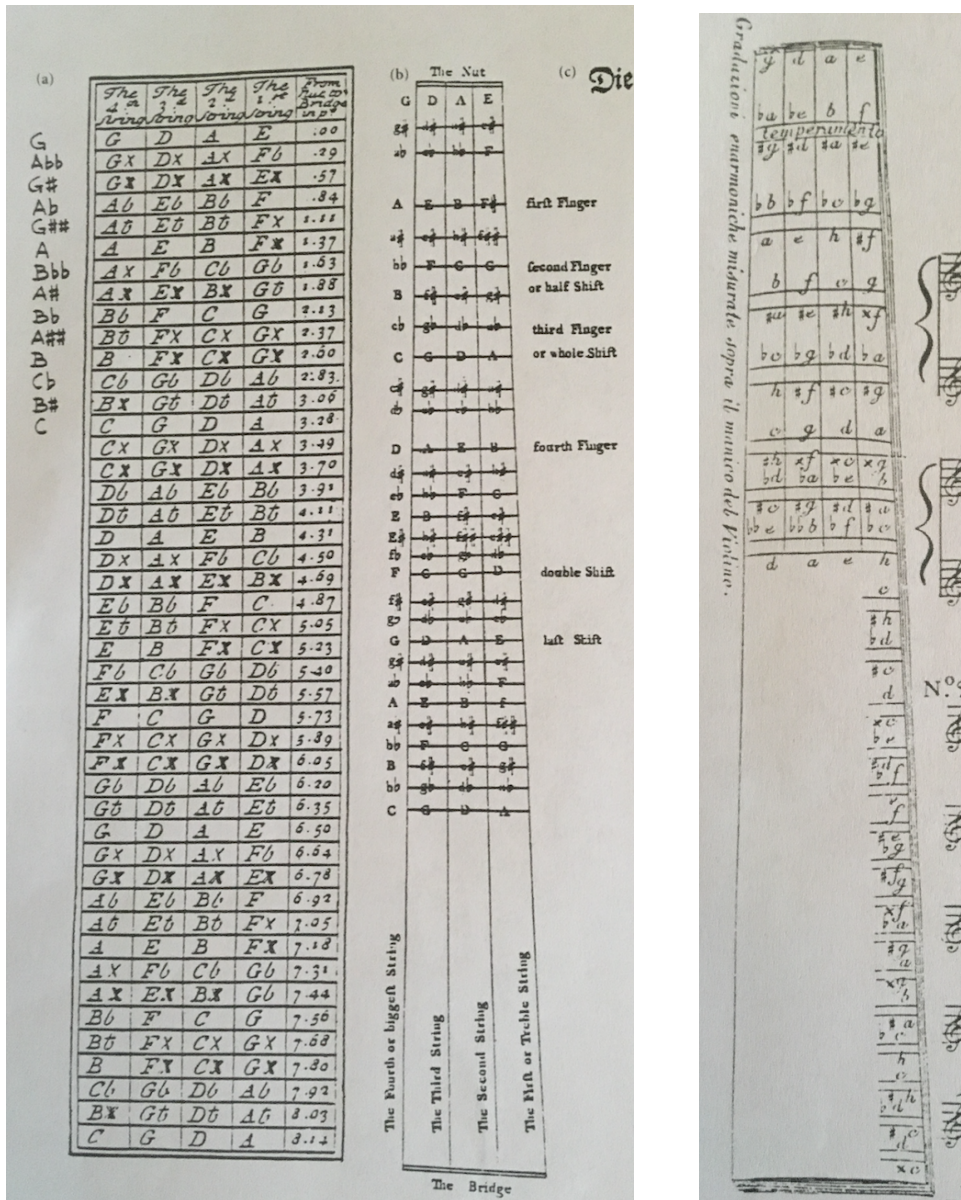


Fig 2.3 : (Left) Geminiani's maps for the correct fingering of the violin in 'The Art of playing on the Violin' 1751. (Right) Campagnoli's maps for suggested fingering of the violin, including the suggestion for the use of tempered intonation between the enharmonic equivalent notes used with the first finger. From 'Nouvo metodo della meccanica progressiva per suonare il violino' Milan c.1797. Both cited from Barbieri (1991).

However, while Henebry and others may be clear about the fundamental melodic structure of Irish music, set apart from harmonic structures of the vulgar music of the day, (especially with regard to fixed pitch instruments such as the piano), this might not necessarily mean that the Irish scale was unique from similar issues of intonation as expressed by the maps crafted by Geminiani, Galeazzi and Campagnoli. These maps illustrate guides for fingering for experienced soloists, whereby *enharmonic equivalents* are central to the question of playing in various keys. I suggest that this may be central to issues of an Irish scale also. Henebry's view that fingering should be altered to achieve the correct 'sound' of a certain key is concurrent

with those views held by some of the leading violinists and composers on the continent c. 100 years earlier. Furthermore, in comparing the maps designed by each of the earlier violin masters from the 1700's and Henebry's maps as outlined in 'Irish Music' (1903), certain similarities are observed. Of particular note is Campagnoli's inclusion of an area marked where 'temperamento' (tempered notes) could be achieved. It must be remembered however that each of these maps are approximations, and used only as a guide. In Henebry's case alone, two maps are presented side by side due to the fact that he took down the measurements from two separate fiddles, which gave discrepant values for where the notes were exactly correct. This proves problematic in recreating what 'sound' the scale suggested may have in relation to the fingering of the fiddle, as it suggests that working out the correct 'sound' of the scale was instrument specific, and therefore tempered to some extent in each case.

As a modern example of elements of such a fluid process of harmonic consciousness, I suggest that issues surrounding tuning on stage for my band FIDIL may illuminate the topic at hand also, where the band is made up of three fiddle players and no fixed pitch instrument.

Fidil are a fiddle trio from Co. Donegal. The members of the band are Damien McGeehan (from Ardara), Ciarán Ó Maonaigh (from Gaoth Dobhair) and myself (from Dunkineely). The band has been highly critically acclaimed being awarded the 'Young Musicwide' award from Music Network<sup>41</sup>; receiving the 'CD of the week' award for both their albums '3' (2009) and 'The Old Wheel of Fortune' (2011) in 'The Irish Times'; and having toured regularly internationally. The repertoire of the band is heavily rooted in the traditions of Co. Donegal. The genesis of the group was the recording of a duet album by Ciarán Ó Maonaigh and myself, named Fidil, in 2008. The instrumentation on this album was two fiddles only. The recording was very much rooted in the duet and solo fiddle tradition of Co. Donegal. This included many of the tunes featuring 'reversing'<sup>42</sup> (which allows a greater freedom of expression to both individuals in the performance of a piece, as both performers are playing versions of the tune an octave apart) as well as featuring some solo performances. This was also a chance for me to

---

<sup>41</sup> Music Network is a national organisation set up by the Arts Council of Ireland in 1986 to promote live music performance, touring and development. For more see <http://www.musicnetwork.ie>

<sup>42</sup> A common term used in Donegal for playing in a lower octave, which is a common practice when more than one fiddler is playing at a given time.

record some of the ideas I had been already working on at the University of Limerick in terms of the fiddle being used as an accompaniment instrument. I had been working on arrangements where fiddles only were used to accompany the main fiddle line. This included the use of chordal arrangement, the use of drones (which in my opinion was complimentary of the tradition in any case as it has an established mode of practice), pizzacato and the use of different tuning systems for the fiddle. These included tuning down the fiddle (to Eb Bb F C) as well as inventing a new system for tuning the fiddle (D A A' D')<sup>43</sup>. While in the studio, I was able to overdub some of these arrangements which in turn became the genesis of the Fídil sound.

What was interesting to note was that while recording in this duet situation Ciarán and I were both encouraged by the engineer to use a digital tuner in the studio. We each felt that this was not exactly correct in terms of our individual senses of tuning, and so these readings from the tuner were corrected by a small number of cents by each of us, with particular regard to our 'E'" strings. We were satisfied that this recording was reflective of our particular performance practices at that time. What was apparent from this experience was that each of our senses of tuning differed but we felt that because of the reversing involved, tuning discrepancies were at a minimum, and any slight discrepancies that did exist added 'character' just as before and were important in a true representation of our 'traditional' 'sound'. It should be noted that the majority of the arrangements on this album comprised both fiddlers playing a version of the melody, be that in the usual setting or in the lower octave.

As we released the album we quickly realised that we needed a third individual to join the group in order to perform these arrangements in a live setting. We agreed that Damien Mc Geehan was a wise choice as he was equally at home with other genres of music as he was to traditional Irish music. He is a talented guitar player, drummer and bass player and so was able to adapt many of the techniques required in the performance of each of these instruments to the fiddle. Damien was also involved with some of my early arrangements in the University of Limerick and as such was familiar with the sounds that we wanted to achieve, and was experimenting in a similar fashion with strumming and percussive effects for arrangement. Issues of tuning, intonation and inflection became more apparent with the emergence of the trio as a performing group. We each readily acknowledged that we each had our own sense of tuning the fiddle. However, unlike before, in this new professional performance context, the

---

<sup>43</sup> Through my research to date I have not encountered this tuning being used in the Irish or any other tradition

aesthetic of these choices in terms of tuning had changed. We each felt that there was more pressure on each of us to be 'in tune' with each other. Tuning on stage was achieved by means of taking an 'A' from a tuner ('Free Chromatic Tuning' app downloaded by Ó Maonaigh for the i-phone) before performance, and then each performer tuning the rest of the strings in 5ths from that point. If tuning needed to be checked or adjusted during performance, then an 'A' was taken from the individual next to you, and could then be passed on to the other individual. This did not work in this context because (a); from a presentation point of view the momentum of performance was breaking down as a result of excessive tuning and (b); from a performance perspective, we were unhappy at the discrepancies that resulted from this methodology. We felt that tuning discrepancies were extremely apparent, particularly in the performance of slower, more highly arranged pieces.

For example, in performing the air 'Hector the Hero', when playing in different octaves certain chords would prove to sound 'out of tune', particularly 'A' (which is the tonal centre of the melody). If Ciaran was to play a low A and E drone (with his first finger on the G and D strings), this would be out of tune with Damien's E and C Sharp drone (open string and second finger), and both would be slightly discrepant with the accompaniment being provided by my D A A' D' fiddle (Drone on open string and multiple fingers). Played individually, each of these chords sounded in tune, and the fiddles sounded reasonably in tune with each other. However the ensemble result was deemed 'out of tune', or at least 'too' out of tune for public concert performance.

Three interesting points can be taken from this: 1) – the changed performance context of the music proved to play a central role in our attitudes towards the tolerance of tuning discrepancy and 2) each of our own senses of tuning was different, as were our aesthetic values of what level of discrepant tuning was acceptable. In my opinion this was due to our various experiences playing in ensemble situations over the years. Both Damien and I were members of various groups as teenagers in which we played on the local pub circuit. While this had little to do with traditional music performance, it meant that we were acutely aware of the importance of tuning in terms of public performance. Ciarán's experience was mainly of playing at festivals around Ireland, and was undoubtedly more immersive in terms of an 'authentic' experience. This included playing regularly on stage, in particular while guesting with Altan, and also primarily in sessions, a context in which tuning discrepancy is more generally accepted (and not noticed by some). There are various reasons for this including

instrumentation (fixed pitch instruments vs. non – fixed pitch instruments), session etiquette, varying standards of performance practice, as well as the social process of 'mutual tuning in' (Shultz, 1951; Thacker, 2012). 3) We had moved from a monophonic traditional setting where the fiddle as a melody instrument was now being used in a harmonic context. Tuning discrepancy was less apparent *to us* when playing in unison. However, some system needed to be put in place to remedy the discrepancies apparent in arrangement, and to this end, each fiddle was fitted with a Kurmann soundpost pickup for amplification and was ran through a Boss Chromatic tuner, to which each of us could tune our strings to 12 TET (A 440 Hz). This immediately helped our harmonic sound with regard to arrangement. However, we each felt that our 'sound' had changed and that the fiddles were not strictly 'in tune'. This highlighted the issues that were raised with regard to the performance of our music in terms of harmonic arrangement / orchestration as opposed to a monophonic context. Our harmonic consciousness changed our collective values, so as to benefit the sound of the group rather than the sound of the individuals within it.

Of course this insight also raises issues of changing aesthetics associated with changing contexts. Why does the aesthetic change when the same style of tune is played in a different musical context, i.e. arranged in a highly arranged fashion or simply when taken out of the informal session context and placed in a professional 'stage' context? If we were to engage these tunes in such a fashion, closer to the aesthetic of a session, where energy and rhythm are of predominant importance, would the discrepancies be only then unapparent to us, or would/ did the audience also experience them /or not? In essence, does an audience member's individual value system play a role in this context? Does their tolerance for pitch discrepancy depend largely upon their previous musical experiences and their attitude towards 'authentic' sounds, as opposed to a polished commercialised version of culture? This experience would suggest that the process of 'tuning in' changes with context and from individual to individual depending on their experiences (Keil's realities) to that point. While we were 'tuned in' to each other and some members of the audience while playing in unison, it is equally possible that other audience members had 'tuned out' as a result of their experience and tolerance (or lack of) for discrepancy. Sloboda writes that

“Music which conforms to the rules of diatonic tonal harmony is much easier for western listeners to remember than is music which breaks those rules.”

(1994, p. 5)

Similarly Dillane (2000, p. 19) offers that

“Often, my perception of something as being 'in tune' in one tradition clashes with my perception of this phenomenon in another. For example, certain Irish fiddlers employ a specific kind of intonation that renders the sound of vamping on an equal tempered piano out of place and distinctly at odds with traditional tuning.”

To this end, employing aspects of McKerrell’s modal complex become valuable in an examination of fiddle playing in Irish traditional music. As stated above, I suggest that structural tones and motivic structures are of particular importance in any investigation of the fiddle music of Co. Donegal, but further than that, the context of performance and the values associated with that given context may also affect the harmonic values performed.

Keegan's work on the use of language in accounting for Irish traditional performance is of particular importance in assessing the performance of an individual performer. Through his research, he has devised a series of technical parameters by which he suggests an empirical account of a performance can be achieved. They are:

1. Ornamentation
2. Phrasing
3. Articulation
4. Variation
5. Intonation
6. Tone
7. Dynamics
8. Repertoire
9. Duration
10. Emphasis



11. Speed
12. Instrumentation
13. Instrument specific techniques

(Keegan 2011, p. 66)

These are directly related to the 5 conceptual units of style alluded to above in section 2.1, where each technical parameter can be used to analyse a performance stylistically. While these technical parameters have been offered to examine style, I suggest that for the purposes of this research project that only some of these should be used with regard to the studied sound community, in particular, intonation, ornamentation and instrument specific techniques (such as potential issues that may arise with the use of the bow).

### **2.3 Processes and values - connecting the individual to the sound community**

While through Fyk, McKerrell and Keegan we are furnished with tools to examine the actual tuning and intonational differences that may occur, it is also important to assess the processes involved. Simon Zagorski-Thomas suggests “that the study of the musical surface is the study of the footprint rather than the step.” (2007, p. 328). I suggest that both footprint (product) and step (process) are of equal importance in understanding the relationship of the individual with the larger sound community. This section outlines the primary paradigms through which an individual filters their experiences and interacts as a member of a sound community(ies).

#### **2.3.1 The Theory of Participatory Discrepancy**

The ‘Theory of Participatory Discrepancies’, first raised by Charles Keil in his articles 'Motion and Feeling through music' (1966) and 'Participatory Discrepancies and the Power of Music' (1987), is a significant paradigm in relation to my inquiry into issues of tuning as apparent in the sound community that is traditional fiddle players in Co. Donegal. Keil (1987, p. 275) states that “The power of music is in its Participatory Discrepancies, and these are basically two kinds, processual and textural.” Keil is suggesting here that the study of music should be less syntactical in approach, in contrast to Leonard Meyer's influential work on 'Emotion and Meaning in Music' (1956 (republished in 2008)), where a syntactical approach is favoured. While a notated western art score accounts for many elements of a performance, and is of vast importance in the analysis of the western art music tradition, its use as a prescriptive or

descriptive tool for analysis for other musics causes problems (Napier 2006, p. 86). Can a score capture the 'feeling' of a performance? Keil uses terms such as 'vital drive' and 'groove', similar to terms such as 'life' or 'lift' (Ó Súilleabháin 1990, p. 123), which are inherently relevant to the Irish traditional music question. What Keil is really talking about is how we, as a society, engage musically with each other, how we create discrepancies through 'engendered feeling' for 'instantaneous gratification' from music, as opposed to 'deferred gratification' through the syntactical analysis of notation. He states that "music, to be personally involving and socially valuable, must be out of time and out of tune" (1987, p. 275). This is the central concept of this paradigm; that music is not designed to be perfect, but rather is an act of communication where individual voices can (and must) be heard both individually, but also collectively, and that the differences between each voice are what make any performance of music a unique, valuable experience. Further than that, each individual voice is important, and deserves to be heard, something that serves to strengthen the collective sound.

The traditional fiddle music of co. Donegal *is* 'socially valuable', in that it exists as part of the social fabric of the community as a vehicle for social engagement in multiple contexts. As such the music is a shared experience between musicians and listeners alike. The discrepancies (or lack thereof) that exist between the musicians performing in various contexts (for example, a group of musicians in a session) create a shared set of aesthetic tools through which meaning can be inferred and identities can become apparent. These identities can vary, e.g. geographic, generational, instrumental and political. I suggest a positive approach to this research is to ask what might be achieved from a study of music using this 'processual and textural' approach. We must be careful not to engage with this paradigm in a linear fashion. If certain 'discrepancies' exist in the performance practice of an individual musician, this may not situate them in one of the potential identity groups (e.g. geographic categories (such as Donegal, Sligo, Clare etc. readily discussed with regard to Irish traditional fiddle music (see Vallely 2011, p. 571), or generational etc.) alluded to in the research questions above. Instead, more attention needs to be given to assessing the development (or 'process') of the musician, as Keil suggests, while also understanding their logic in the execution of a performance. Therefore, the paradigm has at its centre the individual and social inclusivity; the fact that an individual may play in a certain way that's discrepant to another, but that in order to make the sound community work, that that is ok, and actually is what makes the experience so enjoyable.

To this end, Rice's (1997) 'Hermeneutic arcs' provide a useful way of checking our own

relationships as external researchers with the individuals in question and in turn their relationships with their particular influences and experiences. Through this dual method of creating theoretical individual hermeneutic arcs (Rice, 1997; dealt with in more detail in Chapter 3) with the musicians whom we intend to study by way of fieldwork, coupled with the examination of the execution of this music (both process and product), we can deduce more clearly the thought process of an individual musician, what their particular musical affiliations may be, and how this compares empirically with their actual performance practice. We can then understand more clearly the social complexities of the music and the studied community itself.

### **2.3.2 In search of discrepancy : The role of participatory discrepancies in the sound community.**

The Cambridge dictionary defines discrepancy as a difference between two things that should be the same<sup>44</sup>. Therefore, at its core, participatory discrepancies should be about difference, and to a degree they are. They are the temporal and tuning differences that allow us to hear the *human* aspects of music performance, such as the expressive intonation and intentions alluded to above in section 2.2. These are the elements of music that we hear on a regular basis, such as bass lines, guitar riffs and fiddle tunes, performed with certain personal patterns that are instantly recognisable. Essentially, I am singling out what many other academics have singled out with relation to participatory discrepancies (Keil, 2010; Butterfield, 2010; Zargosi Thomas, 2007), the importance of feeling (groove) to the performance of music. While groove is generally associated with the temporal aspects of music performance, I suggest that tuning and finger pitch discrepancies between players is also significant in creating feeling, in particular with regard to the expressive nature of violin music described by Kanno (2003).

While we can easily hear temporal and textural participatory discrepancies in musical performance, when embarking on this study I pondered whether they could be accounted for in a truly comprehensive fashion? Can we really account for 'feeling' or 'groove', or in the case of Irish Traditional music, 'lift', or 'life' (Ó Suilleabháin 1990, p. 122). Efforts have been made by others to account for them empirically using technology, for the purpose of

---

<sup>44</sup> (<https://dictionary.cambridge.org/dictionary/english/discrepancy> - accessed 19/06/19 17:15)

analysis. In his article, '*Searching for Swing; Participatory Discrepancies in the Jazz rhythm section*' (Progler, 1995), J.A. Progler sets out to empirically account for the various ways that a group of 5 musicians (all drummers and bassists) 'grooved' with a bass line, or rhythm, first recording them and subsequently uploading that information into a sound software programme where exact time measurements could be recorded. Here, Progler could empirically account for the exact temporal discrepancies of each musician through exact referencing enabled by the sound software programme. He also examines the technological side of modern music creation, where only computer generated notes and beats are used, informing us that 'perfection' in terms of pitch and tempo is generally rejected by consumers, who instead favour tracks that sound more 'human', tracks that have incorporated certain discrepancies (Progler 1995). This complements Keil's view of the social nature of discrepant music outlined above. It serves to show us how a 'groove' is created; not by perfection but rather by the push and pull of a beat and the interaction between musicians to create this 'groove'. It is this that Progler records so successfully in his experiment. Zagorski–Thomas (2007) offers that such discrepancies are an integral part of music production, where a discrepancy in many cases has to be heard and referenced by a musician, in turn creating a reacted discrepancy, and thus engaging a musical conversation with whatever is 'creating' the groove.

In terms of Progler's experiments to account for 'groove', one interesting thing of note is his use of Charles Keil as one of the participants (Progler 1995). Keil, while sure of how he 'grooved' and what his participatory discrepancies were (playing behind the beat), grooved in a completely different way (played ahead of the beat). This again raises questions about the cognitive nature of the participatory discrepancy. To what extent is it reactive, and does it exist purely in the sub-conscious? In my opinion, Progler's dual approach in terms of qualitative and quantitative methods acquired significant outcomes in terms of the research. By interviewing Keil and all the musicians who took part in the project before they played, he was able to record their opinions on music, and more particularly, their opinions on 'how' they played their music. By conducting the recording experiment after that, Progler was able to see if these opinions were verified, or whether each musician 'grooved' in a different way, depending on what other musicians they 'grooved' with or what they were 'grooving' with. I suggest that this approach is beneficial in the examination of any tuning and pitch discrepancies apparent in the fiddle tradition of Co. Donegal. Traditional musicians readily

conceptualise their musical identities with regard to their changing contexts, and discuss these readily (Keegan 2011).

Olavo Alén's article '*Rhythm as Duration of Sounds in Tumba Francesa*', (Alén, 1995) also empirically accounts for the existence of the 'participatory discrepancy'. By using a tape recorder and a Winkel machine, Alén was able to record the exact real time differences between various beats of each drummer in a Tumba Francesa group. The tape from the tape recorder was passed through the head of the Winkel machine at a precise speed of 76cm/ sec. This allowed him to give exact time values to each beat as it occurred and measure its exact time from the last beat. He also raises some interesting questions regarding the physical nature of playing music. Alén describes, by means of a diagram, how one drummer was restricted physically by the drum itself (Alén, 1995). One beat occurs at the far rim of the drums circumference while the next occurs at the rim right beside his waist. Due to the size of the drum, this means that the drummer's torso gets in the way, causing the second beat to be a little late. In terms of the Irish question this type of discrepancy raises interesting questions around physiology in fiddle playing. In examining the particular performance practice of a musician should we also look at the physical nature of their instrument, or their personal physiologies? This type of micro-syntactical analysis may prove counter-productive, but the conversation is worthy of further discussion.

Butterfield (2010) robustly examines the importance of the temporal participatory discrepancy in creating 'engendered feeling' as Keil suggests. Through examining the results of two experiments carried out with different focus groups, Butterfield challenges the importance of the participatory discrepancy paradigm. He suggests that to play in time, one must reference the beat, and therefore synchronicity is impossible in any music. He examines whether it is the discrepancies between bass and drums in a jazz ensemble that create swing, and whether this is audible by the audience. The argument is made that while participatory discrepancies do exist, they are only audible to a very limited number of people, mainly those with an acute ear and many years' experience in jazz and, therefore, their importance may be over analysed. While there is some truth in the relevance of the experienced listener in hearing certain discrepancies, I suggest that Butterfield has understated the importance a human-centric approach may have in illuminating certain aspects of musical performance. While synchronicity to the level suggested may be difficult to attain and may be of importance to some musicians, I suggest that the importance of studies such as those listed

above, and this one, is to show how our differences are central to our cultural make up, and therefore have a role in describing the collective cultural memories of a studied sound community. While individuality is key, commonality is also important in creating a cohesive sound community. The differences between individuals are equally as important as the commonalities, where macro commonalities serve to create a communal sound, and micro discrepancies serve to preserve the identity of the individual within that sound community.

Such micro-syntactical analysis allows us to compare discrepancies cross culturally, generationally and across styles, allowing for better understanding of the groupings we make in our categorisations of sounds in a sound community. We can look in detail at both pitch and temporal aspects of performance and track them visually using computer software programmes instead of relying solely on our aural perceptions of them (or standard western notation). However, I agree with Kaminsky's (2014) assertion that in a study of a music in which the cultural actors perform encultured embodied acts (music or dance), such as is the case with the fiddle music of Co. Donegal, this type of analysis is not enough. While it may be accurate in the data it gives us, it fails to extract the *human* elements associated with traditional music performance, the central element of the participatory discrepancy paradigm. As alluded to earlier, in my experience, the fiddle music of Donegal is an intrinsic part of the social fabric of everyday life for those who play it. Any study of discrepancies in relation to the fiddle music of the county must engage with the conceptual and practical aspects of the studied sound community and the individual actor within it. Therefore, when asking my research questions regarding the 'sound' of the community, the 'sound' of an individual (at any given time and within any given context), I suggest that maintaining a participant- centric approach is critical.

In my opinion, Keil's concept of 'discrepancy' also raises questions and ethnomusicological issues. As discussed, the term 'discrepancy' indicates something that is not compatible or similar with another. In using the term as it relates to Irish traditional music, variations of individual style lead to a situation where all examples (performances) are similar in terms of their general make up in that they are each performed within the parameters of what defines Irish traditional music itself, using common structures to govern performance. These include, but are not limited to common repertoire, time signatures etc. But equally, these same performances can become highly 'discrepant' when engaged at a micro level of detail (see Vallely, 2011 for more on such structures). This is directly relatable to the earlier discussion

on categorisation in section 2.1, where at a macro level, a sound community is created through the observance of commonalities, but at its core, is made up of a collection of individuals, who each perform unique participatory discrepancies, based on their experiences.

As musicologists, we must be careful when examining discrepancies (and/ or applying the term) in the field. To whom are these pitch and temporal issues 'discrepant'? And measured against what baseline/standard? While the term is useful as a descriptive tool for a musicologist, it may prove problematic for the performer in a research context. If informants are aware that their particular 'discrepancies' are being measured then this may in turn affect their performance. Does the introduction of such terms affect the creative thought process of a performer? Indeed, the argument could be made that it contradicts what we are aspiring to – the individual voice, the individual creative process. This is what each musician is aspiring to, to have their own voice within their community. This further highlights the social value that participatory discrepancies may have on a sound community and the individuals that are members of it.

However, would these individuals (the informants) strive to be more or less 'discrepant' than they usually would be according to their perceptions of musical correctness, or portray a willingness to include such things because we are in the field examining them? Research from social psychology suggests that the latter could be the case. Crozier (1997) suggests that generally individuals will conform to suggested ideas so as to conform to the identity of the group (community) This can be seen in certain competition contexts, where fiddlers generally perform according to an accepted stylistic standard rather than adopting an individualistic approach. This is also commonly observed with regard to the Scottish bagpipe tradition (McKerrell, 2005) and competition fiddling in America (Goertzen, 2017). In this way, actual opinion can in some cases be hidden from a researcher as the opinion in question may be seen to be less relevant and not what is accepted or wanted by the group (or, in this case, the researcher). Crozier (1997, p. 68) states that:

“Individuals depend on the group for social approval and acceptance, and they comply with the group because they anticipate being rewarded for doing so or punished for not doing so. ... individuals modify their position in the process of trying to understand the world by comparing their view of reality with that of the group”

Therefore, individuals are likely to conform to the aesthetics that affirm membership to a

certain community, in this instance, a sound community. As suggested before, using such studies centralise the role of the individual(s) in the make-up of the studied sound community (and associated contexts). This allows us to examine fully the typical way in which the fiddle music of Donegal is accounted for through the lens of this research.

While this is undoubtedly true of certain individuals, personality traits also play a role in how the individual perceives their own unique performance patterns. In his article 'Individual differences in musical behaviour' (1997) Anthony E. Kemp suggests that as musicians we are introverts as opposed to extroverts, but that we do not share the same characteristics as introverts in the general sense of the definition. Musicians are introverts due to the nature of their art, as practice in isolation is necessary. However, he adopts Drevdahl and Cattell's (1958) term 'bold introvert' as a term that might better suit the musician. The point is made that despite their introverted tendencies, highly skilled musicians emerge as independent types and that increase in this form of (musical) independence can be directly correlated to increase in age (Kemp 1997, p. 29). When adapted to the question of fiddle music in Donegal, through the filter of my experience within the community for 20 years, I suggest that 'maturity' in age may not necessarily correspond directly with musical 'maturity'. This can simply be as a result of certain individuals learning later in life or as a result of high level performance practices by some of the younger members of the tradition. Nonetheless, this sense of social independence/maturity can prove useful in assessing the confidence of certain individuals with regard to their performance practices. It further contextualises their performances in terms of their particular discrepancies by way of individual hermeneutic arcs<sup>45</sup>. Cawley (2011; 2013) similarly centres the individual with regard to the enculturation of Irish traditional music, but suggests that 'longevity' may also be a substantial factor in achieving success in achieving desired results with regard to Irish traditional music performance.

When examining the cognitive world of an individual (musician) in this way we must also examine how they relate with the world in which they exist, neither as 'conformist' or 'bold introvert', but simply how we as a society as a whole engage with our experiential existence.

---

<sup>45</sup> Through this paradigm, (Ricoeur 1981, p. 164, Rice 1997). terms such as emic and etic are made redundant. Instead "The self, whether as a member of a culture or a student of culture, understands the world by placing itself 'in front' of cultural works" (Rice 1997, p.114). This in turn suggests a move away from methods of interrogation. By means of positioning ourselves on such an arc, we can evaluate our various stages of integration into a studied community, irrespective of labels. By using this model, one can examine both their own subjectivity and objectivity in relation to a tradition.



As alluded to in section 2.2, Keil suggests that we engage with our world on three levels; our 'primary reality', which is the physical world around us, 'cultural reality', which is how we instinctively engage with this world, especially in terms of culture and nature (where Keil suggests the 'participatory discrepancy' occurs in its purest form), and 'civilized reality', which is how these other realities are defined and systematised (Keil, 1995). This echoes the work of cognitive scientists Eleanor Rosch (Rosch, 1973) and George Lakoff (Lakoff, 1987) in the field of 'Basic Level Categorisation'. Our world is systematised at every juncture based on our experience, with the 'best example of' an object informing a definition of that object. Within music (in particular Irish traditional music) this breakdown continues to occur until we are left with the individual instance. If we link this 'prototype theory' (Keegan, 2013; Rosch, 1973, 1975, 1999; Lakoff, 1983) to Keil's 'realities' we can see how these realities are symbiotic. Both our primary and cultural realities are naturally defined and systematised, creating Keil's civilised reality. Subjects defined in this civilised reality nevertheless also influence cultural reality. Music is no longer just music, it is a particular type of music for which certain constraints apply, and for which celebrated players provide 'classic' examples, for instance, the influence of highly regarded individuals such as Michael Coleman, James Morrison, John Doherty or Tommy Peoples on Irish traditional music. Can differences (in the case of this research, specifically tuning and finger pitch discrepancies) become embodied from the influence of such categoric exemplars? Does this influence of 'civilised reality' not affect how our 'cultural reality' develops? This is a socio-musicological question. When defining these realities, and searching for the participatory discrepancy in practice within them, we must be aware of the consumerist nature of our society and how this is reflected in performance, both as an agent of standardisation, and also as a method of seeking out the less common aspects of music. As Keegan (2010, p. 63) states; "We may build scientific structure to organise our musical world but all it takes is for one creative musician ... to...come down from the mountain and not make music according to our 'science' and we must start again...".

This further highlights the positive result a processual and textural approach (as outlined by Keil) may cultivate ethno-musicologically. Instead of dealing primarily with the syntactical analysis of cultural musical products, an interaction with *how* and *why* the musician plays in a certain manner may prove more valuable. This firmly supports the framework adopted to examine the research questions.

### **2.3.3 Tuning in – The individual’s access to multiple identities (communities)**

As evidenced by the framework, the individual must filter through experiences (processes and shared values) in order to attain membership of a sound community(ies). Again, the notion of studying the ‘step’ of an individual is central. The study of participatory discrepancies are still for the most part centred on product (footprint), as discrepancies can only be measured after being performed, in relation to another point of reference (e.g. in the sound community, usually other players). However, I suggest that, based on the case for the centrality of the individual in exploring the research question, and the fluid, expressive role that the individual may have within a community(ies), Thacker’s paradigm of ‘Mutual Tuning in’ is of particular significance to this research. Based on Scultz’s (1951) theory of ‘Tuning in’, Thacker suggests that through participatory discrepancies, meaning is inferred, and that singers can relate to each other through discrepancies in how they sing rather than an accepted ‘correct’ structure. Further to this is the notion that the members of the singing club where she conducted her research had to ‘tune in’ to her as a visitor to the club, and that this was achieved by her actively taking part in the singing session. This highlights the social nature of tuning into an Irish traditional song setting. Thacker relates that:

“Mutual tuning-in is complex in this setting because of the variety of social relationships that are created and sustained in various moments of musical interaction during the time frame of a single night, and continually over an extended time period, in some cases years and decades.”

“These social relationships inform the ways in which listening to singers takes place. These singers come to know each other socially and musically, and thus have specific knowledge of each other’s singing style, standard song repertoire, and based on previous experiences, have expectations about the kind of interactions that will occur when certain songs are sung or certain singers are singing.”

(Ethnomusicology Review, 2012)

I suggest that these observations are directly translatable to the experience of participatory discrepancy in Irish traditional music, and in particular traditional fiddle music within the sound community of Donegal. The notion of ‘tuning in’ is not one that can solely relate to aspects of ensemble performance in my opinion, rather that an individual can ‘tune in’ or ‘out’ from varying contexts of musical performances, depending on their already enculturated and engrained expectations of what an experience should be. In this way, musicians, dancers

and listeners alike can exist in a singular performance space, where simultaneous membership of various sound communities may be engaged through identity, experience, and knowledge of the tradition and social expectation particular to the individual's experience of tuning in. In this way, phenomenological hermeneutics may prove useful in attempting to understand in a fuller way the collective sound community, through the prism of the individual. Tuning in is the process where by shared values are inferred, and through which membership to a particular communal context (sound community) is negotiated. It is also the process by which an individual is assessed by the sound community. Therefore, in my opinion, tuning in (or out) is a hugely significant process, as it is the primary vehicle for understanding why individuals behave (how musicians play) in particular contexts. It is also the primary vehicle that allows an individual to achieve the duality of being a member of a sound community(ies) while also being an individual voice. I offer that the act of tuning in is of real significance in assessing why participatory discrepancies exist. We already know that they exist because they are socially valuable, and that they are the central to the instant gratification of music. But critically, through tuning in, they exist as a means of sub conscious communication, where the embodiment of tradition and experience can be observed and renegotiated; where cultural reality meets civilized reality, and where the individual meets the sound community.

#### **2.3.4 The embodiment of dance in relation to potential pitch discrepancy in the performance of fiddle music.**

The framework highlights shared values as well as processes as potential filters through which the individual may pass to assess a particular sound community. These shared values are embodied in the social fabric of the sound community. In relation to the Donegal fiddle sound community, it has been evidenced in chapter one that the house dance tradition has been an important performance context historically. Kaminsky (2014) suggests that certain discrepancies associated with the performance of Swedish polska music for dancing are an integral part of the nuanced conversation between the music produced by a musician and the dance performed by the dancers. He suggests that both musician and dancer alike have a role to play in a shared social dynamic, in a shared performance of a dance. In this way, the social function of the fiddle player is foregrounded, where experienced musicians can adapt aspects of their performance to elicit appropriate positive reactions from the dancers present. According to Kaminsky, musicians who play regularly for dancers will inevitably play

differently than those who don't (2014, p. 48). Through Kaminsky's research, three mechanisms through which musicians can suggest motion in a polska dance are highlighted:

1) Iteration, where it is suggested that music can provide a "common near future projection of sonic events to synchronize movements". Such iteration may occur on two levels, 'overt pattern repetition' and 'submerged pattern implication' (2014, p. 52). Overt patterns are those which repeat such that they act as a sonic marker for a listener. However, such patterns may only become readily recognisable through appropriate experience with the particular music in question. To this end, the term 'entrainment' (Clayton et al. 2005, p. 17, 18) is also used by Kaminsky to relate to those relationships between such sounds and the listener. 'Submerged pattern implication' is a less obvious form of cue for a dancer, whereby a musician can influence the general motion of a dance, by subtly placing it in a particular performance context associated with the dance. Again, a high level of understanding of tradition is assumed in this relationship. I suggest that aspects of this experience may be directly relatable to the context of house dances in the Donegal sound community.

2) Metaphor, where it is suggested that rises in pitch or, in the case of Swedish polska dance music, timbre, may link to rising or falling motions in the corresponding dance. Kaminsky relates that

" In polska, the more relevant metaphor is a function of timbre rather than pitch. Overtone – rich sounds are 'light' and draw dancers upwards, while notes with strong fundamentals are heavy and favour downward motion." (2014, p. 53)

No literature that I have found on Irish traditional dance music to date confirms a similar existence of metaphor of this kind in the music/dance canon. Based on my knowledge of Donegal house dancing, in particular the highland dance, similarly no correlation between upward movements and raises of pitch are evident. This does not suggest that the metaphors are not present, rather that they might have a different inferred meaning. In this way, pitch related metaphors are still relevant in an examination of the varying contexts of Irish traditional music performance, in particular with relation to the direct performance of music for dancing. Therefore, such metaphors cannot be discounted when investigating tuning and pitch discrepancies in Co. Donegal, where the traditional house dances were the primary performance context for fiddlers.

3) Sympathetic, where on a basic level, a musician can influence the dancers he/she may play for through physical motion. Kaminsky also alludes to Helmut Lachenmann's paradigm of 'musique concrete instrumentale' (2008) which suggests that the process of sound production is directly audible in a produced sound, and therefore an integral part of the consumption of those sounds. Through such a view, sonic properties of textural discrepancies, such as more vigorous bow movement in the case of a fiddle player, may not solely need to be visible and so a musician can communicate appropriate cues for a dancer through sonic means only. Again, this may prove to be applicable to the Donegal sound community, where aspects of the sound such as bow movement or nuanced finger pitch discrepancies may play a role in the relationship between the fiddle player and the dancer.

The term sonic metaphor (2014, p. 59) is used to account for such sonic cues. I suggest that these mechanisms and terms, while primarily related to the study of rhythm and motion in Swedish polska dance, may translate in a useful fashion to the question of textural discrepancies in the fiddle music of Co. Donegal. Data recorded as part of the interview process for this research will be examined with regard to sonic metaphors, in an effort to examine whether such sonic metaphors (if observed) may be related to the tuning and pitch discrepancies performed by an individual. Similarly, if metaphors such as these are observed with regard to such discrepancies, this may further illuminate questions surrounding the performance practice of the individual, and contextualise that practice with regard to the context of the community, enabling a further understanding of the 'sound' of both the individual and the community. Also, evidence of sonic metaphors may relate to any act of 'tuning in' that may be observed, where metaphor may be an intrinsic element of membership of a particular identity or sound community.

## **2.4 Conclusion**

Throughout this chapter, the centrality of the individual has emerged as key. Expressive intonation, harmonic consciousness, the use of metaphor (geographic and musical) each have at their centre the actions of the individual. However, other processes and values identified, including the performance of participatory discrepancies, the act of tuning in (to these discrepancies as well as to varying performance contexts) and the influence of categoric exemplars are the lens through which disparate individuals may come together socially to create a sound community. Therefore, the framework suggested at the start of this chapter can be revisited.

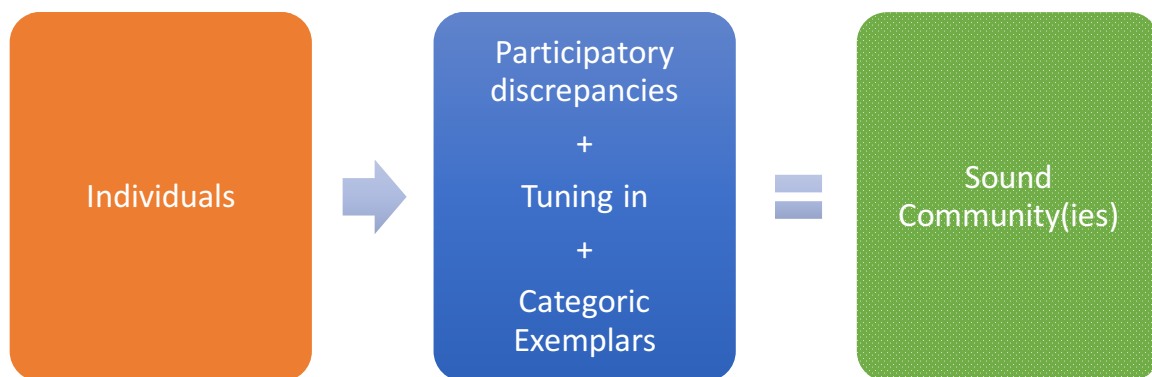


Fig 2:5 Framework revisited

I suggest that this framework and the literature presented in this chapter form a robust tool to engage with the issue of tuning and fingered pitch discrepancies in the Donegal fiddle sound community. Through this framework, individuals can be assessed in relation to their own identities, but equally, the fundamental processes that allow them to become members of a larger sound community in a specific context become apparent. This is a significant aspect of this research, where the question of tuning and intonational inflection can be illuminated by the examination of social process. The footprint (the performance of the music) can be contextualised and understood in a significant fashion (the step), and therefore, we can assess not only the mechanical nature (the actual actions performed) of how any issues relating to tuning and intonational inflection are performed, but understand why they happen. That is central to this research; not only to examine how, but to uncover why variances in tuning and fingered pitch practices exist in the Donegal fiddle sound community.

## Chapter 3

### Introducing a methodology for fieldwork specific to this research

#### 3.0 Introduction

In this chapter, the methodology for the fieldwork undertaken as part of the research is presented. The suggested framework in chapter two is central to this research, and the methodology presented here for conducting fieldwork in the sound community reflects this. However, this chapter also offers an opportunity for me to examine my role in the research, both as an active member of the studied sound community and as a researcher from within that community. Therefore, examples from other ethnomusicological research is discussed in an effort to contextualize my role in conducting this research. In particular, I investigate approaches to maintaining objectivity with regard to research while maintaining positive relationships with those who I recognize as colleagues and friends.

Further to this, I introduce the criteria for the selection of my sample of participants, my engagement with them and the contexts (how and when) that each were recorded. The sound software programme Melodyne is also discussed. This is the audio software programme I have selected to use to carry out the analysis of tuning and fingered pitch discrepancies recorded during the fieldwork. I will present how its normal function with regard to music production, (the various algorithms, polyphonic, Melodic and percussive), are used to analyse music, and how I use these in my research. Further to this, other methods such as accessing recordings, gathering quantitative data on plucking and addressing the influence of categoric exemplars by way of analysis are also utilized, but are discussed in more detail as they emerge thematically in Chapters 4 and 5. I will provide more methodological detail in Chapter 4 and 5 where appropriate, particularly in relation to how the interviews were conducted, and the tuning processes that were observed from the informants.

#### 3.1 Examining from within: Emic vs. Etic attitudes to the tradition

Traditionally in ethnomusicological discourse the terms 'emic' (derived from the term 'phonemic') and 'etic' (derived from 'phonetic') (Pike, 1954) have been borrowed from linguistic discourse to denote alternate viewpoints obtained of a studied tradition, with specific regard to the type of data which may be collected. These terms were developed in an

attempt to create new ways of understanding and accounting for linguistic difference, and more importantly to interrogate 'subjective' versus 'objective' views of a culture. An 'emic' perspective is that of an insider of a studied community, which may be subjective in nature, leading to an understanding of what is important and meaningful to the cultural actors of that studied tradition. In contrast, an 'etic' view is more objective in nature, and is achieved by means of data collection and observation of a studied community (ibid, 1954). The researcher may contextualise this studied tradition within the wider discipline while attempting to stay 'culturally neutral' (Princeton online, 2013).

Hammersley and Atkinson suggest that “as far as possible, the social world should be studied in its 'natural' state undisturbed by the researcher” (1995, p. 6). While this is an admirable concept, unfortunately in the active study of any cultural element, either by an insider or an outsider, this is difficult. The unavoidable presence of the researcher *will* affect the field in which study is being conducted (Nettl 2005, p. 152). Hudson and Bruckmann state that “Researchers from this (etic) perspective approach a community as an outsider. They announce their affiliation as researchers from the outset of their research.” (2004, brackets by author). As is usual ethical best practice, the researcher *must* announce their affiliation to a particular academic institution or organisation regardless of position within emic/etic discourse. We must then consider what issues such a declaration may raise in relation to the identity of the researcher, both in terms of the fieldwork informant, and the researcher themselves. Within this emic/etic discourse we must also ask whether the insider is less 'visible' than an outsider when conducting research; whether access to certain valuable informants may be easier; and to what extent can the objective and subjective be balanced.

What is generally accepted is that the particular view of the insider is desired (Neff, 2013; Nettl, 2005, pp. 134, 135; Rice, 1997). This view can then be compared and contrasted to other traditions, including that of the researcher (Nettl 2005, p. 60). To gain this emic perspective many researchers engage a 'participatory model' (Hammersley and Atkinson 1995, p. 126) of immersion in a culture which may involve studying a musical instrument of the studied tradition in order to better understand the process and practices of that music (O'Laoire, 2003; Rice, 1997). This practice of 'bi-musicality' (Hood, 1960) can help in the understanding of the aesthetic, ritualistic and social values of the music, as well as build extremely valuable relationships through which much desired informants can be attained. While traditionally ethnographies were studies of 'the other' (Nettl, 2005; Aubert, 2007), it is



common in modern ethnomusicology for an 'insider' to also assume the role of 'researcher' in relation to their own tradition. Using labels, such as 'insider' or 'outsider', 'emic' or 'etic' can prove problematic in this regard. This is particularly true of Irish traditional music. In examining his role as a researcher of Irish traditional music, Keegan suggests that truly objective research is impossible (2012, p. 20). Keegan, (a highly regarded traditional Irish flute player, a member of the London – Irish diaspora, and Associate Director/ Director of Undergraduate studies at the Irish World Academy of Music and Dance at the University of Limerick) has conducted his own studies from an emic perspective. He agrees with Shultz's (1964) suggestion that certain everyday and seemingly inconsequential elements of traditional performance may be overlooked by an insider. However, he vehemently disagrees with Shultz's suggestion that by default an objective view of tradition for an insider is impossible:

“... if it is the case then we should leave the formation of social research and policy (let alone ethnomusicology) ... to researchers and sociologists from other cultural contexts as we cannot possibly have anything worthwhile to say about our own society that can't be better done by so-called outsiders!”

(Keegan 2012, p. 20)

When examining such issues of objectivity, it must be acknowledged that the outsider may in fact bring as much cultural baggage to the research field as an insider might (Nettl 2005, p.150). In this way, the boundaries which terms such as 'emic' and 'etic' were created to denote and explain become less clear and less scientifically functional, especially in a modern society where we are part of different cultures and part of one global (western) culture simultaneously (Aubert 2007, pp. 1 – 8; Cooley 2003, pp. 10 ,11).

This blurred boundary can be useful for the 'inside' researcher. The researcher in this context can readily acknowledge the aspects of tradition they wish to study and are fluent in the descriptive language of the tradition while also being fluent in the academic language needed to contextualise and evaluate these areas of study (Keegan 2012, p. 21). In this way, the insider may have an advantage in the contextualisation of a tradition in academic research, by way of being able to ‘tune in’ to the sound community, and also to the perspective of

academia. In attempting to achieve good quality fieldwork and collect valuable cultural artifacts Dowling suggests that:

“Full integration into the field...requires an expansively intense experience, often stretching across months and years of one’s life. ”

(Dowling 2006, p. 108)

While this is may be true of the researcher from the outside, by default this highlights the advantage an insider may have. They may already have experience within a certain tradition, in many cases understanding the full embodiment that tradition, because it is a tradition lived before it has become a tradition studied. Dowling alludes to a famous Donegal fiddler, Con Cassidy of Teelin in this regard.

“... Con Cassidy spoke of the “red mist” that falls over the eyes of the musician, blocking one's view of quotidian life and leaving him in a state of absorption while a vast repertoire of tunes and techniques is digested and embodied. ”

(Dowling 2006, p. 108)

This state of absorption alluded to above is an interesting concept in terms of our discussion of ethnomusicological fieldwork. Questions may be raised regarding how much an outsider to the tradition can in fact 'absorb' in terms of fieldwork, or if they can transform from an outsider to experience this 'red mist' referred to by Con Cassidy above? Essentially, are forays into the field for 'months and years of one’s life' enough to understand a tradition that is lived? By being in the field for such an amount of time, does identity change in the minds of the researched towards the researcher, or does the politics of their presence in the field disrupt the tacit understanding of identity?

An interesting insight into this question can be gained through Michelle Kisliuk's work '(Un)Doing Fieldwork' (1997, 2008) through which she examines her own fieldwork experiences of studying the BaAka female music and dance form, 'Elamba'. Through active

participation, Kisliuk endeavored to learn more about the dance as an active part of culture. This methodology, while allowing for a greater immersion and understanding of the tradition, as well as greater interaction with the cultural actors of that immediate community, proved problematic in terms of issues of identity. While Kisliuk had made an effort to build relationships with the members of the community in order to be considered 'part' of the collective experience of the music and dance (e.g. learning the language, being initiated by means of various cuts around the body etc.) (Kisliuk 1997, pp. 26, 27), she still felt frustrated by the fact that certain members of the community equated her identity (i.e. as white westerner) with that of the typical stereotype of either colonialism, humanitarianism or that of the various missionaries associated with medical provision. Kisliuk's identity (i.e. how she was viewed by many of the studied community) was somewhat blurred between that of a medic and that of an ethnomusicologist. This highlights that any relationship in the field (while this is an extreme example) may be politically loaded in terms of the opinions of an informant or a studied community, e.g. with regard to academic (or other) affiliation, or simply with regard to the personal relationship cultivated between the researcher and the informant. Kisliuk's experience is also useful in highlighting the issues of identity an outsider might have in relation to a studied community. Unfortunately for Kisliuk, she could not be fully integrated into the studied community because of the views of the studied community towards her. However, if similar research were to be carried out by an insider from that studied community (i.e. one not associated with colonialism, humanitarianism or missionary) an attempt to assimilate into the community would not be necessary. This is because they have lived that experience and their presence in the field is not loaded with political meaning from outside the community (but may have political meaning from within the community itself).

Ó Laoire's experiences of ethnographical research on Tory Island, on the northwest coast of Donegal echo this sentiment. Ó Laoire shared many of the attributes of his chosen community of study - the song tradition of Tory Island and its singers. He is a native of Co. Donegal; he is a native speaker of Irish / Gaelic which is the everyday vernacular of the island; he is a singer, (which he states he was a novice in relation to the tradition on Tory, but Ó Laoire is widely regarded as one of the finest traditional singers in Ireland); he is familiar with Irish folklore and tradition generally; however, he was never considered 'of the immediate tradition by those he studied, or by himself (Ó Laoire 2003, p. 118). Even though his research was generally embraced by his informants he was still warned that this could

change, as was the case with past researchers who displeased the islanders with their research findings (Ó Laoire 2003, p. 127).

This is in direct contrast with Ní Chonghaile's experience of working on 'Balliúcháin Bhairbre' (Barbara's Collection), a collection of songs collected by Bairbre Quinn (Ní Chonghaile's aunt) between the late 1950s and early 1970s on the Aran islands and in neighbouring Connemara. This material was made available to Ní Chonghaile as part of her doctoral research by Bairbre's husband, Paddy Quinn. From this, Ní Chonghaile broadcast these recordings as part of a radio series on Raidió na Gaeltachta, the National Irish language radio station in Ireland. Ní Chonghaile noted that she was approached more readily about the song tradition of the island as a result of these broadcasts, and so was identified as someone who had an interest in these old songs, as well as the traditions of the area. Ethnomusicologically speaking, positive fieldwork relationships were achieved through which further material and access to tradition could be cultivated. She had achieved this through the avenues of being related to the initial collector (who was an insider to the studied community) and by using the medium of Raidió na Gaeltachta, the radio station of the local language, to get the recordings in the public domain. Therefore, she was identified as an insider by nature of her relationship to the initial collector, and through her knowledge and use of the language as a key component of the local cultural identity. As an insider, material was more accessible, in many cases being offered to her, as a direct result of her familial ties to the area.

What is apparent from the examples above is the need (and the attempt by ethnomusicologists in the field, both insiders and outsiders alike) to establish positive relationships with the members of a studied community. Both Keegan (2012) and Ní Chonaghaile (2011) have suggested that being 'of' the tradition is important in terms of access, and in turn could prove useful in attracting more informants to the research (Ní Chonghaile, 2011). Also, integration into the studied community as a performer of the studied tradition can prove useful (Hood, 1960; Ó Laoire, 2003) and can further build positive relationships. In the end, the researcher needs these positive relationships in order to gain, not just access, but also the trust of the community, that any data cultivated during fieldwork and subsequent results will be treated with sensitivity and respect. (Nettl 2005, pp. 133 -148). In essence, this sharing of cultural artifacts and ideals is an act of friendship. As a fieldwork epistemology such a 'friendship model' (Cooley, 2003) is unavoidable in terms of

my own research. I have engaged with the various aspects of the Donegal fiddle community from the age of 12, and have achieved a level of embodiment within it. However, as has been presented in Chapter 2, elements of that shared embodied tradition are conceptual, and therefore the shared understanding of what that sound community is may differ from person to person. Discussion of such idiosyncratic perceptions of the sound community in terms of a ‘friendship’ model may prove to be much more fruitful than having to initially establish certain basic elements of the structure of the sound community as would have to be done by an outsider.

Again, as per the suggested framework, the individual and their relationship to the collective of individuals that make up the sound community is central. In chapter two we have observed that processes such as the influence of categoric exemplars and engaging in acts of tuning may be important in understanding how individuals create sound communities. These are acts of ‘belonging’; attempts to satisfy a basic human need. This method of interrogation allows for best practice in understanding how participants of this sample ‘belong’ to the Donegal fiddle sound community.

I also feel that it will be important to examine my own role in an auto-ethnographical fashion. Chang (2008) suggests that while presenting one’s own story could reveal important cultural information in relation to a study, that positive auto-ethnography “... follows the anthropological and social scientific inquiry approach rather than descriptive or performative storytelling” (2008, p. 46). Similarly, in discussing objective approaches to auto-ethnography, Anderson relates that a researcher can be a ‘full’ member of the studied community, and should be a visible member of that community in any related texts (in relation to this study, I suggest that such visibility relates directly to public performance and integrations into the sound community socially, as well as any affiliation with an academic institution, as discussed above), and should be “committed to an analytic research agenda, focused on improving theoretical understandings of broader social phenomena” (2006, p. 375). I feel that this is an important aspect of this research. I felt that while studying those in my immediate sound community, that my own story also had a value as a prominent member of that community. I was aware that in those early ‘Pass the Fiddle’ events described earlier in this thesis, that I too was discrepant, and wanted to understand more about why this was the case. I felt that my personal story had value, but that my role as a researcher must also be kept firmly intact. For this reason, I took a dual approach to the personal aspects of this research,

by way of the aforementioned boxed in narratives to aid illustration and inform the reader with regard to my personal experiences, while also using myself as an informant for this research, analysing my own data and tuning in the same way as the others, so as to learn more about my place within the studied sound community, as part of that sound community. My identity as both a researcher and a member of the tradition gave me a unique position to study this sound community, but in an effort to maintain objectivity in that regard, I looked to further research as a model.

### **3.1.1 The 'hermeneutic' arc**

In examining my role as a researcher within my own tradition, I find that Rice's use of 'phenomenological hermeneutics' (1997) is of particular use and has been used in other studies of a similar nature (see Melin, 2012). Through this paradigm, terms such as emic and etic are made less relevant (although they still play a role in assessing the identity of the researcher). Instead “The self, whether as a member of a culture or a student of culture, understands the world by placing itself 'in front' of cultural works” (Rice 1997, p. 114). This in turn suggests a move away from methods of interrogation. Rice suggests the adoption of a “hermeneutic arc” (Ricoeur 1981, p. 164). By means of positioning ourselves on such an arc, we can evaluate our various stages of integration into a studied community, irrespective of labels. By using this model, one can examine both their own subjectivity and objectivity in relation to a tradition. Through the reflexive nature of the 'hermeneutic arc', the emphasis inevitably becomes less on the 'field' and more about constructive relationships, with the ethnographer as central to the method (O' Laoire 2003, p. 118). As a result, we examine and contextualise ourselves in terms of the tradition we study, and the relationships forged through the 'friendship model' (Code, 1991; Cooley, 2003) resulting in a healthy balance between what is subjective and objective.

I have found this model of 'hermeneutic arc' useful in the interrogation of my relationships as a researcher of my own tradition, with particular regard to the issue of tuning and fingered pitch discrepancy. My experience of this topic is that it is treated with a sensitivity within the community. Politics and etiquette dictate that in many cases, implying to a member of the community they are ‘out of tune’ is highly unusual and may cause offense (evidence of this is discussed later in chapter 4 in relation to tuning of the strings of the fiddle in varied contexts). As an active member of the Donegal fiddle community, it should be noted that I have learned from and have a great respect for many of these cultural giants I am now studying (e.g.

Danny Meehan, The Campbells), and as such needed to find the right way to discuss their textural differences (Thacker, 2012) without implying that they were simply 'out of tune'. To be clear, I am in no way in the field to determine whether a fiddle player is 'out of tune'. My aim is to analyse an aspect of the Donegal fiddle community that has not been studied previously and to assess whether it is a contributing factor to the overall 'sound' of the community, and/or the individuals that make up that community. However, I feel that it is important to acknowledge that some may have negative connotations of being recorded with the purpose of having the performance analysed and contextualized within a wider sample where differences in tuning and intonation are discussed. These sensitivities are likely contributory to why research on this topic as hitherto been avoided.

While these individuals are mentors and teachers, they are also members of my immediate musical social circle. As a member of that tradition, I am aware of the complexities of the music in terms of pitch discrepancy, but also of the etiquette apparent. While various combinations of instruments, discrepancies in basic tuning, variation in performance standards and personal tuning valuation all contribute to the heterophonous nature of the music (particularly in its most common setting, the session), when asked "if you were sitting beside someone who was 'out of tune' to your ear, would you politely tell them?" all but one informant answered no, as they were primarily concerned that this was a social cultural event, and that offense may be taken by such an approach.

"...if they (a member of the session) were out of tune, I don't think you would say it to them"

(Appendix A, Breffni O'Donnell interview)

"Everybody has their own way of doing it...you all just get on with enjoying the music"

(Appendix A, Jimmy Campbell interview)

I suggest that it is important that my informants and I shared a common descriptive language of the music and that this can then be interrogated academically (Keegan, 2012). By approaching this research from a relaxed semi-structured environment my impression was that the individuals involved were able to contribute freely and honestly about the topic. In my opinion, this was due to my initial relationships with the informants (as 'friends' (Cooley,

2003)), which were based over years of shared cultural activity. In this situation, trust could be built between researcher and informant; trust that while interrogating the topic, that both researcher and informant understood deeply the cultural aesthetic in question. To further add to this, I furnished each participant with an information sheet prior to the interview, where they could get a feel for the kind of discussion that would take place and observe that the study was not a judgment surrounding tuning, but an effort to gather data and opinions to help analyse this aspect of the sound community.

Positive personal relationships in the field can also present some challenges. One issue with which I have had to deal has been the withdrawal of some participants from the project. While generally more individuals are offended by lack of inclusion, and this is what limits the study (Ó Laoire, 2003), my experience has been of the withdrawal or refusal of individuals taking part in the project. Primarily, it should be noted that two participants conducted interviews only later to withdraw consent for their use. A further one individual refused to take part from the outset. Upon withdrawal of consent, I asked each of the individuals in question if they could explain to me via email the reasons for their withdrawal. To me, this seemed a logical step, as I felt I needed to interrogate my interview methodology at this point in case it needed adjusting. In each case, the concern of the individual involved was primarily associated with the etiquette alluded to earlier in terms of discussions surrounding issues of pitch discrepancy. While there was a trust that I would not use their material in a compromising way in the final written project, there was a fear that offense may be caused to members of the tradition should they read the entire transcript of their interview in the appendices of the project and it be inferred that rather than discussing the nature of tuning and fingered pitch discrepancies in terms of the general sound of the community, and in relation to their own practice, that they suggested that another individual may be simply 'out of tune' rather than merely 'discrepant'. I decided to relate these experiences to the appropriate ethics governance body in Ulster University, through which I had already been granted ethical clearance for the research. They were happy (as was I) that my methodology was correct and proper, particularly considering that each informant had been supplied information sheets before the interview process. Therefore, it became more likely that these instances of opt out were as a result of the sensitivity surrounding the topic, and that this sensitivity was evidently stronger for those who had opted out of the project. It was felt that it was most likely that the individuals in question quite simply could not get past the fear that I was in some way there to assess and compare the 'correctness' of their personal or communal



practices. To state clearly again, this was not the case. My interviews were an excursion into the field to examine how and importantly *why* individual 'sounds' differed, and how those sounds formed the sound of the larger community. I suggest that this aspect arising from my research raises an interesting anthropological set of questions about the changing social acceptance of being in/out of tune. It interested me as to the contexts in which temporal and textural discrepancies were acceptable in terms of Irish traditional music for certain groups of people within the community. Why and how did these contexts differ? While a context may be the same, could the interpretation of the individual be a factor? These social psychological questions helped form my methodology while also making me acutely aware of the sensitivities involved when approaching my informants in relation to the topic of tuning and finger related pitch discrepancies.

As a result of this experience, I suggest that while paradigms such as the 'friendship model' (Cooley, 2003) and the 'hermeneutic arc' (Ricoeur 1981, p. 164; Rice 1997, p. 115) are valuable in the interrogation of emic/etic discourse and the field, that they need to be adapted per individual relationship. Through this, we can evaluate our relationship with an informant on an individual 'arc', which in turn may prove useful in understanding the issues of the wider studied community. By using this model of multiple arcs, we can assess our progress on both a micro and macro level; micro by assessing our relationships with various individuals by means of their own individual arcs; and macro in terms of our understanding and relationship to the studied community as a whole. This very much ties into the proposed framework where the relationship of the individual with other individuals and the overall sound community are also understood in a similar fashion. Both can be viewed as singular entities, but are linked by the processes and shared values through which they interact.

Gregory Barz suggests that the key to fieldwork is interpretation (Barz, 1997). We must observe at all times, even if by means of reflection after participation in cultural activity (for example by way of a fieldnote). As Barz suggests, our challenge is to interpret our experience of culture and subsequently examine and contextualise it epistemologically according to our own values. While interpretation is the key, as Barz suggests, we must be mindful of our own identities in these interpretations, and those of others. This can be achieved by means of following Rice's phenomenological hermeneutic model which ensures an epistemologically sound method of understanding the ontological nature of 'being in the field' (Rice 1997, p. 101). Essentially, what Rice suggests is that we as scholarly researchers should also engage

in an act of ‘tuning in’ (as with musical performance experience). This is why I think this is central to my research. I bring my identities with me to this research, as a member of the sound community, and a member of multiple communities that form my musical existence and experience. I am aware of the aspects of tradition that are conceptualized with regard to the sound of Donegal fiddle music, and the breakdown of those conceptual structures with regard to the community; I’m aware of the role of the individual in the creation of their individual sound, and how that may contribute to the macro sound of the collective community; I’m aware of the politics and etiquette surrounding the issue of tuning and fingered pitch discrepancies. My role is to ‘tune in’ in as meaningful way as possible to the participants so as to better account for each of their individual musical journeys, and in turn better understand the collective sound community, because their experience will differ to mine, and it is these differences that may illuminate the research questions asked.

### **3.2 Methodology**

As outlined earlier in this thesis, a qualitative and quantitative approach to this research is employed. As can be observed through the research carried out by Alén and Proglér (1995), participatory discrepancies are not performed in a uniform fashion, rather patterns directly related to the individual are recorded, and these patterns may not be what was expected or intended by the individual performer themselves (when recorded during the interview process). Similarly, I suggest examining what members of the sound community of this sample say they do against what they actually do in recorded performance with regard to tuning and fingered pitch discrepancy could provide meaningful results, and help understand both ‘footprint’ and ‘step’ as Zargosi – Thomas suggests. The results will then be contextualised through the prism of the relevant literature presented in Chapter 1 and 2. I suggest that this approach will firmly root this research in both observational methods of ethnomusicology and academic literature directly related to the research questions.

The fieldwork for this project was undertaken between March 2012 and July 2019. 20 informants in total were selected to partake in the process. These particular informants were selected in order to represent the diversity of the fiddle community in Co. Donegal, taking into account gender, generation, geography, and performance practice experience of a desirable standard.

### 3.3 Processes of engagement with informants

Following on from the methods used by Progler and Alén (1995), I decided that that a dual approach to this research would yield the best results. Qualitative analysis was achieved by means of semi-structured interviews (Longhurst, 2003; Harrell and Bradley, 2008) with the informants. All of the informants were aware of my position as an active member of the Donegal fiddle community, as a member of the band FIDIL and within the University context (as a PhD researcher). I had met all of them in an informal setting previous to the project, so I felt that a formal, structured setting may seem somewhat unnatural, and may affect the result. Aside from this issue, as alluded to earlier, the subject of discrepancies with regard to tuning, intonation and inflection is somewhat taboo and so engagement with the topic in a more formal environment such as the University may have produced somewhat more sterile opinions on the subject. Most of the interviews had taken place in the homes of the informants, three were conducted in my own home in Donegal town, while 5 were conducted at the Highlands Hotel, Glenties.

In each interview, questions were asked from a pre-determined list of questions (presented to each informant before the interview)<sup>46</sup>. These were used to shape the interview although they were not prescriptive and a more conversational approach overall was taken. In this way, I felt a natural conversation around the topic could take place through which opinions about and personal experiences of discrepancies with regard to fiddle playing within the region could be communicated with ease. Each person was also asked to perform some pieces of music for analysis as part of the research, and tune choice was largely their own. Certain tunes emerged as popular choices early on in the interviewing of participants, for example, Miss Drummond of Perth. Where individuals were having difficulty choosing tunes to play, I suggested these tunes that were already played, while highlighting they should only play these tunes if they were comfortable playing them, and that the purpose of the research was to examine normal performance practice in relation to tuning and fingered intonational practices. I did not consider that the change of repertoire would adversely affect the outcome of this research, which was to primarily investigate whether discrepancies in tuning and fingered performance practices were apparent. This however may be an area worthy of further research, building on existing studies in the area (see Krumhansl and Kessler, 1982).

---

<sup>46</sup> A list of the predetermined questions can be found at the beginning of Appendix A

### 3.4 Selection of informants

In conducting my fieldwork for this project, I felt it was important to try to achieve as wide a sample of fiddlers as possible associated with the fiddle tradition of the county. While trying to do this, it was also important to me to try to achieve a balanced sample in terms of gender, age and region, as stated above. In terms of gender, certain issues were apparent. While there is a larger number of male performers in the county, as stated in Chapter 1, a higher number of female players are now playing in the county. However, many of these either did not meet the criteria outlined below, or declined to be a part of the project. Therefore, gender balance was achieved in as much as was possible for this particular study, but it should be noted that a larger number of female fiddlers are active in the county than are included in this sample.

It was decided that participants in this project needed to be of a particular recognized standard of fiddle performance related to the fiddle tradition of Co. Donegal in order to account for any potential discrepancies in a meaningful way. While I understand that this may in some way imply judgment as to what constitutes an authentic standard of performance relating to the tradition, this is not the case. Rather, I feel it is incumbent upon me (and integral to this study) to state that certain criteria had to be put in place to ensure that the individuals in question were held in a positive regard within the sound community, and were representative of the sound community in a meaningful way. I was also aware that a meaningful examination of all fiddle players living and dead associated with the Donegal fiddle tradition would be too large for this project, and not yield potentially meaningful results. As described in Chapter 1, I was also aware of the large number of those who regularly integrate into the sound community of Co. Donegal to partake in the fiddle tradition, as well as the diasporic relevance of some of those in that particular category. To this end, all participants in the project were required to fall within all of categories 1-3 , AND one (or all) of the other three distinct categories 4-6:

1. Each participant had to be living after 01 September 2011 (the start date of my research project).
2. Each participant must be over the age of 18 on 01 September 2011.
3. Each participant must be born in Donegal, or have one or more Donegal parent.
4. Have had their music commercially recorded/ released.

5. Have been invited to teach at various festivals/ workshops in the county.
6. Have been invited to partake in public performances (concerts) organized by Cairdeas na bhFidiléirí, Comhaltas Ceoltoirí Éireann, Earagail Arts Festival, The Frankie Kennedy Winter School, the Donegal County Arts office or any other major festival or event.

Following the application of these criteria to those active in the Donegal fiddle tradition at some level at present, 38 people were deemed eligible.<sup>47</sup> Mason (2010) states that: “Qualitative samples must be large enough to assure that most or all of the perceptions that might be important are uncovered, but at the same time if the sample is too large data becomes repetitive and, eventually, superfluous” ,while Jette et al. (2003) suggested that expert knowledge in a research area could reduce the number of participants needed in a study. Green and Thorogood (2009, p. 120) state that "the experience of most qualitative researchers is that in interview studies little that is 'new' comes out of transcripts after you have interviewed 20 or so people". I was conscious of my familiarity with the field of research, and of those who were potential candidates. I wanted to achieve the richest sample possible without reaching over-saturation of results. I was also conscious of the constraints placed on this project in terms of word count and scope, and so deemed that a sample of 20 (half of the potential population plus one) was an appropriate sample size. I felt that this number was large enough to discuss the topics to be investigated thoroughly, by a representative selection of individuals from various sub groupings and sound communities within the county. Again, reference is made to the fact that some declined to take part in this project, while an effort was also made to account for performance practices across the entire geography of the county. I have also added myself as an extra member of the sample as I meet the required criteria. Based on Proglor’s (1995) experiment using Keil as a member of the sample recording participatory discrepancies, I was curious to examine my own performance practice in relation to tuning and fingered pitch discrepancy and how my idiosyncratic perception of it tallied with an actual analysis of it.

The fiddlers who made up this sample of participants are:

---

<sup>47</sup> I engaged with various groups, individuals and literature to compile a database of active fiddlers within the county, to which I then applied the criteria. Unfortunately, a small number of regular contributors to the community fell outside this criteria, such as Dermot McLaughlin, Mick Brown and Caoimhín Mac Aoidh, but it was felt that the sample extant was still very much representative of the community, and their exclusion would not affect the result. However, they *were* interviewed so as to gain their insights on the topic (Appendix A).

Vincent Campbell, Jimmy Campbell, Peter Campbell, Tara Connaghan, Denise Boyle, Iarflíath O'Donnell, Breffni O'Donnell, Ciaran Tourish, Roisín McGrory, Thomas Strain, Martin McGinley, Melanie Houton, Mairéad Ní Mhaonaigh, Ciarán Ó Maonaigh, Danny Meehan, Dinny McLaughlin, Aisling Byrne, Damien McGeehan, Ronan Galvin and Micheál Cherry. I also included myself as an informant, where I recorded my own performance practice and subsequently analysed it using the same methodological method as the others.

### **3.5 Mapping of the county's fiddle music tradition**

Scholars conducting research on the fiddle music of Co. Donegal have re-imagined the county in different ways. Nic Suibhne (1994; 1995) for example studied in detail fiddle music from the area south of the Bluestack Mountains, and to the Rosses and Gaoth Dobhair in the west, excluding those other areas of Donegal where fiddle playing was also a common practice. In ‘Between the Jigs and the Reels’ (1994) Mac Aoidh makes the following geographic distinctions in terms of Donegal fiddle playing: The North-West, The North, Inishowen, The East, Central Donegal, South-West, and South; he also considers the travelling fiddlers<sup>48</sup> as a discrete population, transcending all the identified boundaries. Each of these areas is defined at the beginning of each chapter, giving an indication of the geographic area referred to. Systematically, a historical survey of the fiddle activity of the suggested area is given, right up to the date of publication (1994). Cairdeas na bhFidiléirí and Ronan Galvin have worked together to research historical contexts associated with fiddle music in specific areas of Donegal. This work entitled ‘A Musical Landscape’ is ongoing and is available online as an interactive map. Researchers or fiddle enthusiasts alike can click on an OS map of an area and find information on the various musicians of the area by clicking on tiles on the map that directly correspond to the dwellings of those musicians. The research has been geographically defined using the parish and townland boundaries. To date, the parishes of Glencolmcille, Kilcar and Mountcharles have been completed, but it is the intention of Cairdeas na bhFidiléirí and Galvin that this be extended eventually to cover the as many areas of the county as possible. In Inishowen, the Inishowen Traditional Music Project (ITMP) on its website classifies the local music tradition within 4 distinct areas, East,

---

<sup>48</sup> These fiddlers were members of the Irish travelling community, an indigenous minority that make up c.0.5% of the national population in Ireland. See <https://itmtrav.ie/what-is-itm/irish-travellers/> for more info on the Irish travelling community. In respect of the Donegal fiddle tradition, some of the most well respected fiddlers in the county have been travellers, including the Doherty and McConnell families. For more info on these famous fiddlers see Mac Aoidh 1994 or [www.donegalfiddle.ie](http://www.donegalfiddle.ie).

West North and South. Informally, labels associated with areas such as ‘Kilcar’, ‘Glencolmcille’ and ‘Teelin’ are frequently used to define regional pockets of fiddle playing and are generally associated with some of the most well-known fiddlers from the area, for example Francie Dearg Byrne Kilcar or James Byrne Glencolmcille (e.g. Feldman and O’Doherty, 1980; Caldwell, 2014) but in essence, as will be examined through an interrogation of the descriptive labels apparent in the Donegal fiddle community, these are not easily defined, and can have members from varied sources, both from within and outside the county. In terms of this research, such locally used labels will be referred to as appropriate due to the fact that they may be used by those in the sample with regard to the fiddle music. However, as constructive labels for use in the analysis of sonic discrepancy, they are not clearly enough defined. Therefore, I will suggest a method of mapping Donegal for the purposes of this study below, based on existing and clearly defined structures of division.

Of course the need for the division of the county geographically to account for the varied soundscape observed in the county is a further contextualization of the conversation surrounding regional style nationally. Traditional geographic categories that account for style (Such as those suggested by O’Riada (1982) and Breathnach (1971) are becoming less relevant in conversations around the complexity of traditional music as it is observed today. Instead, musicians and academics alike are eager to point to the fluidity of such labels and ‘styles’ (see Kearney, 2009, 2012, 2013; Keegan, 2010, 2011; Doherty, 2010).

### **3.5.1 Categorical division with regard to this study**

I propose mapping the fiddle music of the county to align with the municipal electoral areas present in Donegal at the time of the commencement of this study<sup>49</sup>. This creates 5 geographic areas; Donegal, Glenties, Letterkenny, Stranorlar and Inishowen. By using these clearly defined areas, I can interrogate issues of geographic variation with regard to performance and tuning practices in a clear way, while also allowing for discussion of some of the verbal geographic categories alluded to in the course of the research. Of the above

---

<sup>49</sup> These areas were changed in 2018, where the Letterkenny area was divided into Letterkenny and Milford, and Inishowen was divided into Carndonagh and Buncrana.

examples of categoric division with regard to scholarly research, I suggest that Mac Aoidh's divisions are effective in relation to the historical context of his research. However, this research deals with a general sample, where the purpose of the research is to account for the historical and contemporary context of the tradition in the fullest way possible. Conversely, using such divisions in relation to this study, with a smaller dedicated sample across the county, may not be appropriate due to the change in the numbers of fiddlers in the suggested areas in the interim 25 years, and also due to the fact that my study is scientifically based on a smaller sample, examining a specific aspect of fiddle performance. Therefore, having explicitly defined areas of comparison is an important consideration, as well as having large enough areas so as to allow for a measurable number of fiddlers from the various areas to exist.



Fig 3.0: Mapping the Donegal fiddle community (based on pre-2018 The Municipal Electoral area divisions)



### 3.6 Using 'Melodyne' as a tool for the analysis of tuning and fingered pitch discrepancy in the fiddle music of Co. Donegal

Having reviewed several options (such as industry standards like Pro Tools, Logic and Reaper) I identified the audio editing software Melodyne as the most effective tool for creating data for analysis for this project. Melodyne is a sound editing programme which specialises in resolving pitch and temporal issues. It can examine a piece of given music by means of three separate algorithms (i) Melodic, where only the perceived main melody of a piece is shown, (ii) Polyphonic, where all notes of the harmonic series are shown, and (iii) Percussive, which deals exclusively with temporal issues. Although it is primarily a tool for 'fixing' any temporal or pitch related issues, my focus was on harnessing the feature of the software that allows data to be extracted from audio recordings in its unprocessed state. This facilitates the visual representation of the tuning of a piece of music, using one of many chosen scales as a reference.<sup>50</sup>

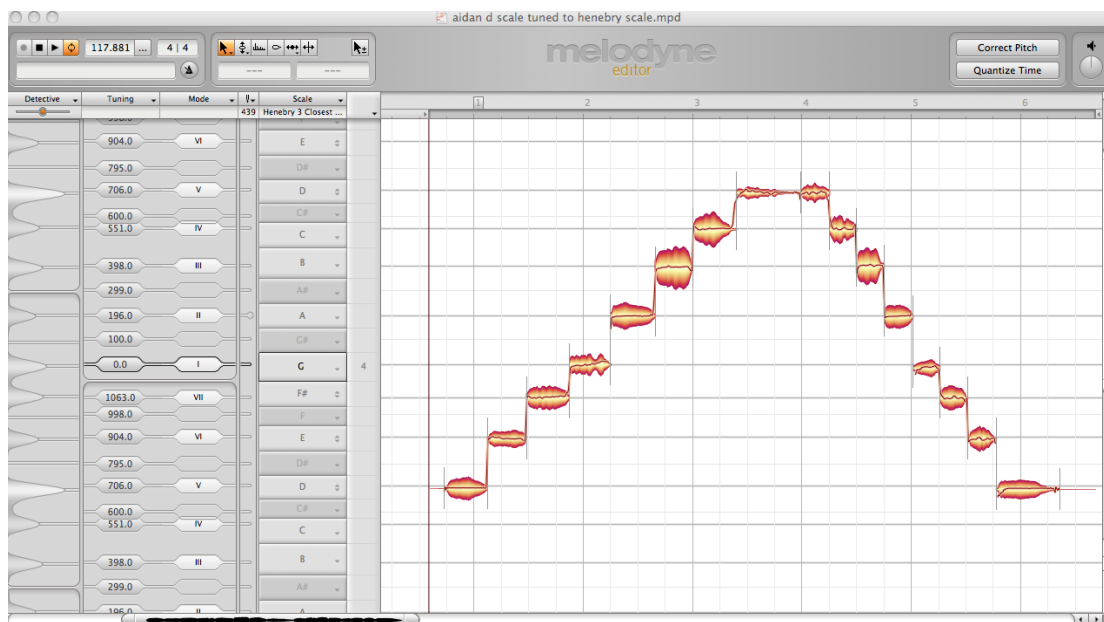


Fig 3.1 : A scale on d, tuned to a scale created by me in an attempt to recreate a proposed scale for Irish music by Dr. Richard Henebry, 1904. However, as discussed in Chapter 2, what this scale accurately sounded like is lost, and only an approximation such as this is possible.

The musical information can be presented in various ways. Melodyne generally provides a clear visual aid to highlighting all pitch and temporal discrepancies where musical notes

<sup>50</sup> In Melodyne 2.0 an 'ethnic scale and tuning' facility exists. This allows you to tune your music to Indian, African or Greek scales as well as the standard Equal Temperament. It is interesting to note that there is no 'Irish scale' suggested. It is also possible to create a scale, an example of which is above.

appear as ‘blob’-like waveforms, and based on the preferences for the grid selected (such as what key, temperament, tempo etc.) appear in relation to the lines of that grid, indicating whether a note is early/ late with regard to a selected tempo, or ‘in tune’/ ‘out of tune’ in relation to a specific key or temperament. However, there are some issues with this. The information is presented on a rolling screen and so it is laborious to keep comparing certain notes for discrepancies, especially in terms of the general form of Irish traditional music where sections are usually repeated periodically. Another issue lies with the polyphonic window, as it can prove difficult to track the melody. This window, however, shows every possible recorded note on the recording, including all detected notes of the harmonic series. The programme does have a 'venetian blinds' function which means that the editor can show less or more of these notes relating to the harmonic series. Essentially, we can pull down and up the 'blinds' like an excluder, allowing us to only focus on the spectrum of the 'tune'. An example of the polyphonic view is below.

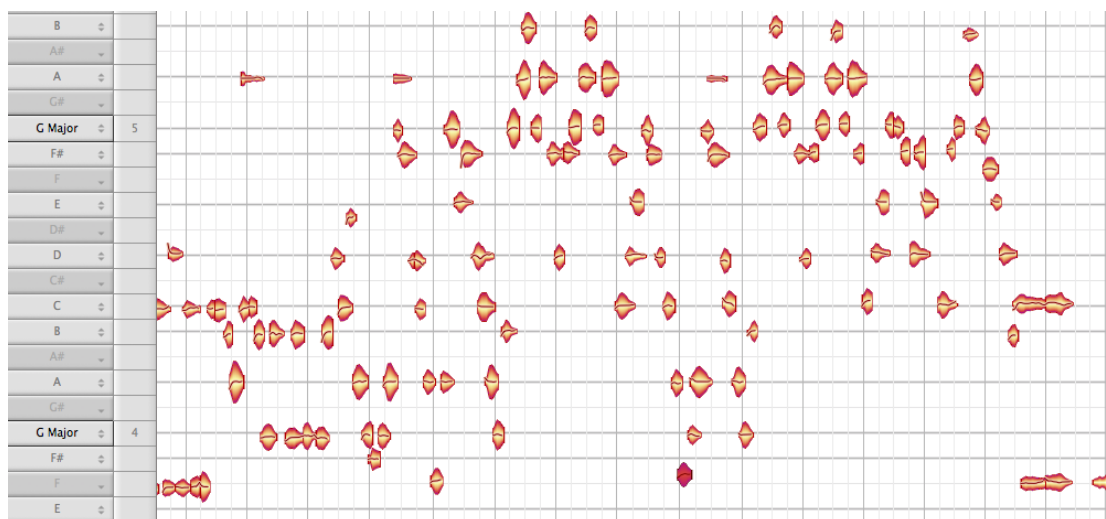


Fig. 3.2: Example of a tune in the polyphonic view in Melodyne. Note the graphic line representation.

In Melodyne, a graphic line comes from each of the notes of the selected scale on the left hand side of the display. This can also be presented as a 'keyboard' display where it is easier to see full tones and semi-tones. However, in terms of functionality for this project, the graphic line is more favourable in observing to what level a note is discrepant from a point of reference (in this case an equal tempered standard, discussed below). While this graphic line shows if a note is ‘in tune’ (i.e. it is on the line), or if a note is ‘out of tune’ (above or below the line) no value is immediately given to this note. However, Melodyne analyses each note played and from clicking on any particular note in the user window, the value of that note is

presented in a smaller window on the left hand dashboard of the screen. Notes are indicated by letter value, (A B C etc.) and the corresponding plus or minus values of Hz and cents, thus indicating if the selected note is sharp or flat according to the key and temperament selected.

I have selected to use equal temperament as my chosen temperament for the analysis of the fiddle music recorded during this fieldwork. As indicated in Chapter 2, temperaments with regard to violin performance have varied historically. However, equal temperament has become an industry standard, and is ubiquitous. Also, the purpose of this research is to investigate discrepancies with regard to tuning and finger related discrepancies in the fiddle music of Donegal, and using equal temperament as a standard measuring tool for this is acceptable practice.

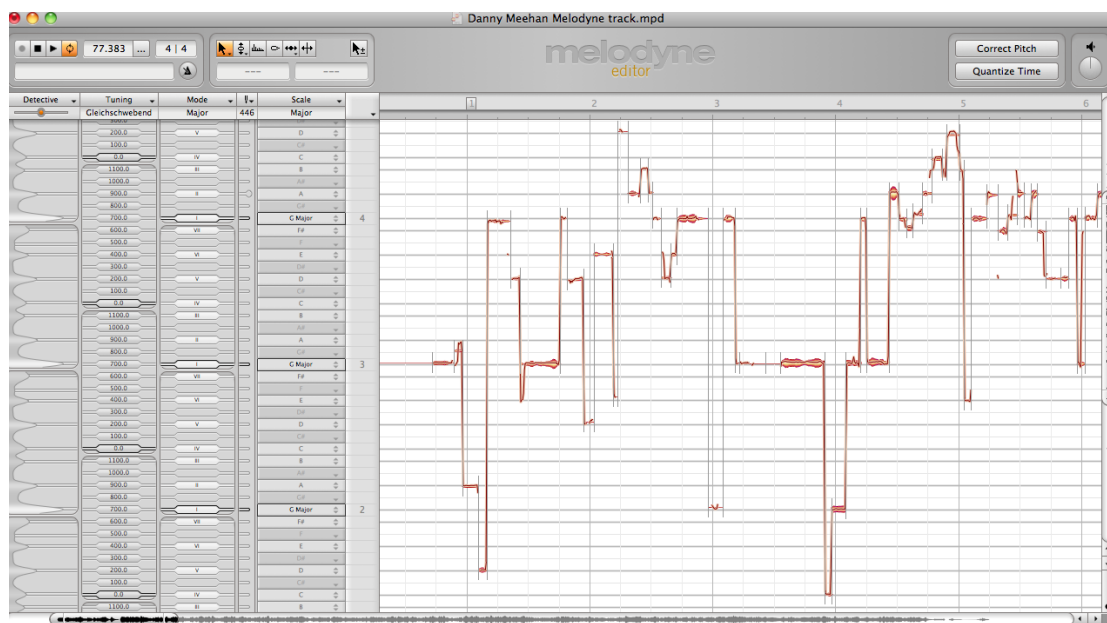


Fig. 3.3: Example of a tune as played by Danny Meehan, presented in ‘Melodic view’. Note again the graphic line representation.

I suggest that the use of technology such as Melodyne in this manner may represent a significant move forward in terms of how traditional music performance is captured and represented visually. To my knowledge, this is the first time that such software has been used to examine and analyse tuning in Irish traditional fiddle music. I suggest that this is a valuable method for examining pitch related discrepancy in music due to its accuracy in assessing the data, and its ability to account for each played note in a visually precise way, regardless of musical experience. I suggest it may prove more accessible than standard western transcription methods and the use of offsets, both visually and academically, as a musical digital description.

That said, I have provided some transcriptions to aid with the illustration of certain points in the course of the text, accompanied by the relevant extract from Melodyne. These transcriptions range from some that specifically relate to a particular motif extracted from a piece to discuss the topic, to full tune transcriptions. Transcriptions of ornamentation are used when deemed necessary, in particular in relation to ornament related fingered pitch discrepancy. Off sets are also used in these examples where necessary to aid with illustration alongside Melodyne examples.

Through the graphic analysis detailed by Melodyne, and the additional data related to the researcher about the performance (for example information regarding the attack and decay of notes and the pitch values of those notes in Hz and cents), deeper layers of performance detail are evidenced, where exact measurements of notes are observed, as well as information regarding all aspects of the temporal and textural nature of the performance. Through the use of such data, in conjunction with qualitative techniques, such as interview and contextualization within the wider body of literature, a greater understanding of the performance process is possible, as well as a more detailed image of the footprint (the musical product) of the individual performer.

The tuning-up and performance process was recorded on either a Zoom H4 recorder or where necessary, through my laptop, using the Reaper DAW programme. The audio file of each individual's tuning process was opened in the Melodyne software programme. Melodyne then analyzed each note performed and assessed if it was discrepant from the equal tempered standard for that recognised pitch value (e.g. A = 440 Hz). This analysis provided detail on the pitch values for each played note (both plucked or bowed) for analysis. Discrepant values are recorded as + or – cents (when sharper or flatter respectively), measured from an equal tempered scale. Therefore, each note graphic as it appears on the Melodyne grid represents the actual pitch value of the notes performed by those participating. This then allows for direct comparison between the individual members of the sample.

### **3.7 Conclusion**

In my opinion, the methodology presented here has many benefits in terms of the examination of the topic through fieldwork. Using already established methods and experiences in the field as related by others, my personal experiences of the studied sound community, both as a researcher and practitioner, can help form a positive springboard from

which to embark on this study. Using the framework suggested in Chapter 2, this suggested methodology has both the community and the individual at its core, and by the use of both qualitative and quantitative means, real insights can be gained into individual perceptions and the communal sonic identity. Through the use of Melodyne as a digital descriptor and the offerings from the informants themselves, we can assess the processes that form individuals into a sound community and investigate the primary research questions in a clear and valuable way.

Olavo Alén suggests that it is within the participatory discrepancy that:

“... we find the richness of musical interpretation which the performer uses to recreate, time and again, a single work that never ceases to be itself.” (1995, p. 59)

Through this use of technology, we can examine fully this richness and understand it to a far greater extent than ever before.

## Chapter 4

### Tuning in practice among a sample of Donegal fiddlers

#### 4.0 - Introduction

The specific questions detailed in this section are exclusively related to the basic standard tuning of the 4 strings of the instrument (E'A D,G,). Issues arising in relation to fingered discrepancies will be dealt with independently in Chapter 5. The primary research question is: is there a Donegal fiddle 'sound'. Here, that is explored through analyzing data around the practice of tuning the instrument. Levels of consistency and approximation in tuning practice are examined across a sample of 20 fiddlers from all but one of the electoral areas<sup>51</sup> around the county. As per the suggested framework, the individual is the primary point of investigation, however, emergent patterns are discussed in terms of both geographic and generational distribution as well as with regard to communal perceptions of the sound of the community. As stated in Chapter one, central to this research is the question of 'sound'. This chapter aims to examine the recorded data to assess these 'sounds' in an attempt to understand the role of the individual in the sonic make-up of the Donegal fiddle community.

How can we analyse any of the data recorded without firstly understanding the cognitive processes associated with pitch recognition? As discussed earlier, certain musical systems are employed by musicians to account for the spectrum of sounds associated with their musical environments, with some becoming international standards (such as equal tempered tuning, A= 440 Hz). In terms of the specific tuning of the strings of the fiddle, Kanno (2003, p. 36) states that, post the global emergence of equal temperament in the 18<sup>th</sup> century;

“ The four strings of the violin remained unchanged, having the intervals of a perfect fifth in between them. But the effect on performance practice was considerable: gone was the ritual of tuning and playing instruments to different temperaments depending on the musical and practical constraints. The wealth of musical intonation, which had inhabited the music culture throughout the history, was forced to leave the centre stage of Western composed music, in favour of the vast potential that the use of equal temperament promised”

---

<sup>51</sup> As noted in Chapter 3, no one from this electoral area met the specific criteria of this research. Some well known fiddlers do live in this area, such as Seamus McGuire and Barry McLaughlin, but unfortunately fall outside the inclusion criteria for this project.

As discussed in chapter one, the introduction of a specific equal tempered harmonic consciousness to Irish traditional music by way of the piano accompaniment used on the popular recordings of the 1920s and '30s, is one example of such a shift on a macro scale; the impact of this on fiddle players may have required them to adjust certain performance practices (relating to a developing harmonic consciousness) to assimilate with the popular performance of the day. I suggest that this may play a role in the 'sound' perceived by some of the fiddle players in the sound community of Donegal, as the advent of modern harmonic accompaniment has not bypassed the county. This will be re-examined with regard to fingered pitch discrepancies and the use of harmonic tuning, and structural tones later in chapter 5.

Therefore, certain tones came to carry more significance based on this compositional and performance context. Some research suggests that tone recognition, much like other aspects of musical experience, is based on individual musical experiences and environment, where best examples of what is accepted as 'in tune' are implicit in an individual's musical development. Van Hedger et al (2016) suggest that when assessing whether given notes are 'in tune' or 'out of tune', an implicit expected value is already assigned to a certain tone by an individual and that this is most likely as a result of 'typicality' (Rosch, 1973; Van Hedger et al. 2016), where certain examples may serve to be better than others in assessing what is or is not in tune. Hedger *et al* (2014) also shows by way of experiment that even those with absolute pitch (as opposed to relative pitch) can have their sense of pitch altered based on experience. In this instance participants were played pieces of music tuned flatter by software, and those with absolute pitch were asked to correctly identify the relevant pitches and whether they were 'in tune'. The research showed that following exposure to the flattened piece, those with absolute pitch altered their idiosyncratic perception of the notes in question to accommodate the context in question. In essence, what Van Hedger *et al* are suggesting, is that our sense of tuning is largely based on our context, our cultural realities and experience. Siegel & Siegel's work (1977) on how musicians can hear and classify tones in relation to relative pitch is of particular importance to this project. Their work centres on musicians with relative pitch, used to playing by ear, in a context that is similar to that for participants of my current research. More than 95% of Siegel & Siegel's sample was able to state whether a tone was in tune or out of tune, but could not reliably state whether a tone was sharp or flat. This suggests that tones that may be identified as in tune or out of tune, but that the tuning of those notes relies heavily on the mental interpretation of the sounds encountered.

The individual perception of the *sound* of the fiddle has emerged as a central thread in this research. I offer that the ‘sound’ of an individual may be conceptualised by them, where in their individual context, they already have a sense of where the strings of the fiddle sound right to them for the purposes of playing. This chapter presents an opportunity to observe whether evidence for such individual perception is apparent with regard to this sample of participants. It may also illuminate the relationship of individual perceptions vs. the communal perception of a Donegal fiddle ‘sound’ and illustrate how these perceptions are conceptualised.

#### **4.1 The tuning process**

This section deals exclusively with methods observed for tuning the strings of the fiddle. Other interpretations of the term ‘tuning’ in relation to the fiddle (e.g. ‘bridge tuning’, (see Curtain, 2005) are not discussed as they are solely related to the set-up of an individual instrument by a maker, and are largely outside of the control of the player. Such practices also have no discernible impact on the Hz values recorded for achieving appropriate tuning for performance, instead affecting timbral aspects of sound production.

All tuning in this sample of participants was achieved by use of a 440 Hz tuning fork as a reference tone for tuning. I brought the same tuning fork to each interview and offered it to the participant for use in tuning their instrument. Such an approach reinforced participants having the same tone as a reference, making comparison of the data recorded easier.<sup>52</sup>

#### **4.2 - Methodology – the experiment**

Each individual was asked to tune their fiddles from the moment of taking their fiddles out of their cases. This was something that I had given much consideration to. When planning my research, I pondered whether I should ask the fiddlers to completely de-tune their instruments before being asked to re-tune them. However, this is not a typical practice, nor is it typical for fiddlers to encounter such a situation when opening their instrument case. I was also conscious that to adjust the fiddles in such a dramatic fashion may alter the results negatively, as some fiddles would need time to re-settle following dramatic changes in tension and tuning. Therefore, I decided that to ask the fiddlers of the sample to tune their fiddles as they found

---

<sup>52</sup> There was one exception to this approach: Dinny McLaughlin, opted to tune his fiddle using his piano as reference, as this was his declared preference and his usual practice. In this case, following data analysis in Melodyne, it was observed that the A taken from the piano was tuned to a value of 440 Hz, the exact value of the tuning fork; based on this I accepted this as a viable alternative.



them from opening their cases, as this was most likely their typical practice and likely to cultivate more typical and positive results.

Plucking<sup>53</sup> the strings using the thumb of the right hand was the initial point of contact for most of the fiddlers in question, where the fiddle was placed standing upright, supported on the knee, facing inward toward the body.



Fig.4.1 : Plucking the fiddle with the thumb of the right hand, with the fiddle facing towards the body.

Following a period of plucking the strings, any necessary adjustments were made with the fiddle still in this position. There was no consistency in terms of time spent on this process across the cohort; nor was there any discernible pattern in the way individuals plucked the strings. For most participants, the adjustments were made using the fine tuners of the fiddle. Following this the fiddle was lifted up and positioned under the chin in typical performance position and the strings sounded out using the bow. It is interesting to note that during this tuning process, the majority of fiddlers continued to make adjustments once the bow was engaged and the fiddle positioned under the chin; basically the tuning achieved through plucking was not the final tuning settled on. I queried why plucking was utilized at all since it seemed merely a pre-cursor to tuning achieved with the bow. I suggest that this is habitual, and in some way embodied as practice in the tradition. In my experience as a fiddler, and from

---

<sup>53</sup> To sound (the strings of an instrument) by pulling and releasing them with the fingers or a plectrum. See <https://www.thefreedictionary.com/plucking>

discussions with others, plucking as a means of primary reference such as is observed here is used to get the intervals of the strings of the fiddle to a value that is close to correct, and that subsequent fine adjustments are then made using the fine tuners after trial by the bow. Therefore, a two step process is apparent, using the plucking of strings to achieve an approximation of the intervals between the open strings, while the use of the bow is an act of fine tuning those approximations (if needed).

While tuning using the bow on the fiddle, most participants sounded a single string or the open double stopped strings in question (e.g. A and D strings) before stopping sound production with the bow, making adjustments with the fine tuners using the bow hand while still holding the bow and then trialing the newly adjusted strings.

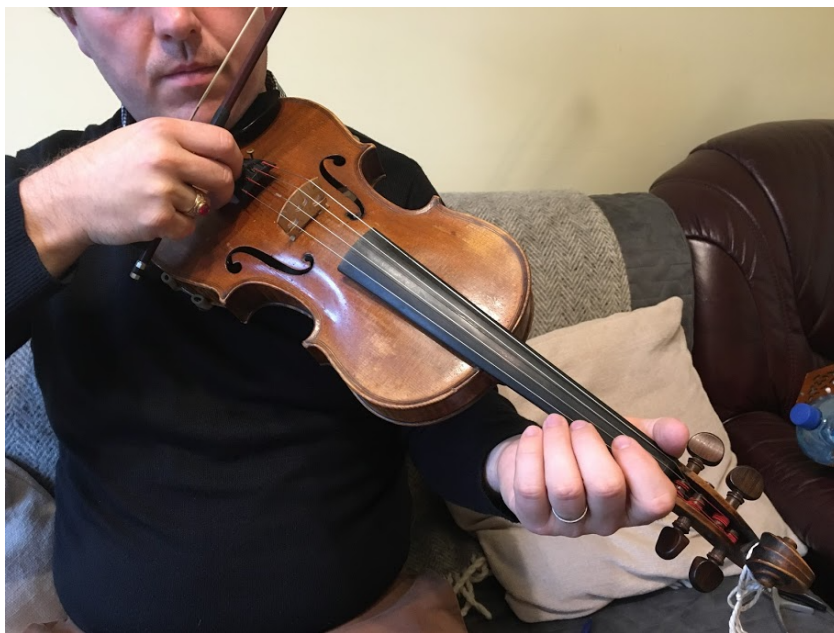


Fig 4.2: Adjustment of the fine tuners using the right hand (bow hand) with holding the bow

This process was repeated until each individual attained the values for the strings that they were satisfied with. There was one exception to this. Ciarán Ó Maonaigh has 4 geared pegs known as plenatary pegs fitted to his fiddle (discussed in more detail in 4.3), and therefore in his case, fine tuning was achieved by adjusting those pegs which are set into the pegbox of the fiddle with the left hand, while simultaneously bowing the strings of the fiddle with the right hand. He therefore does not use the 2 step process outlined above, rather tuning using the bow is one continuous sonic process.



Fig 4.3: An example of a 'Planetary Peg'. Pic from violinist.com see <https://www.violinist.com/blog/crslack/20168/19670/> (accessed 27/05/19)

### 4.3 Processes of Tuning - Pegs vs. Fine tuners

In terms of this sample of 20 participants, 82% used the fitted fine tuners on the tailpiece of the fiddle to tune the instrument. In Irish traditional music, it is usual that fiddle players have 4 of these fitted on the tailpiece, one for each corresponding string. This is in direct contrast to the accepted practice of classical violinists, who generally adopt the use of just one fine tuner, often corresponding to the E string only<sup>54</sup>. This suggests a collective practical importance associated with the ability to perform minute tonal adjustments on the fiddle for traditional music performance. I suggest that this practice is an embodiment of the mental need for tuning of the fiddle to be flexible to tune to context (for example fixed pitch instruments such as accordion or pipes). Only 3 participants chose to use the tuning pegs of the fiddle to tune the instrument, 2 of whom subsequently used the fine tuners for the final adjustments. Therefore it is demonstrated that for the majority of the sample, fine tuners were the preferred tool in achieving the most accurate tuning values possible. Only 1 participant did not have all 4 fine tuners fitted to the fiddle. Tara Connaghan had one fine tuner fitted to the E string and indicated that this was a personal preference, stating that she had previously used them but had them removed. In her specific case 'fine' tuning was adjusted by applying pressure to the relevant string above the nut of the fiddle with the index finger, or by the same method between the bridge and the tailpiece.

---

<sup>54</sup> This thread at <https://www.violinist.com/discussion/archive/13401/> (accessed 20/06/20) discusses the reasons for this, including the use of gut vs. steel strings.



Fig. 4.4: Example of tuning the strings by pressing the finger on the relevant string at the nut of the fiddle.

She suggested that if fine tuners were still fitted to the fiddle that tuning could have been more “perfect”. However, in her opinion, the pursuit of perfection in terms of tuning is futile due to its infinite nature in terms of the harmonic series (Appendix A, Tara Connaghan interview). This is a reference to the harmonics sounded by the fiddle as part of the harmonic series which, to many, are inaudible and of little consequence. This suggests that Connaghan has a high awareness of tuning accuracy with regard to her own personal sound, but it is interesting that ‘perfect’ tuning is sacrificed to achieve a better sound quality from the instrument in terms of tone (by having less external points of contact on the fiddle which would soak up the vibrations of the fiddle, such as the extra fine tuners). Connaghan’s reference to this is particularly interesting with regard to the question of individual sounds associated with tuning and whether sound communities may have tuning patterns associated with the production of a sound. This is discussed later in section 4.8.3.

As noted earlier, one participant (Ciarán Ó Maonaigh) had fitted his fiddle with planetary geared pegs, which work via a system much like the tuning pegs fitted to a guitar. Instead of the usual frictional jerking motion of traditional pegs, that offer an approximation with regard to tuning, the geared peg allows the practitioner to achieve the exact values desired for a given string, largely making fine tuners redundant. This is not in common use within Irish traditional music, as evidenced by this representative sample of fiddlers within the Donegal fiddle tradition alone. One interesting insight into such technological advances is Tom Stewart’s

(2018) article in The Strad magazine<sup>55</sup>, where it is suggested that the use of geared pegs by luthiers has been met with mixed reviews. As part of that discourse Stewart also highlights the issues that can arise from the use of fine tuners with regard to the tone of the fiddle, indicating that a less brilliant tone is apparent when fine tuners are fitted. Such insights are of interest to the Donegal question, and the Irish fiddle question generally, where fine tuners are still for the most part fitted as standard, and subsequently with regard to our western art music colleagues, where the use of fine tuners is generally restricted to the E' String but similarly, the use of geared pegs seems to be uncommon. It could also be the case that these pegs are a relatively new invention, and therefore may still not be present within the playing public in a significant way because of that very fact. In time, they may prove to be a significant contribution to the tuning of the instrument.

#### **4.4 Methods of tuning the fiddle - plucking vs. bowing the strings**

My research reveals that plucking is the common method employed at the start of the tuning process with 85% of the fiddlers of the sample of participants beginning to tune their instrument in this manner. Strings are plucked in isolation, with the thumb of the right hand and as part of a relative harmonic interval with other strings (e.g. the D string followed by the A string in quick succession. The point on the string where the plucking happens varies depending on how the fiddle is being held by the individual player. This has no discernible effect in relation to the recorded Hz values for the sounded string. However, only 1 of the fiddlers in the sample used plucked strings as the sole means of achieving satisfactory tuning. Instead, the majority of fiddlers go through the process of tuning using the plucking method but then follow this by engaging the bow and using this bowed method to make the final adjustments. When bowing the strings, individuals typically achieve what they deem as the appropriate intervals between the strings by playing each string individually, followed by open double stopped chords between each of the strings, sounding an interval of a 5th (e.g. the A and E' strings, D and A strings or the G, and D strings). Fine adjustments are made to these strings to varying degrees according to what is deemed appropriate by the individual in question. This can either be achieved by sounding the strings with the bow, stopping bowing and subsequently adjusting the fine tuners, or adjusting the fine tuners while bowing continuously.

---

<sup>55</sup> Article can be found at <https://www.thestrad.com/lutherie/geared-pegs-why-isnt-everyone-using-them/7862.article>



Fig. 4.5: Adjusting the fine tuners while bowing the strings of the fiddle simultaneously

A discussion of the values recorded in this process and their relationship to some contextual tuning systems is discussed in 4.8

#### **4.5 The Bow – Grip, Pressure and direction**

The bow is used in common performance practice in Irish traditional fiddle music, and subsequently Donegal fiddle music. The use of pizzicato (plucking) is not common, outside of its use in an arrangement capacity (by bands such as FIDIL) or employed as left hand pizzicato used in some exhibition pieces, such as ‘La Messe’<sup>56</sup>, commonly known as ‘The Postman’s knock’ as played by John Doherty, for example. When using the bow, pressure and friction are applied to the string which is not present when plucking. Therefore, using the bow should relate to a more accurate representation of the required tuning values to analyse standard performance practice. Since where an individual grips the bow is the primary point of contact between the player and that particular part of the instrument, issues regarding pitch deviation and grip are dealt with first, followed by the related issues of bow velocity (direction) and pressure on the string, and how they may relate to tuning discrepancy.

##### **4.5.1 Bow Grip**

For the most part, bow grip in Irish traditional fiddle music is constant with the general accepted practices of violin playing worldwide. Pedagogical literature on the subject of Irish

---

<sup>56</sup> Composed by Scottish fiddler James Scott Skinner (1843- 1927). See <https://www.abdn.ac.uk/scottskinner/>

traditional fiddle music points to this same fact. Clear examples (and instruction) of bow grip can be found in popular tutor books by some of Ireland's best known fiddle players including Tommy Peoples<sup>57</sup> 'Ó Am go hAm – From Time to Time: Tutor, Text and Tunes' (2015) and Matt Crannitch's 'The Irish Fiddle Book' (2001). However, grip is not a wholly standardised practice, and therefore some difference can be noted around in this throughout the traditional fiddling community. Of the entire sample of participants recorded in this research, only one exhibited a bow grip that was discrepant from a conventional bow grip. This was Mairead Ní Mhaonaigh. Her grip is higher (i.e. closer to the top) on the bow than the conventional bow grip used by the others in this sample. She also makes reference to this grip as part of her interview, suggesting that it was something that she developed as a means of forging her own musical identity in contrast to that of her father, who had instructed her to hold the bow in the conventional manner (Appendix A, Mairéad Ní Mhaonaigh interview).



Fig 4.6: Picture highlighting the difference between the position of grip on the bow used by Mairéad Ní Mhaonaigh compared to the more standard position of grip used by Altan bandmate Ciaran Tourish. (pic from <http://www.standingstones.com/mairead.html> (accessed 27/05/19))

Research suggests that distance of bow grip measured from the pearl eye situated on the frog in the bow can be directly related to changes in bow velocity and pressure (Askenfelt 1995 pp. 26, 27; 2013)<sup>58</sup>. Askenfelt suggests that more control over downward bow force is related to where on the bow your grip is, i.e. more control over force at the bottom and middle of the

---

<sup>57</sup> From St. Johnston, Co. Donegal (1948 - 2018) See <http://www.tommypeoples.ie/>

<sup>58</sup> See [https://www.youtube.com/watch?v=Og\\_V4PkrMEQ](https://www.youtube.com/watch?v=Og_V4PkrMEQ) for a full lecture presentation on this.

bow if you have a conventional bow grip, where as more control of over the tip of the bow is present when playing with a grip closer to the top of the bow.

I suggest that this is related to Lyth’s (1981; 2013) observation of bow weight as a means of emphasising certain passages rhythmically in the performance of Irish traditional music, where downward force is suggested to act as a means of identifying and emphasizing sonically and rhythmically such important passages. While this section deals exclusively with the primary tuning process and not full performance practice, it is still important to observe examples where both bow weight and bow direction may have an effect on the values recorded.

As part of their tuning processes, both Mícheál Cherry and Máireád Ní Mhaonaigh exhibited such discrepancies. With regard to Cherry, following a primary brief period of plucking the A string, it was played in unison with the E string using the bow. Upon examination of the subsequent 6 successive bows, issues concerning bow movement in relation to pitch adjustment of the open string in the tuning process became apparent. The following table illustrates the values recorded for the A and E strings across 6 bow strokes as played by Mícheál Cherry.

A (+/- Cents)	+11	+7	+14	+15	+9	+11
Point of Reference is 0	0	0	0	0	0	0
E (+/- Cents)	+12	+11	+18	+17	+11	+11

Table 4.1: Values recorded for the 6 successive bows discussed above as played by Cherry

No external adjustments were made to the strings by Cherry and pitch deviation was consistent with bow stroke direction. A pattern is clear where, in particular, the A string sharpens and flattens in direct correlation with the changing direction of a bow stroke. This is similar to values observed during Máireád Ní Mhaonaigh’s tuning process, where of note were discrepancies recorded during occasions of two successive open double stops with the bow, in



particular with regard to the use of the D and A strings, where values were flattened during the second bow stroke.

A	-11	<b>-13</b>	-13	<b>-17</b>	-12	<b>-16</b>
Point of Reference is 0	0	0	0	0	0	0
D	-13	<b>-18</b>	-12	<b>-17</b>	-12	<b>-16</b>

Table 4.2: Table highlighting the discrepancies (in bold) associated with change in bow direction

I observed that the values indicated that the increment of change in values is not always consistent when the changes on both strings are compared. Again, while other factors associated with the bow discussed in section 4.5.3 may be present (in particular with regard to bow pressure in an open double stop), I suggest that it is important to observe in the pattern that deviations in recorded Hz values are directly related to changes in bow direction. While this is a significant observation, I suggest that more research is necessary to examine the extent of the influence directly attributable to grip and / or bow direction independently, and the relationship one may have on the other.

#### 4.5.2 Bow Pressure

Variance in bow pressure is difficult to record and evaluate. There are various considerations regarding this, for example, the point of contact of the bow upon the strings at a given time may have a bearing on discrepant values of open strings. This is as a result of three factors, individually associated with the topic of bow tension and pressure. These are (1) the fact that the tension at the top and bottom of every bow is greater than in the middle (2) This tension is set by the individual player as a personal choice, and therefore variable from player to player and likely from performance to performance of the individual too and (3) the downward pressure exerted by the player using the index finger on the bow, which may be conscious or sub conscious. Concerning the tension being greater at the top and bottom of every bow, this is due to advancements in the modern bow from the baroque equivalent, where sound production, loudness and tone are controlled in an easier fashion due to the fact that the bow bends away from the string at both the top and the bottom of the bow (where the areas of extra

tension lie).<sup>59</sup> The tension at a point is directly related to the amount of tension deemed appropriate and employed by each individual as part of their unique performance practice by turning the screw to adjust the frog. If a performer employs more tension between the stick and the hair of the bow in this way, this may have an influence on the tuned values of a given note. This also affects the pressure placed downward on the bow by the individual player themselves. This pressure is applied in a conventional bow grip using the index finger. No academic study of Irish traditional fiddle music to date discusses whether there is an approximate appropriate force to be used in performance practice. Instead, this concept is fluid and open to interpretation by each individual and can change by way of mood, context, or according to the demands of a particular piece. It should also be considered whether an accurate value of such tension can be measured by a player each time they play the instrument, considering they have to loosen their bow each time they pack away their instrument, thus starting each time they play with a slight variance in tension in the bow from before. I suggest that this highlights that the downward pressure applied by the index finger of the bow hand by the player must be extremely sensitive and reactive to allow for adjustments to the sonic properties of any and all notes played in real time.

Unfortunately, little conversation on the subject of the influence of bowing on variation in pitch has been generated in academic literature. However, there are recent offerings that deal with gesture analysis of bowing technique specifically focusing on bow velocities. These use computer generated results (for example, by using robotic 'bow machines' Askenfelt, 1995), and the information captured reveals detail around the impact of bow use on the produced tone (Rasaminanana et al. 2005; Casado, 2017; Cook, 2017). Other studies on bow-related affects on the sound produced by the fiddle include Askenfelt (1995, pp. 26, 27), who presents data that suggests that the grip, specifically the location of the grip (i.e. where the player grips the bow in relation to the pearl eye situated on the frog) can be directly related to changes in bow velocity and pressure.

It is sufficient for this study to state that, as evidenced through the fieldwork conducted, the bow has a definite effect on the tuning discrepancies of the strings of the fiddle. Evidence to support this is outlined below. As such, this research represents the first time that the impact

---

<sup>59</sup> See <http://newt.phys.unsw.edu.au/jw/Bows.html> for more on the basics of the bow string relationship.

of the bow in contributing to individual tuning practices has been presented within the conversation around Irish traditional music. However, it is difficult (and beyond the scope of this research) to quantify the exact value of bow related discrepancy in terms of the performance practice of the participants. I suggest that further research directly focused on the impact of the bow on the sound of traditional Irish fiddle music, using the data cultivated in this research as a springboard/starting point, would be extremely valuable. Such a study could examine issues such as individual technique, postural/physical factors, pedagogical instruction around bowing technique, and the experiential nature of the embodiment of certain sound communities (i.e. issues of identity associated with the membership of an individual to a certain sound community or multiple ones, using the bow as a means to tune in or out of a particular sound) in a dedicated fashion.

Evidence has emerged from this research that open strings, when bowed, can in fact be susceptible to fluctuations in pitch. However, it is difficult to present exact data with regard to the exact number of participants for whom this is an issue. This is due to the fact that without the use of some kind of measurement device to record the pressure used for each bow stroke by an individual, coupled with the variance in tension in the bow employed by the player, it is difficult to provide a great level of detail around each individual bow stroke. However, this research *does* highlight that significant levels of variation/individual interpretation do occur, and so examples of such occurrence are highlighted and discussed.

A fact emerging from the data analysis suggests that individuality is a key consideration in any analysis of pitch variance regarding the affect of the bow. Bowing is a key component of style in Irish traditional music (Vallely 2011, p. 258; Lyth 2013 ). This view is supported according to some members of this sample, and dependent on the context, they suggest that it is an aspect of traditional fiddle playing that is important in Donegal, and one that is central to a Donegal sound. In particular, with regard to the performance context of the house dances, both Vincent Campbell and Jimmy Campbell make reference to the importance of a player's bowhand in communicating the correct rhythm to a dancer.

“Dancers claimed...and my father often said it...if we copied a tune from down the country, and it would be a lovely tune but it would be a little bit slow for dancing...and my father often said “Don't be learning them tunes for dancing because they'll be too slow...and you'll get no one to dance for yis...In parts of Ireland they played it more

for something to listen to than to dance to...If you were somewhere for a night and there was a fiddle player there...the first thing my father would ask ya “What kind of a bow hand had he?” and if you said “Ah...it wasn’t great” he would say “Ah well, forget about that so! If they hear then that the bowhand and the man was, he a good lively player, that was ok...he passed his exam!”

(Appendix A, Vincent Campbell interview)

This highlights the significance of an individual’s use of the bow in terms of achieving the correct sound for dancing, appropriate for the immediate local environment. It also places importance on achieving a sound *of the locality* or a *Donegal sound* deemed separate from that from another region in Ireland. This suggests that the bow *is* an integral part of achieving an authentic sound as identified by the sound community, and that it conveyed something to the dancers who heard and responded to the music. This is directly relatable to Kaminsky’s assertion that sonic cues for dancing can be attained from the mechanical nature of fiddle playing, in particular with the energy used in bowing (2014, p. 53).

In considering bowing as an integral part of both the sound of the community and the sound of the individual within that community, it is made clear that individual techniques and processes are central to any variations in tuning of the open strings. Therefore, examining individual cases where such variation was apparent was explored further.

When Vincent Campbell tunes the fiddle it is clear to observe the difference that bowing a string vs plucking a string has on the pitch values recorded. When plucking the strings, an emphasis was placed on the E’ and A string, each plucked 10 times in succession with the D, string ringing out in a sympathetic fashion. It (the D, string) was plucked once at the end of the plucked tuning process. At no stage was the G, string plucked during tuning. No adjustments were made during plucked tuning. Following this initial period of plucking the strings to tune his instrument the pitch values are recorded as follows: (recorded in cents Hz Equal tempered standard – measured from a base value of 0 as per the indicated correct value for the equal tempered note identified by Melodyne) E’ = -11 cents, A = - 3 cents and D, = - 30 cents. The bow is then used to sound the strings of the fiddle. During this stage of the process, Vincent placed emphasis on the A and D, strings, playing them in unison and 10 times in succession. Following 8 bowed open double stops an adjustment was made to the D, string using the fine tuners, tuning it down by 3 cents (D, = - 33 cents). This process was reiterated on the D, and

G, strings, with each played 3 times in succession in that order. An adjustment was made to the G, string after the first draw of the bow with the fine tuner, from G, = -29 cents to G, = -9 cents. The fiddle player's response and the level of adjustment made indicates an acute sense of tonal awareness. The E string is played only once during the tuning process. It is played as a single open note preceded and followed directly by the already tuned A note.

Pitch values recorded after the completed tuning process by Campbell were:

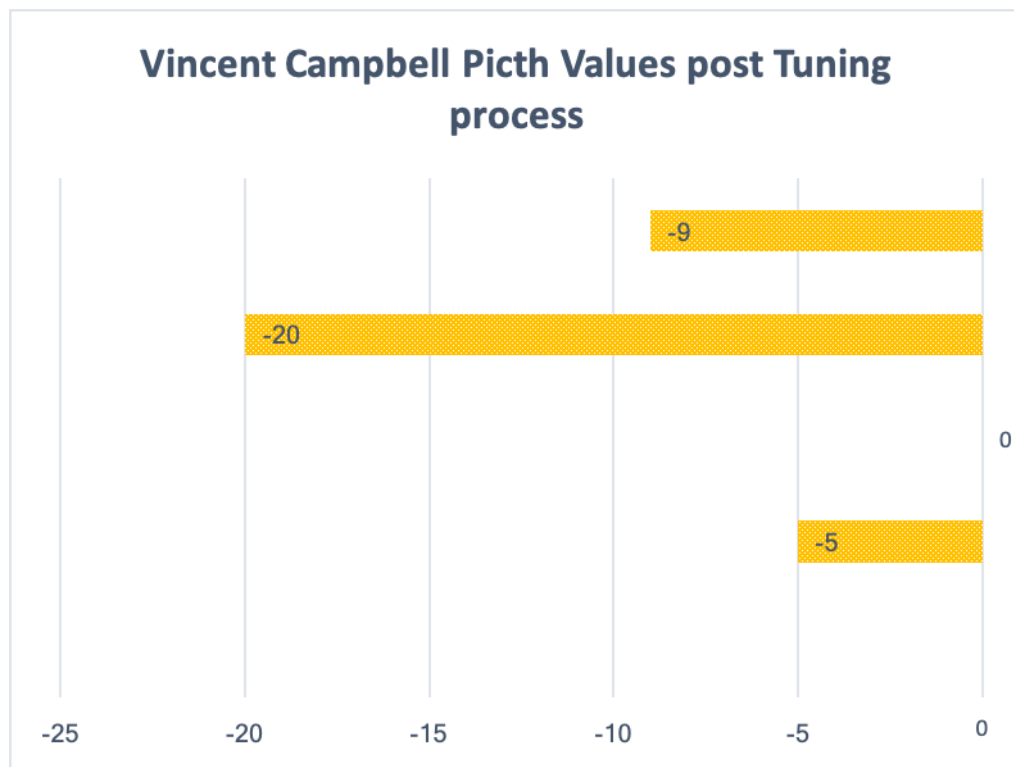


Fig. 4.7: Vincent Campbell pitch values post tuning

A comparison with the tuning values that Campbell settled on using plucking reveals the following discrepancies

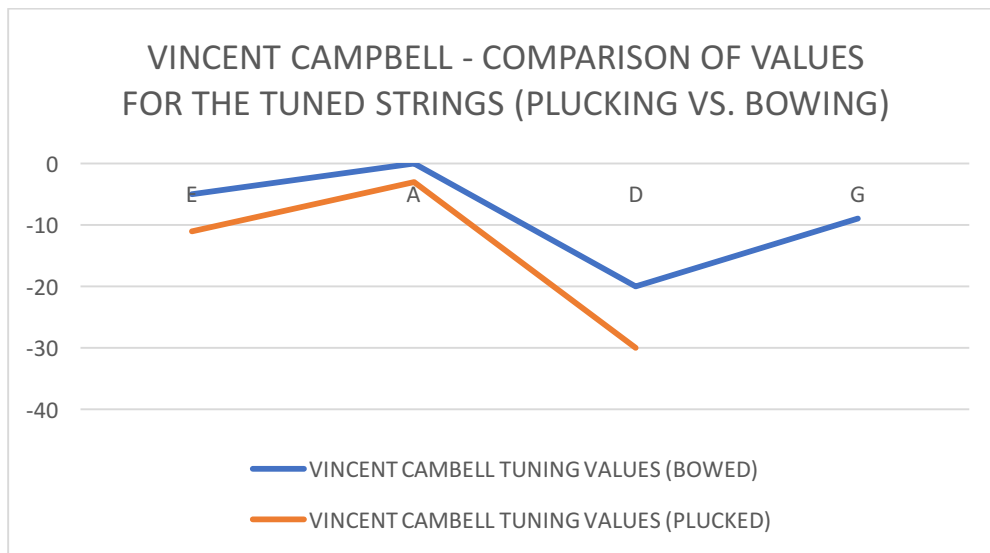


Fig. 4.8 : Comparison of Vincent Cmapbell's tuning values (plucked vs. bowed)

For example, the A string changed from a value of  $-3$  cents while plucked to a value of  $0$  cents while bowed, a change of  $3$  cents. The D, string changed from a value of  $-30$  cents to a value of  $-20$  cents, following an adjustment downward of  $3$  cents by Vincent. This relates to a difference of  $13$  cents from plucked values to bowed values. This suggests that the bow contributes to the pitch varying in terms of its affect apparent on each individual string.

Damien McGeehan's practice of tuning further demonstrates how the use of the bow, specifically variances in bow pressure, contributes to changes in the pitch properties. McGeehan begins by plucking the A string after taking reference from the supplied tuning fork, then subsequently bows the note, without making further adjustment. The note sharpens from a value of  $-4$  cents to  $0$  cents when the bow is used. At the end of his tuning process, McGeehan plays each string individually, and subsequently, each pair of open double stopped strings across the fiddle (A and E', A and D, and D, and G,).

Of interest to this section is the variance in values recorded by McGeehan when bowing the strings during tuning to an electronic tuner (discussed in 4.10), where discrepant values are observed without the use of any external force of change other than the bow. The values (in cents) for the strings of Damien's fiddle post tuning in that context were as follows:

E'	+3	-1	+2	+4	-2	-1	-9	-1	+2
A	+1	0	-4	0					
D,	+4	0	+4	+3					
G,	+3	+4	+1						

Table 4.3: Tuning values for Damien McGeehan, highlighting the bow as a factor of change

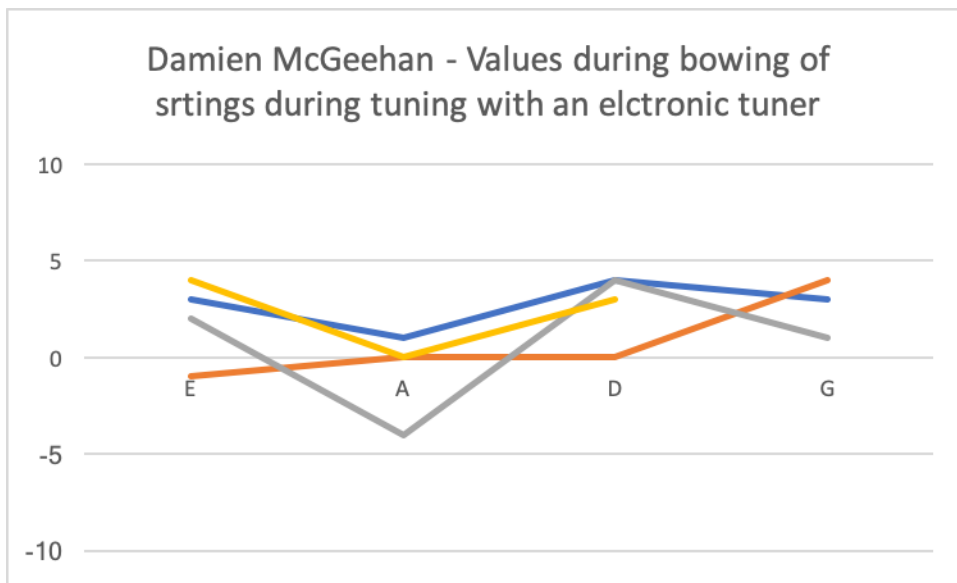


Fig. 4.9: Damien McGeehan's tuning values during bowing the strings (while using an electronic tuner). Again, bow pressure is observed to have been a significant factor in the variation of values recorded, as no other outside adjustments were made to the fiddle during this trial.

Upon receiving a reference tone of A from the supplied tuning fork, Martin McGinley engaged in a practice of tuning the fiddle with the bow only, without the use of plucking. In this respect he was the only fiddle player involved in the experiment to approach the tuning process in this way. His initial bowing of the fiddle clearly highlights how excessive pressure applied from the bow can also affect the tuning values of a given note. For example, he bows the A string four times in succession; the values fluctuate from +0, -1, -38, -1 cents. The bending of this string to cause such deviation from the normal approximate performance value of this note is also clearly visible in the appropriate digital description taken from the Melodyne software below.

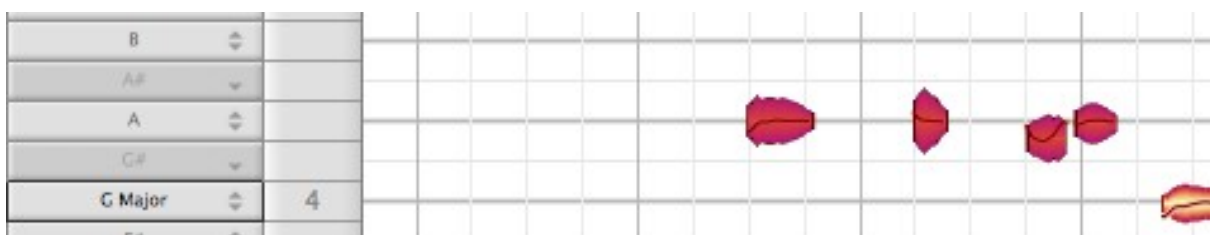


Fig. 4.10: Example of the role of excessive bow pressure in discrepant tuning of the open A string.

An example of changes in pressure can also be observed with regard to the tuning of the D, string, where values range from -3 to -6 cents before dipping to a value of -19 cents for one note only.



Fig. 4.11: Further example of bow pressure as a factor in discrepant tuning, this time in terms of the open A string.

It is interesting to note that extreme discrepancies such as those observed above *are not* recorded again as part of either McGinley’s tuning process or performance practice. Again, this suggests that more research is necessary with regard to this aspect of bow pressure, as factors such as mood, warming up, and context may play role in assessing the specific differences.

#### 4.5.2.1 Examples of the relationship between bow pressure and open double stops.<sup>60</sup>

Some variance in pitch values were observed with regard to the use of open double stopped strings compared to their single string equivalents when tuning the fiddle. Again, while this was not easily observable in the majority of cases, a number of examples were evidenced. It is suggested that the use of technological measurement devices to record the balance of pressure on the strings of the fiddle would be of huge importance when trying to obtain exact measurements on a note for note / bow stroke for bow stroke basis for each individual participant, but unfortunately this falls outside the capabilities of this research.

One such example where this research highlights the presence of such an effect of bow pressure on the open double stopped strings is in the practice of Damien McGeehan. Values (in cents) for McGeehan’s fiddle post tuning process<sup>61</sup> were as follows:

<sup>60</sup> In fiddle terminology, ‘open double stop’ refer to the sounding of two open strings simultaneously, as opposed to a ‘fingered double stop’, which refers to the sounding of two strings simultaneously where one or more fingers are placed on the played strings to achieve the desired effect.

<sup>61</sup> By ear, as opposed to use of an electronic tuner – which was used by McGeehan by way of trialling whether a tuner would deem his individual ‘sense of tuning’ ‘in tune’ – discussed later in 4.10.



	Bowed singly	Bowed in open double stop
E'	+2	0
A	+7	+3
D <sub>2</sub>	+8	+3
G <sub>2</sub>	+2	+2

Table 4.4: Tuning values recorded for Damien McGeehan. Note the difference between values for strings bowed singly compared to their open double stopped equivalent.

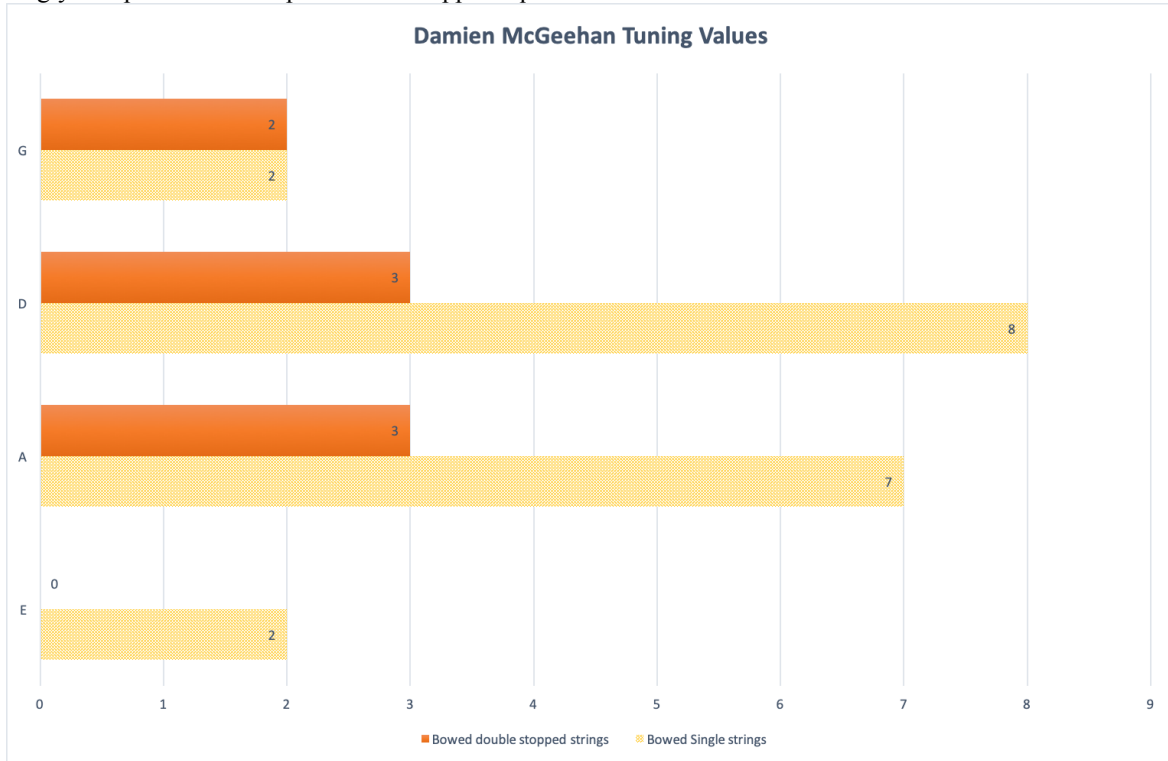


Fig. 4.12: Pitch values for Damien McGeehan's tuning process, highlighting the comparison in values between open double stopped and singly bowed strings.

Note that in most instances (i.e. 3 of the 4 strings played) the double stopped value is lower, but not by a consistent value. This measurement highlights the affect that bow pressure may have on tonal discrepancies as a whole, and issues that arise in terms of their measurement. McGeehan makes reference to this fact during the course of the interview (Appendix A, Damien McGeehan interview).

Similar data emerges from the analysis of Iarfhlaith O'Donnell's tuning practice where a comparison of the tuning values (in cents) of the open strings when played singly as opposed to in pairs is as follows:

	Bowed singly	Bowed in open double stop
E'	-3	-4
A	-10	-12
D <sub>2</sub>	-8	-10
G <sub>2</sub>	-7	-2

Table 4.5: Tuning values recorded for Iarfhlaith O'Donnell. Note the difference between values for strings bowed singly compared to their open double stopped equivalent.

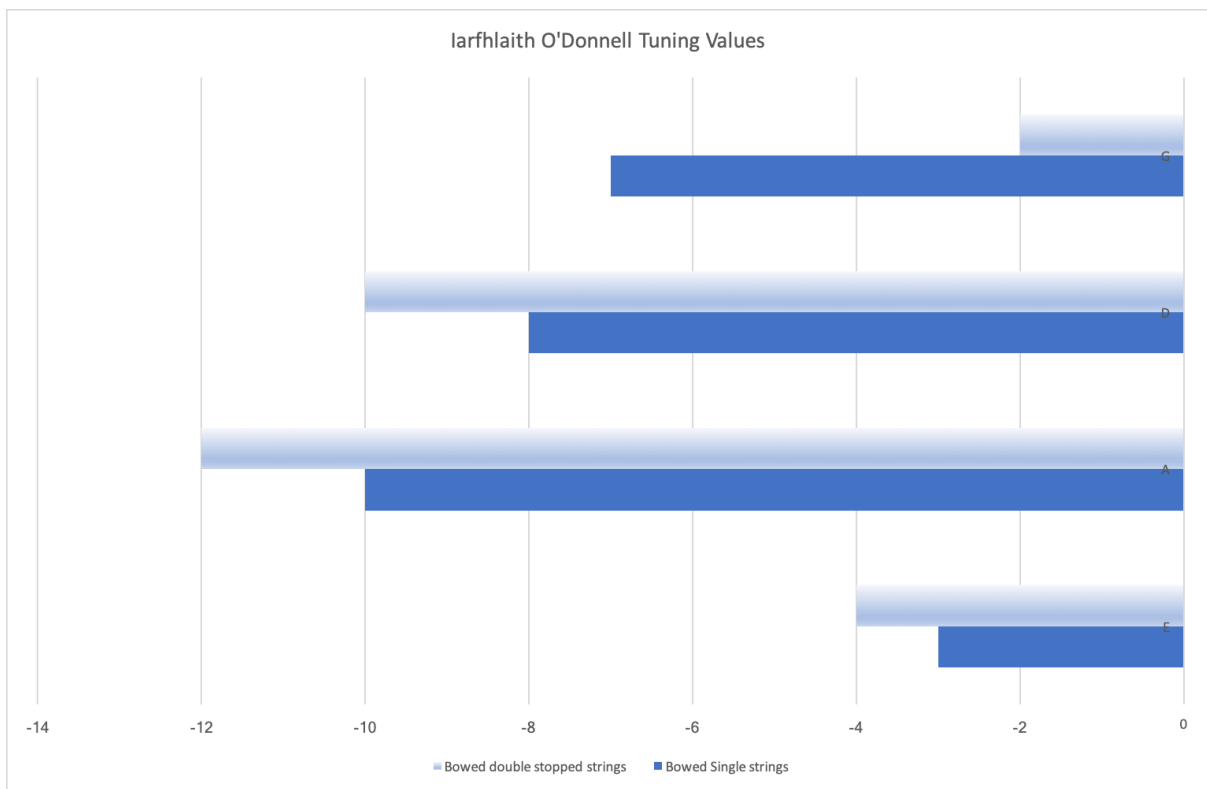


Fig 4.13: Iarfhlaith O'Donnell's tuning values

Again, a pattern emerges where strings played as part of an open double stop are recorded to have a flatter value than those played singly.

#### 4.5.2.2 Conclusion

In my opinion, evaluating the use of the bow in tuning is an important consideration. As outlined above there is compelling evidence to suggest that bow pressure is a contributing factor in terms of pitch discrepancies of the open fiddle strings. It is observed that the bow may affect the tuning of the strings in a slightly different way when playing a note singly (on its own) or as part of an open double stop term (e.g. A and E'). It has been noted that in such a situation, the values of double stopped strings typically have a flatter cent values than those of a singly bowed equivalent. I suggest that it is logical that this is a direct result of the pressure of the bow being distributed over two strings rather than one.

It was also observed that the discrepancies recorded are not uniform, neither with regard to an individual's practice or in contrast to others. If we examine McGeehan's practice of bowing an A string repeatedly in succession in contrast to that of Martin McGinley, we observe an

immediate difference. McGeehan's values are within a range of 13 cents where most occur within the values of +4 cents and - 2 cents, with one note only played as -9 cents, and are all deemed 'in tune' by way of an electronic tuning app. McGinley's values are within a range of 38 cents, where of the four notes played, 3 are within a cent of each other, with one recorded as -38 cents. Observing a cause for such discrepancy is more difficult, particularly as a result of the individual nature of bow related issues discussed earlier. However, it is suggested that bow tension may be offered as one cause for such discrepancy. I suggest that such discrepancy occurs not as a result of the application of pressure with the bow but the release of downward pressure of the bow by the performer. This is logical, as any downward pressure on the string serves to elongate the string and subsequently sharpen it, much like the bending of guitar strings in popular modern performance. This pressure/ release of pressure is likely a subconscious element of the tuning process. Furthermore, results observed in this data sample suggest that individuals can reference a plucked string with a flattened value as 'in tune', and that when the said string is played with the bow, it *will* be in tune with the given reference tone of 440 Hz. Both Vincent Campbell and Damien McGeehan tuned their A strings to - 3 and - 4 cents respectively while initially plucking the fiddle, and when each of these strings were subsequently bowed, they were recorded as being 440 Hz exactly, as per reference tone from the tuning fork. McGeehan also states clearly that the plucked note is 'in tune'. This suggests that some individual fiddle players are aware on some level of the effect that the bow will have on the tuning of the instrument and that that for some, the discrepancy is relatively quantifiable. This is an area where more research is necessary, in order to assess the extent to which fiddlers can allow for this. However, for the purposes of the current study the data does provide clear indications of the nature of some discrepancies that may be performed with the bow, and the individual nature of how these may be performed from individual to individual.

#### **4.6 Double Stops and use of fingered motifs to test tuning**

23% of the participants involved in this study used fingered double stops and fingered patterns to check the tuning of their fiddle. Each individual demonstrated a set idiosyncratic practice in relation to this. For example, Ciarán Ó Maonaigh used harmonics played with open strings as a way to check tuning. He played an E' harmonic using the 4th finger on the A string in unison with the open E' string; where a discrepancy was apparent he subsequently adjusted the string. He repeated this process across each string. Tara Connaghan also used harmonics during the tuning process; Unlike Ó Maonaigh these were not used in a chordal fashion, but were played individually. Others such as Damien McGeehan used fingered chords once the open strings

were tuned in 5ths; this was in order to trial the tuning achieved by ear, and he subsequently made adjustments to the tuning with the fine tuners based on the sounded intervals of those trialed chords. This suggests that McGeehan is employing a tempered approach to tuning the fiddle, where tuning in 5ths is a desirable starting point for tuning the instrument, but is adjusted with regard to the fingered practice of the fiddle also so as to achieve a balance between all relevant intervals that may be produced during performance. Mairéad Ní Mhaonaigh played a scalar motif from the lowest A, on the fiddle to the high A' played with the third finger on the E' string in order to trial the tuning achieved by ear. Following this scale, she reaffirmed her satisfaction with the sound achieved.

Practices such as these highlight that many of the individuals involved in the study rely to a large extent on their ear in terms of achieving the correct sound as per their sense of tuning. This serves to suggest that individualism in achieving a sound closely matched by an idiosyncratic perception of what sounds 'right' to the individual is apparent within certain contexts in this community. Borup (2008, p. 3) offers that:

“The sense of pitch is, certainly in the tradition of western music, interconnected to the sense of tonality and harmony. The sense of tonality is characterized primarily by the fact that it registers specific notes as the outstanding main notes of a tune, i.e. it recognizes their particular function within the melody. ...The sense for pureness of intonation is a yet more complicated function, because the assessment of intonation depends mainly on emotions...Open strings naturally further complicated matters in such a fluid intonation system, since only one open string of a violin tuned in perfect fifths will correspond with most keyboard instruments. Some performers claim that the violin can only be tuned perfectly in the key of D major, since only then are the fifths actually perfect; in other keys, certain open-string tunings have to be tempered and this is best achieved by avoiding open strings and stopping the notes in question”

This view will be examined in relation to fingered participatory discrepancies later in this thesis (see Chapter 5). However, it examines in a clear way the relationship between the sound of the tuned open strings as tuned by a fiddle player and that of what is later perceived as 'in tune' when those open strings are subsequently fingered for performance. The examples mentioned above exhibit an understanding of this, and so, it is suggested that by trialing certain notes using fingered double stops or scalar motifs, that the fiddle players in question may be in the

process of achieving a tuning tempered as appropriate for the performance of traditional Donegal fiddle music, a Donegal ‘sound’.

#### **4.7 Comparisons in actual tuning values recorded**

This section examines quantitative and qualitative data from the fieldwork concerning individual variances in tuning values. Individuality is key to understanding how a certain ‘sound’ of tuning is achieved. Jimmy and Peter Campbell offered an insight into such sonic flexibility:

J.C. : “We got the sound of the tuning in our heads...they used to put the bow on the third string and across two strings because you hear something different.”

P.C. : “Its funny you never tune a string singly, well I don’t anyway”

J.C. : “well they are in harmony with one another see”

P.C. : “but there’s a certain sound... and yours might be different to mine...we were chatting about that the other night actually Vincie’s is different to us.... ”

J.C. : “And there’s another thing, why is it that you get another person’s fiddle, and sometimes it’s not just quite right?”

P.C. : “a little bit sharper or a bit flatter,... but they think it’s absolutely perfect. It just must be a *very* individual thing... whatever way you hear it in your head I suppose.”

(Appendix A : Jimmy Campbell, Peter Campbell: interview)

Issues around identity, ‘tuning in’ (participatory discrepancies and uniformity/homogeneity), and context are also examined. Pedagogical issues are raised in relation to how individuals were taught how to tune the fiddle and whether this may be a factor in affecting an individual’s sense of tuning. The significance of sonic exemplars in influencing the ‘sound’ of tuning will also be considered.

#### **4.8 Tuning up: the experiment: emerging themes and patterns**

In Fig. 4.14 (below) the graph captures each individual’s final tuned string values at the end of the recorded tuning process This graph highlights a number of issues for discussion. Most

significantly it is evident that there is no consistency in tuning of the fiddle strings to the standard E'AD,G, across the population of participants. Each line represents the tuning of a single individual across the 4 strings as measured against A = 440 Hz; the graphic representation highlights that at no time do the lines run in parallel; therefore, at no time is any of the tuning identical. Clearly, each individual in the sample has their own sense of tuning. It is also clear that a majority of individuals in this sample favour an E' string that is sharper than when compared to the comparative value recorded for the A string. No pattern such as this is apparent with regard to relationship with the other strings. There are a number of notable exceptions to this (the E' being tuned sharp) that will be discussed later.

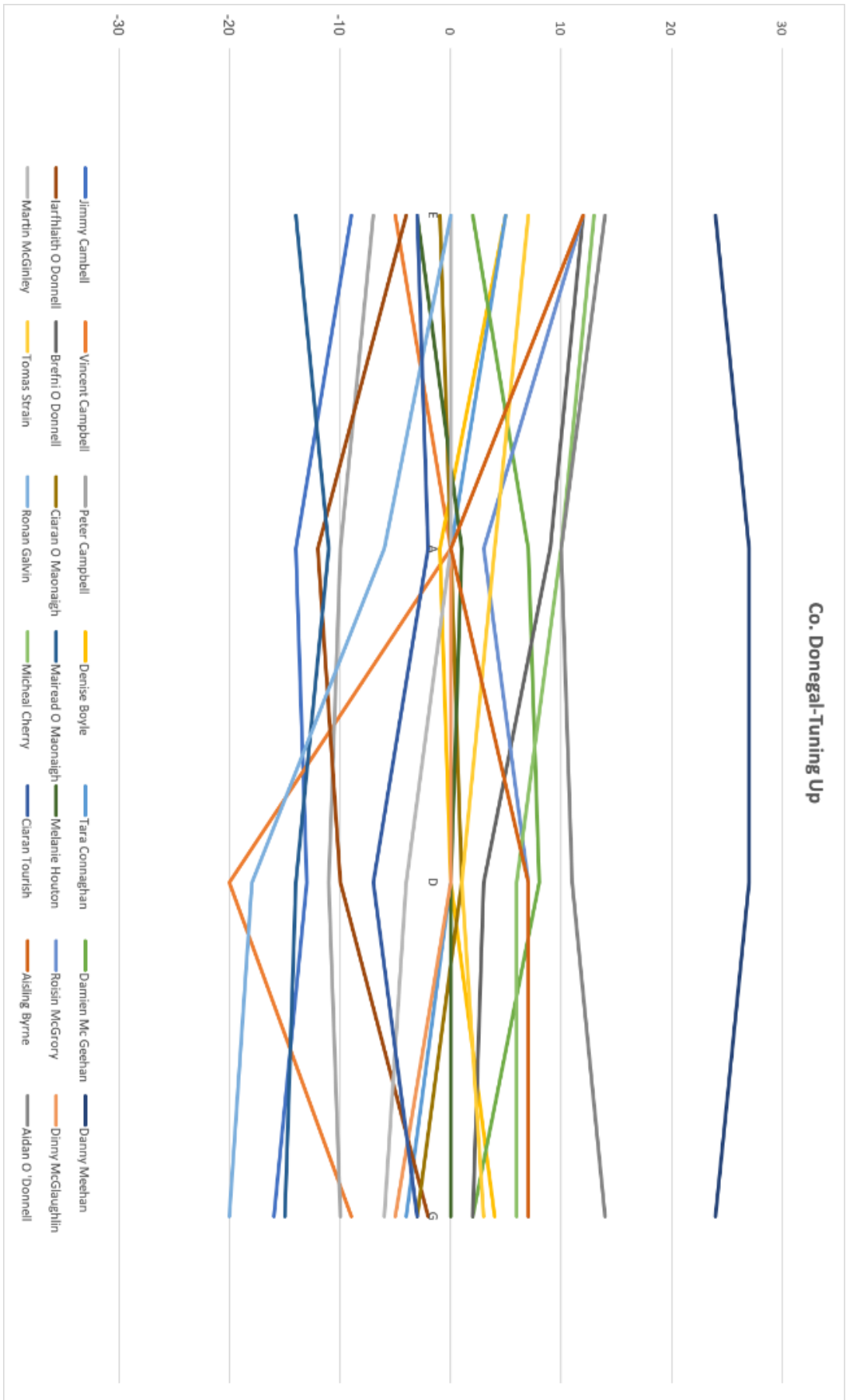


Fig 4.14: Graph highlighting all tuning values recorded by those in this sample

As discussed earlier, paradigms such as ‘typicality’ and ‘tuning in’ (or out) play an important role in assessing any discrepancies in pitch values between individual participants. While individuality is a central theme emerging from the data collected and analysed, some commonalities are present, with regard to process, typicality and context. Therefore, in cases where wide discrepancies are observable at a primary glance, these might not suggest that any individual in a context is ‘out of tune’, rather that their idiosyncratic perception of what is ‘in tune’ may be discrepant to start with, and may be movable depending on the specific performance context. Therefore, assessing the ‘meaning’ or ‘importance’ of tuning to an individual performer in this (or any) situation may prove to be as important as examining the data itself.

A comparison can immediately be made generationally between changes in idiosyncratic perception and changed performance contexts. It emerges that the highest degree of variance documented in terms of tuning values of the open strings is found among the 4 participants who are aged 65+. Dinny McLaughlin, for example, exhibits an acute ability to tune to an equal tempered standard, and I suggest that this is as a result of his usual tuning practice referred to earlier in this thesis, where tuning to an equal tempered piano is his preferred method. In contrast, Vincent Campbell also tunes his A string to exactly  $A = 440$ , as per reference tone of the tuning fork, but the values for each of the other strings are discrepant flatter than the equal temperament baseline used as a measurement guide. Jimmy Campbell tuned to values of  $E = -9$  cents,  $A = -14$  cents,  $D = -13$  cents and  $G = -16$  cents, also flat of the equal tempered baseline. Danny Meehan’s values post tuning up (using the tuning fork as a reference) after the performance of scordatura tuning was  $E = +24$  cents,  $A = +27$  cents,  $D = +27$  cents and  $G = +24$  cents. This is significantly sharp of the equal tempered baseline.



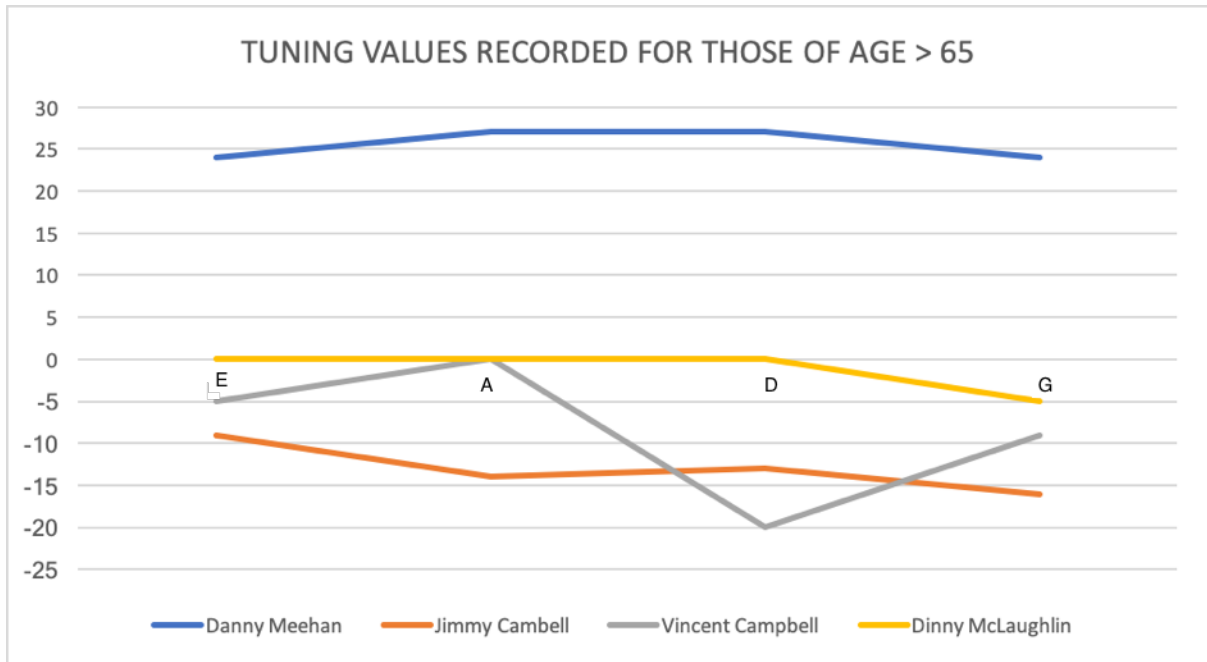


Fig 4.15: Tuning Values recorded for those of age 65+

This graph highlights an apparent wide spread of values across the participants in terms of the tuning of the fiddle. However, I suggest that a pattern of tuning emerges as constant with regard to idiosyncratic perception with three out of the four individuals examined. In order to test this theory, I adjusted each of the values for each individual to a value where A = 440 Hz. In doing so, each fiddler had a baseline of A= 440 Hz in common, and definite comparison could then be easily achieved. Each of the other strings were then adjusted by the appropriate offset value. For example, in the case of Jimmy Campbell, his basic recorded values pre adjustments were E = - 9 cents, A = -14 cents, D = -13 cents and G – 16 cents. When I sharpened these values respectively to A = 440 Hz (i.e. sharpening each string by 14 cents) the new values are E = +5 Cents, A= + 0 Cents, D = +1 Cent and G = -4 cents.

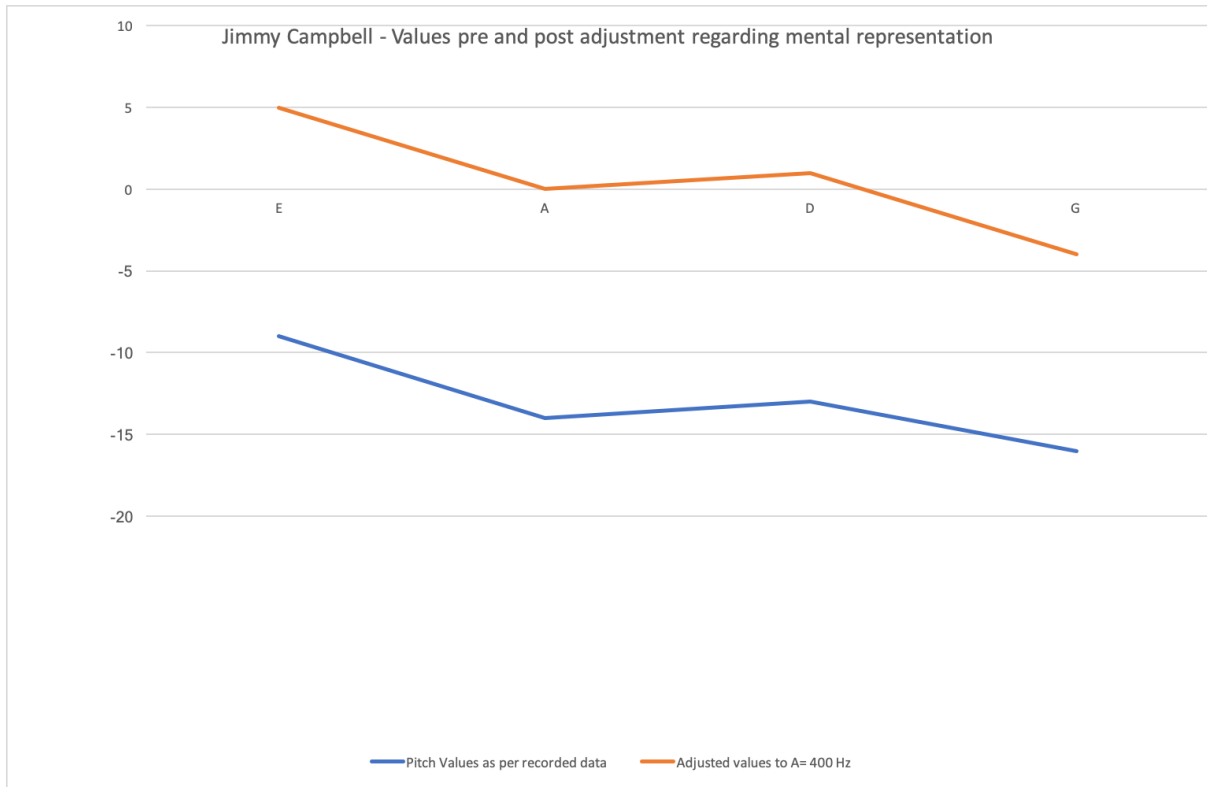


Fig. 4.16: Example of readjusting the value of ‘A’ as per the pitch values recorded as part of Jimmy Campbell’s tuning process.

This exercise demonstrates that Jimmy Campbell’s fiddle tuning is actually identical to that of others in the sample. In particular, what it reveals is that his tuning pattern is identical to that of Tara Connaghan (who exhibited exactly the same values of discrepancy. The significant differential, however, is around his sense of tuning i.e. idiosyncratic perception of A (his starting point for tuning the fiddle) is what appears to be different. This is where the individuality lies, in this individual sense of tuning, evidenced by where A lies for him, even when tested against a supplied reference tone (tuning fork of A= 440 Hz). This could further illuminate common informal anecdotes of older fiddle players turning up at sessions and being ‘out of tune’ with some of the other members of the session, in particular the fixed pitch instruments. Idiosyncratic perception may play a role in that discussion.

Danny Meehan’s tuning values at the end of the tuning-up process (post tuning up after the performance of scordatura tuning) was E’= + 24 cents, A = +27 cents, D, = +27 cents and G, = +24 cents. Again, I flattened these values for comparative analysis to A = 440 Hz (in this case flattening each string by a value of 27 cents), where values show E’ = -3 cents, A= +0 cents, D, = +0 cents, and G, = - 3 cents. These values indicate that the fiddle is in tune with itself to a similar standard to others in the sample. However, I suggest that conforming to a

standard A is of little importance to Meehan in terms of delivering an authentic performance, rather the act of playing and his own sense of where the music should be pitched are more important than tuning to my supplied reference tone.

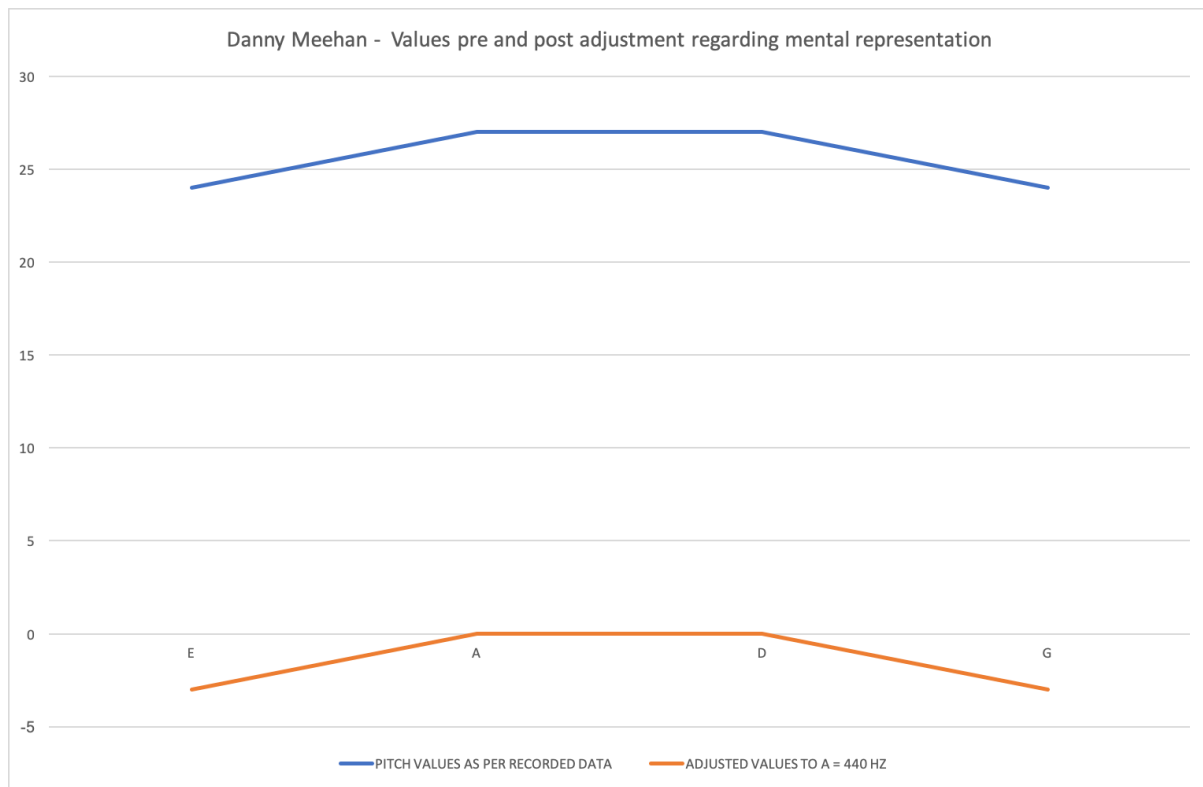


Fig 4.17: Danny Meehan tuning values pre and post adjustment to A=440 Hz

Instead, I suggest that the changing performance context of traditional music may prove to be an important consideration in understanding this form of tuning variance. I suggest for individuals such as Meehan and the Campbells, that their immediate performance environment in their formative years was the house dance, where (as it has already been demonstrated that) rhythm was of primary importance in performance. While they were ‘in tune’ with themselves, tuning to a standard given note was not important, while playing in group or solo capacity. They did however tune the strings of the fiddle to a relatively comparable tuning system standard as used today. This is evident in the graph below. Here values for Jimmy Campbell and Danny Meehan are included both in their actual state and also when adjusted to A=440. While their initial values lie far apart, following adjustment to allow for a changed idiosyncratic perception of A, the graph lines indicating their tuning values overlap in a significant fashion, i.e. their fiddles are in tune to a similar standard. but the idiosyncratic perception of where the fiddle should be pitched was movable and unique to each individual.

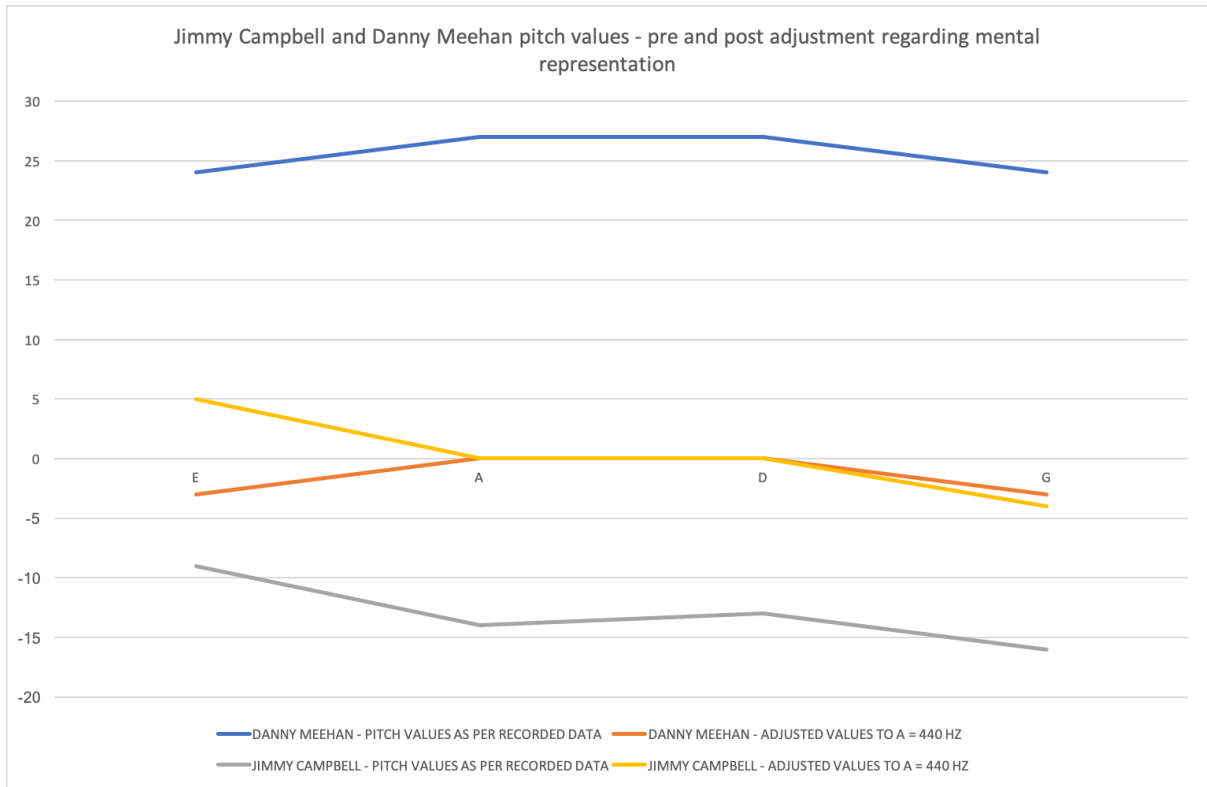


Fig 4.18: Jimmy Campbell and Danny Meehan tuning values, pre and post adjustment to A= 440 Hz

Such findings are further supported by this research. This is detailed below in the relevant sections.

This is further supported where the actual tuned values are mapped out and are compared to the adjusted values where A= 440Hz. A comparative analysis reveals that 3 of the 4 individuals in fact have a similar sense of tuning in terms of the relative tuning of the 4 strings. However, again it is clear that while there is commonality in terms of the relative tuning pattern, there is significant individuality when it comes to how they each interpret A. I would suggest that this sense of pitch is variable based on context and the experiences of those fiddlers. The exception to this (as is clear in the charts below) is Vincent Campbell. While Campbell tuned his A string exactly to the supplied reference tone of A= 440 Hz as part of the interview, his sense of tuning is significantly different from the others in the sample and genuinely individual. It is clear that his pattern is highly discrepant from the others. While Danny, Jimmy and Dinny in fact show considerable alignment in their tuning preferences, Vincent's has a distinct profile, where a wide variance is observed with regard to the D, string in particular.

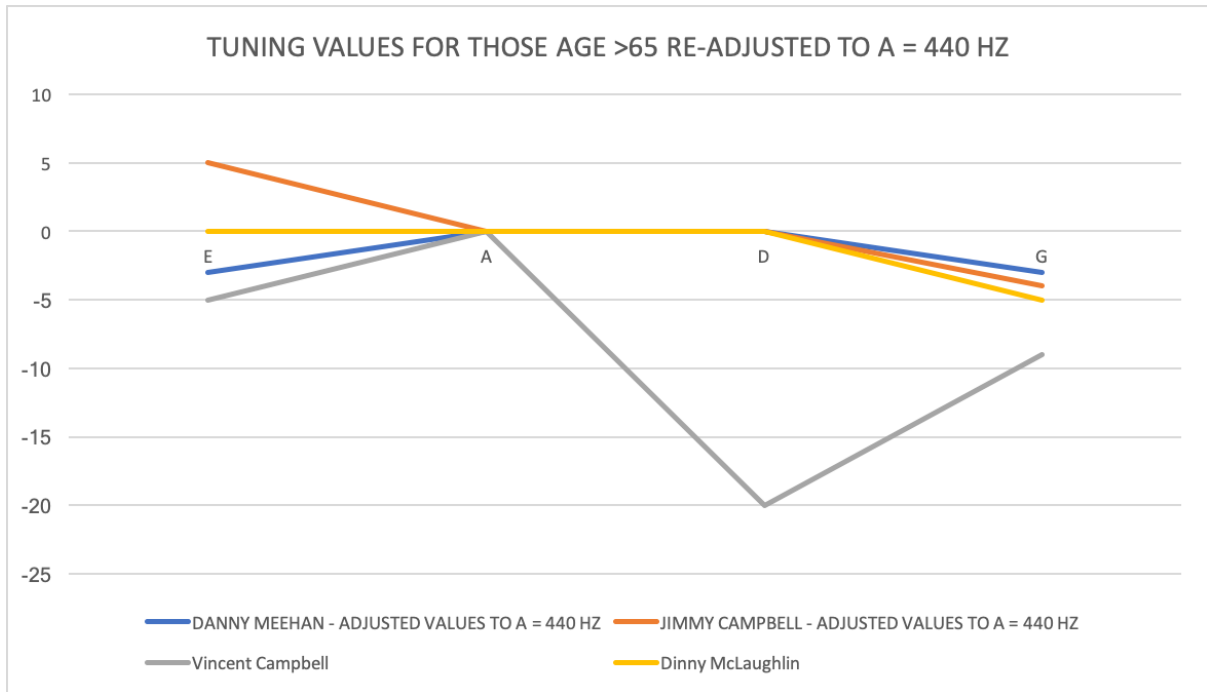


Fig 4.19: Tuning values for those aged 65+ adjusted to A = 440 Hz

I suggest that while many of the tuning values recorded for some of the individuals of this sample may appear to be out of tune to an equal tempered standard, (as may have been the case prior to the introduction of a given harmonic consciousness in the 1920's, and for some in this sample, much later) that their fiddles are actually in tune, but to a discrepant idiosyncratic perception of where A should/ may be pitched. I further suggest that any idiosyncratic perception of a Hz value for A is movable. A fiddler is less likely to conform to a standard associated with a tuning system than to that of a social convention, even if that social convention is in the short term. This aligns strongly with the theory that, just as is the case with performance, that individuals can 'tune in' or 'out' to conventions based on context and willingness to possess membership of and integrate into a certain sound community. In this way, a dual 'typicality' is observed, one with regard to individual performance and one where it is typical in certain social contexts that one's mental representation of their sound may change, dependant on the social requirements of the said context.

#### 4.8.1 An insight into the 'Pass the Fiddle' event

Mimicking the pass-the-fiddle practice popular among Donegal fiddlers, during the interview, Jimmy Campbell suggested that we enact that in order to further test out individual tuning processes.

In the following tables I have included the tuned values of the fiddle for each participant (Jimmy, Peter and myself) as they initially tuned against the tuning fork and later, as the fiddle was ‘passed’ to him having been just tuned by another member of the group who had made tuning adjustments according to their own taste/sense .

<b>Jimmy Campbell</b>	E	A	D	G
Initial Values	9 cents	-14 cents	-13 cents	-16 cents
After being passed the fiddle from Peter	-10 cents	-11 cents	-14 cents	-16 cents

Table 4.6: Tuning values for Jimmy Campbell during the pass the fiddle experiment

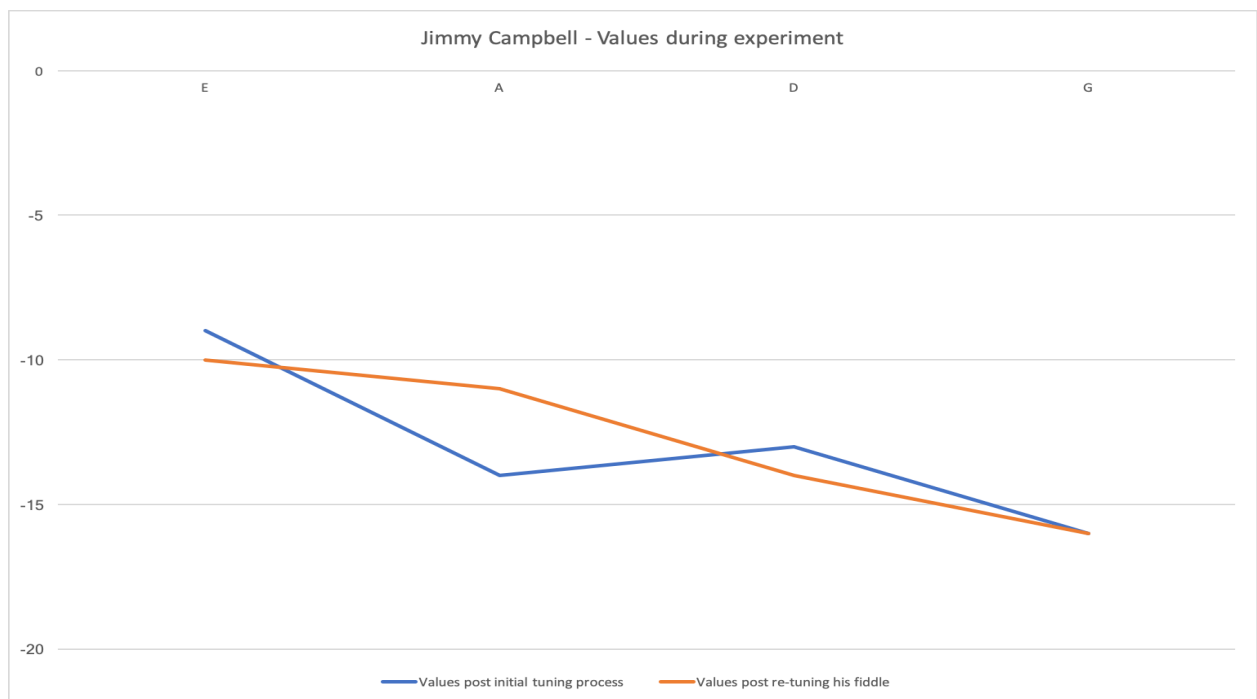


Fig 4.20: Jimmy Campbell's tuned values during the 'pass the fiddle' experiment.

<b>Peter Campbell</b>	E	A	D	G
Initial tuning values for his own fiddle	-7 cents	- 10 cents	- 11 cents	- 10 cents
Values after tuning Jimmy's fiddle	-9 cents	- 11 cents	- 8 cents	-10 cents

Table 4.7: Tuning values for Peter Campbell before and during the ‘pass the fiddle’ experiment.

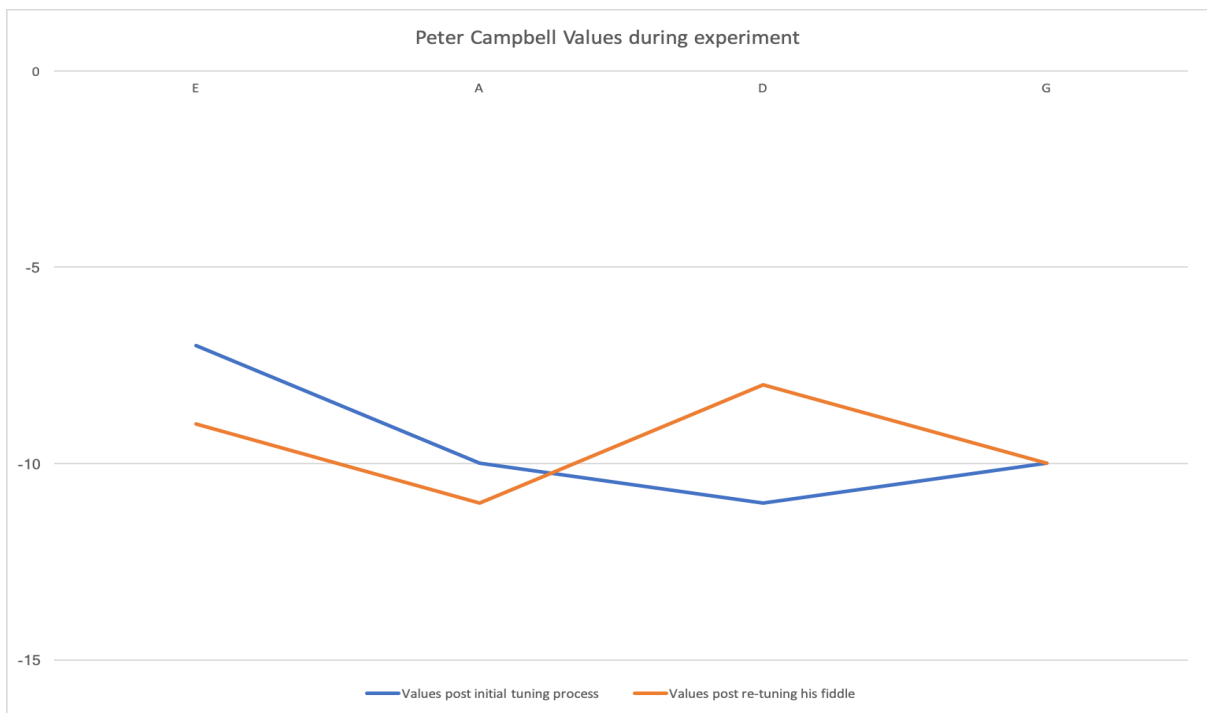


Fig. 4.21: Peter Campbell’s tuning values during the ‘Pass the fiddle’ experiment.

These results indicate that each individual re-tuned the received fiddle back to values that are close and/or identical to their original choices. This supports the theory posited by Jimmy Campbell that fiddlers have the ‘sound’ in one’s ‘head’ (Appendix A: Jimmy Campbell interview). Furthermore, it highlights not only the idiosyncratic nature of the fine tuning of the fiddle by those involved but also a level of consistency in each individual’s practice that support such claims. This individual sense of tuning is therefore central to each fiddle players identity and is an integral part of their practice and ultimately their sound.

This individuality around a sense of tuning is something that Jimmy Campbell reflected on further during his recorded interview. His view is that tuning was in fact something that was

considered fluid for the majority of fiddle players in his area. He suggested that this was particularly true of those fiddlers he experienced in his youth (and even today), when a fiddle was passed around from player to player, each individual made some small adjustment to the tuning of the fiddle before it was played, suggesting that the fiddle was ‘out’ of tune to their ear.

Campbell wondered if that basic hand position in terms of holding the fiddle was of a key factor that impacted on tuning. He suggested particular importance in microtonal adjustments between players and that those could affect the basic tuning of the instrument.

“Years ago everyone tuned the fiddle their own way...because ...in the olden days, the fiddle was handed round ...to all the fiddlers. Nearly all of them would turn it that little bit, because I think its they held the neck in a different position, maybe a little bit down or up...if you hold your ...fingers very high on the neck, you get a different tone. If you go down you are going down on the strings a bit and I think that little bit done it different in the tuning...I think that’s why they had to tune the fiddle, every individual had a different way of tuning to suit them.”

(Appendix A: Jimmy Campbell interview)

Certainly it makes sense that hand position would have a significant impact on tuning once the fingers are employed, but I had never previously considered the fact that the position of the hand in holding/supporting the instrument might actually affect the tuning of the open strings.

Campbell demonstrated his particular method of holding the fiddle; then he altered his hand position a number of times highlighting that such changes in hold did in fact result in changes in the tuned values of the open strings.





Fig. 4.22: Photo of Jimmy (L) and Vincent Campbell. Note the hand position employed by Jimmy Campbell (pic taken during his usual performance practice). (Pic from <https://donegalnews.com/2014/10/scottish-link-up-at-glenties-fiddle-weekend/> (accessed 30/ 05/19).

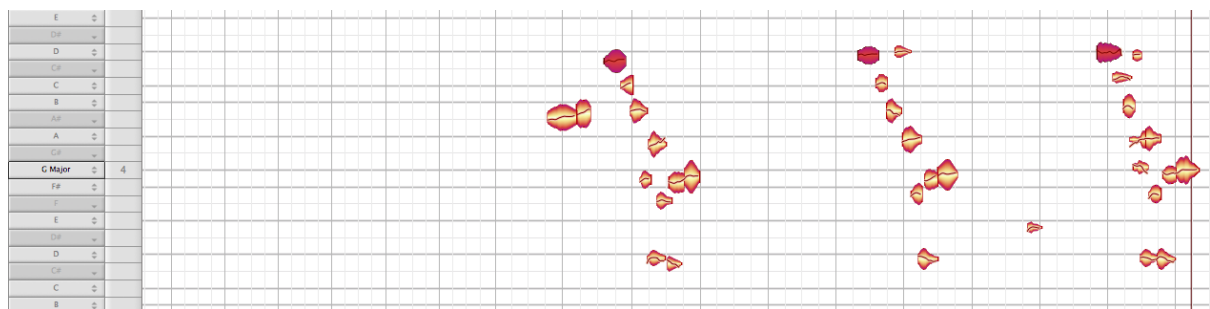


Fig. 4.23: Jimmy Campbell's – changing hand positions and corresponding impacted on tuned values. Positions are observed from left to right (1,2,3 respectively).

Note the obvious sharpening of the highlighted notes played at the start of each repeated motif in the example above.<sup>62</sup> The table below outlines actual variance in note values played on each occasion. Values are in + or – cents.

<sup>62</sup> It is suggested to listen to the audio recording of this process to aid full comprehension of the process engaged in by Jimmy Campbell.

Jimmy Campbell – Sharpening hand positions	Position 1	Position 2	Position 3
D'	- 53	-19	-6
C	+5	+15	C# - 54
B	-46	-48	-24
G	-54	D' +1 (Played instead)	+17
A	-48	-21	-14
F#	Recorded as F + 18	-39	-44
D,	-55	-25	-24
G	-38	-26	0

Table 4.8: Values for Jimmy Campbell's example of sharpened hand positions

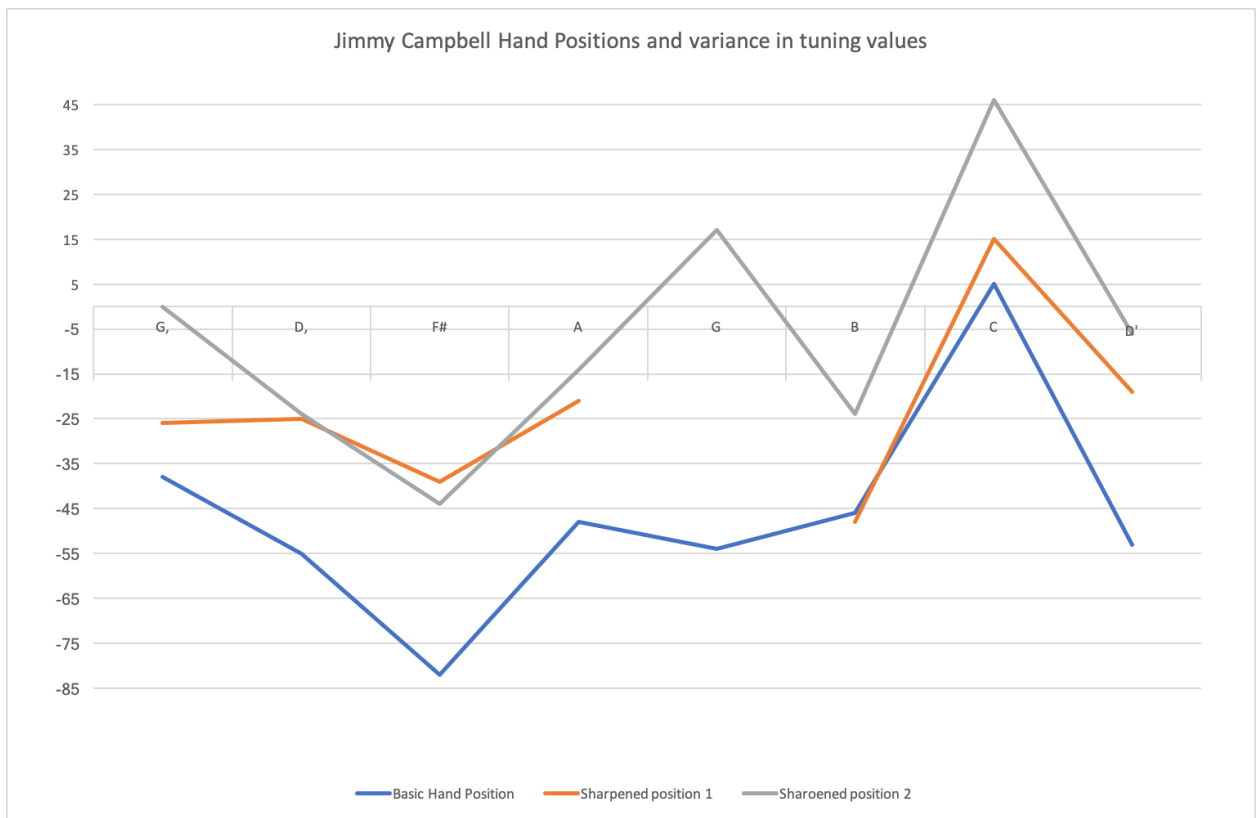


Fig. 4.24: Jimmy Campbell's changing hand positions. Of particular note to this conversation is the changing values for the tuned strings of D, and A.

It is immediately clear that a significant adjustment takes place during this process. Some interesting patterns emerge upon further investigation. Campbell clearly indicates that his

primary hand position is that used in column 1 above (blue line in the graph). However, values indicated for the notes played are not consistent with his general performance practice (dealt with below). In actual fact, even the values recorded for the open strings *change* when a slightly sharpened hand position is used. Tuning of the open A sharpens from an initial value of - 48 to - 14 cents, which is remarkable considering that no actual mechanical tuning of the instrument took place. It should also be noted while I thought that the 3<sup>rd</sup> motif played (most sharpened hand position) was the most in tune to my ear, in my opinion each of the hand positions communicated a viable performance of the tune, with potential for an idiosyncratic sound.

I contacted Rab Cherry, Fiddle maker, to enquire as to what physical factors may be at play in such discrepancies. Cherry surmised that fact that Campbell may have put more pressure downward on the tailpiece of the fiddle with his chin when adopting a new grip, thus elongating the string and sharpening it. However, the discrepancy is significant, and not uniform with regard to each of the open strings played. I suggest that this is worthy of further research, and may prove to illuminate conversations with regard to non standardised violin technique globally

#### **4.8.2 Passing on a ‘sense’ of tuning**

Another interesting finding is the fact that those who claim to have been directly influenced by James Byrne (1946- 2008) from Glencomlcille, each also tune their E strings sharp compared to the comparative value for the A string. These players include Iarflaith O’Donnell, Breffni O’Donnell, Micheál Cherry and his own daughter, Aisling Drost Byrne. Many in the sample (Galvin, the O’Donnell brothers, Tara Connaghan and Denise Boyle) also make reference to that same fact, that James Byrne tuned his E’ string slightly sharper than was usual and that this may have had something to do with his unique sound and /or the perceived style of the area. I wondered whether the tuning of the E string by the O’Donnells, who acknowledge their wish to perform in accordance with that particular style, is a (sub) conscious result of the embodiment of that tradition? Of interest are values by others in the sample who have been similarly taught in some guise by James Byrne, but do not make reference to him as a central influence in their interviews, but do still tune their E strings sharp. Also, Aisling Drost Byrne makes reference to the fact that she usually tunes to an electronic tuner due to the professional nature of much of her performance practice. However, in this situation, where she tuned to a tuning fork, her value for her A post tuning was exactly 440 Hz, However, her value for the

corresponding E string was much higher. Is James Byrne, and the sound associated with him really just an awareness of the fact that a preference for a sharpened E is prevalent in Donegal? Could this be a form of embodiment of a cultural memory as a result of the influence of the bagpiping tradition on the fiddle music of the county, much as the way Doherty (1995) suggests that the cultural memory of the piping tradition may have had a role in the development of the Cape Breton fiddle tradition, and as Flynn (2010) suggests in relation to the Irish question? I suggest that this may be the case, but the evidence from those who suggest that that particular sound is associated with the area, and subsequently perform accordingly, cannot be ignored.

### 4.8.3 Tuning/ ‘sound’ preferences

Personal preference for tuning the fiddle sharper is also highlighted by others in the sample, including Melanie Houton and Roisín McGrory. McGrory suggests that her own personal sense of tuning lies sharper than concert pitch, and that this is something that has been noticeable for her at her local session in which she plays with fixed pitch instruments such as the accordion.

“I have a thing to tune above concert pitch, its naturally where I want to be...but if the note is there you just have to go with that...it just seems a bit duller when you’re in concert pitch”

(Appendix A: Roisín McGrory interview)

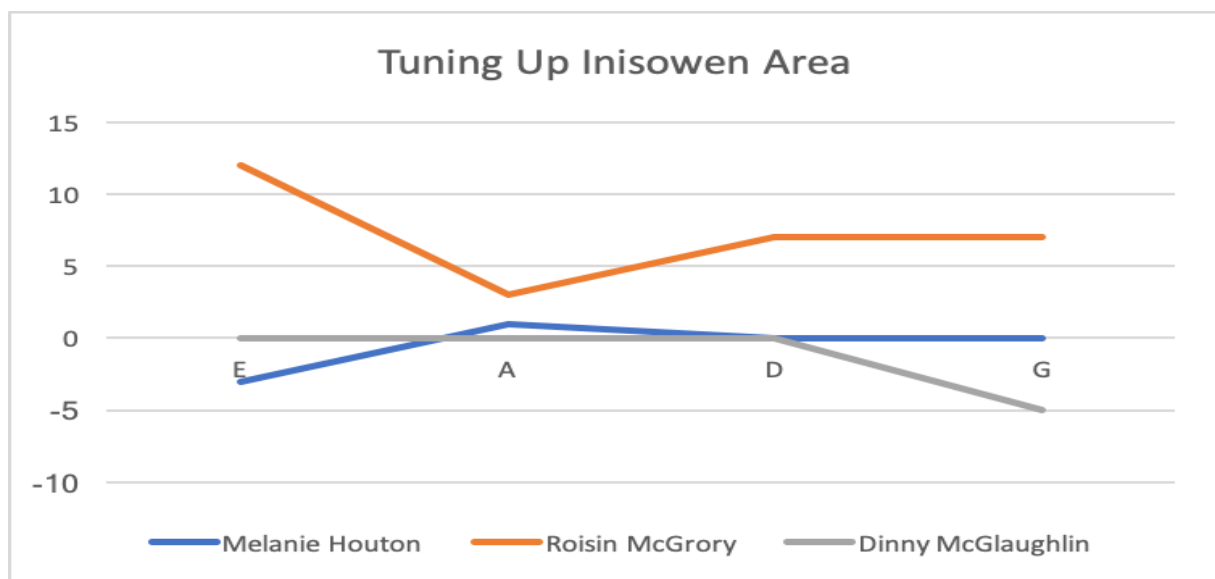


Fig 4. 25: Tuning up values for the Inishowen electoral area

Interestingly, when presented by way of the graph above, actual values recorded show that McGrory does in fact tune higher than others from the Inishowen area, but that Houton's values were closer to the equal tempered standard baseline measurement, and closer in relation to that of Dinny McLaughlin.

McGrory suggests that the tempo of the music can also have a bearing on the pitch at which the fiddle is tuned, and that this may be relatable in terms of some of the traditional regional labels used to describe traditional music in Ireland.

“I would imagine if you were in east Galway or Clare you would want to tune a wee bit more mellow. It's probably got to do with the tunes you're playing and the brightness of the tunes as well. I feel if you were playing slower music that you'd want to tune slightly lower”

(Appendix A: Roisín McGrory interview)

Similarly, Houton suggests that employing slightly higher values when tuning the fiddle is associated with a 'livelier' sound.

“I think...playing just in your box just being dead on in tune is a wee bit dull sometimes. Especially if there's no backing instrument I find that wee bit sharper just helps make everything sound a wee bit livelier”

(Appendix A: Melanie Houton interview)

While it is outside the remit of this project to quantify such temporal discrepancies as discussed by McGrory, I suggest that this is an area worthy of further research. From my experience as an active traditional musician, I have witnessed many conversations by traditional practitioners supporting this thesis. Furthermore, I have found that when playing with pipes pitched in keys lower than concert pitch that the sound has been more 'mellow' and the tempo slower than usual. Upon reflection on this, I also noted that almost all my experiences of playing with pipers with flat pipes<sup>63</sup> were outside of Donegal (apart from playing with Ciarán Mac Fheilimidh from Lifford). Instead, my primary experience of pipers in Donegal were bagpipes, which are tuned a semitone above A to B flat. I suggest that preference of a sharpened sound may be in some part due to this bagpipe tradition which, as is well documented (Mac Aoidh, 1994; Caldwell, 2014), influenced the tradition in terms of technique and repertoire. I also suggest that this may be a reasonable explanation for the

---

<sup>63</sup> The term is used commonly in Irish Traditional Music to refer to all pipes pitched flatter than concert pitch D. See Hegarty, 1983 for more info on pipe making and tuning.

sharpening of the E string associated with the music of Glencolmcille and James Byrne, where the idiosyncratic sense of tuning employed by one categoric exemplar may prove to be part of a wider social consensus within the county. In my opinion, it is likely that this is another form of mental representation that has become embodied within the authentic sound for some of those currently active in the Donegal tradition.

#### **4.9 Investigation of geographic discrepancy in tuning values**

One of the questions raised by this research is whether certain areas can have a ‘sound’ associated with the music of that particular community. In essence, this breaks down the question of the larger investigation of a ‘Donegal sound’ to a more localised level, where anecdotally and academically (e.g. Nic Suibhne, 1995) divisions are made within the county to account for the varied soundscape within it. Preliminary evidence from this research suggests that there are grounds for more research to be done on this topic. To examine if geographical variance in sound was apparent in terms of the fiddle tradition in the county, I have chosen to consider Donegal according to its electoral areas for this particular analysis, as discussed in Chapter 3. For example, 7 participants took part from the Glenties electoral area: Vincent Campbell, Jimmy Campbell, Peter Campbell, Denise Boyle, Tara Connaghan, Maireád Ní Mhaonaigh and Ciarán Ó Maonaigh. In considering these participants as a discrete cohort based on geographical distribution an interesting pattern emerged around their tuned values. 4 of the 5 individuals who lived in the immediate Glenties area (in Glenties town or its environs) tuned their E’ string sharper than the comparative values for their A strings, which was used in each case as the reference tone for tuning the instrument. This is a curious finding, especially when coupled with the fact that both Connaghan and Boyle suggest that having a sharpened E is synonymous with the sound of the area. It is also interesting to note that the individual who does not conform to this pattern is Vincent Campbell, but that this fact is referenced in the interviews with both Connaghan and Jimmy and Peter Campbell. Also, it is interesting to note that allowing for the fluid idiosyncratic perception of A as discussed above, that when Jimmy Campbell’s values are re-adjusted to a value of A = 440 Hz, that his values are subsequently exactly equal to those of Connaghan.

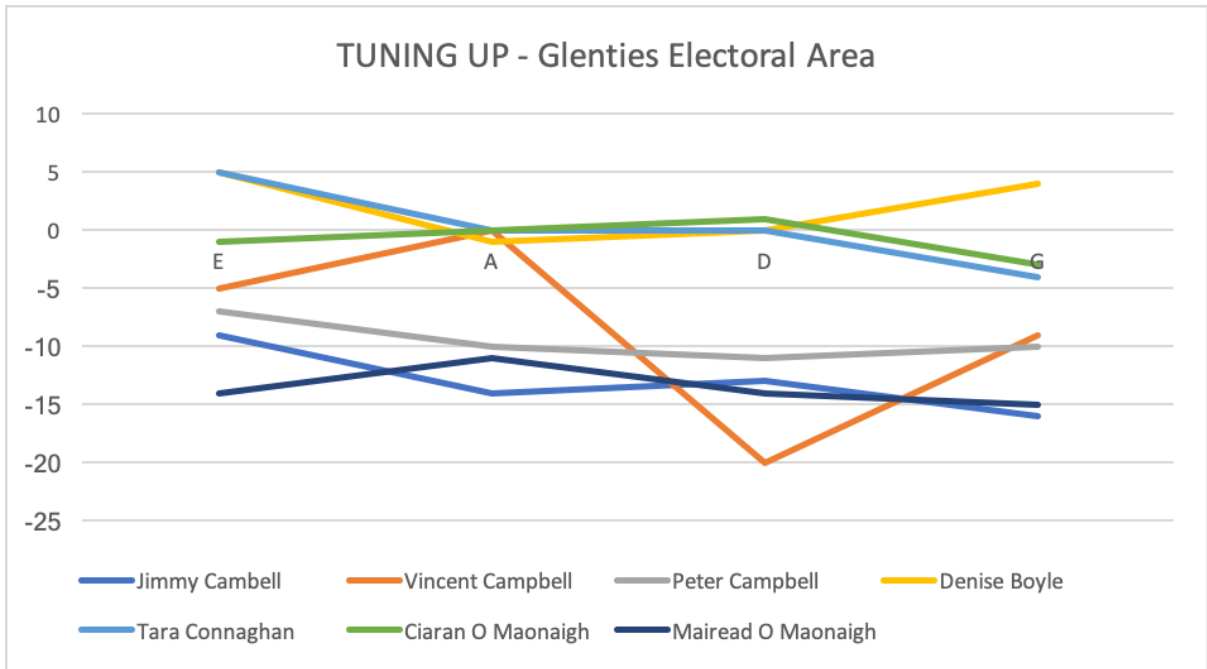


Fig 4.26: Tuning up values for the Glenties electoral area

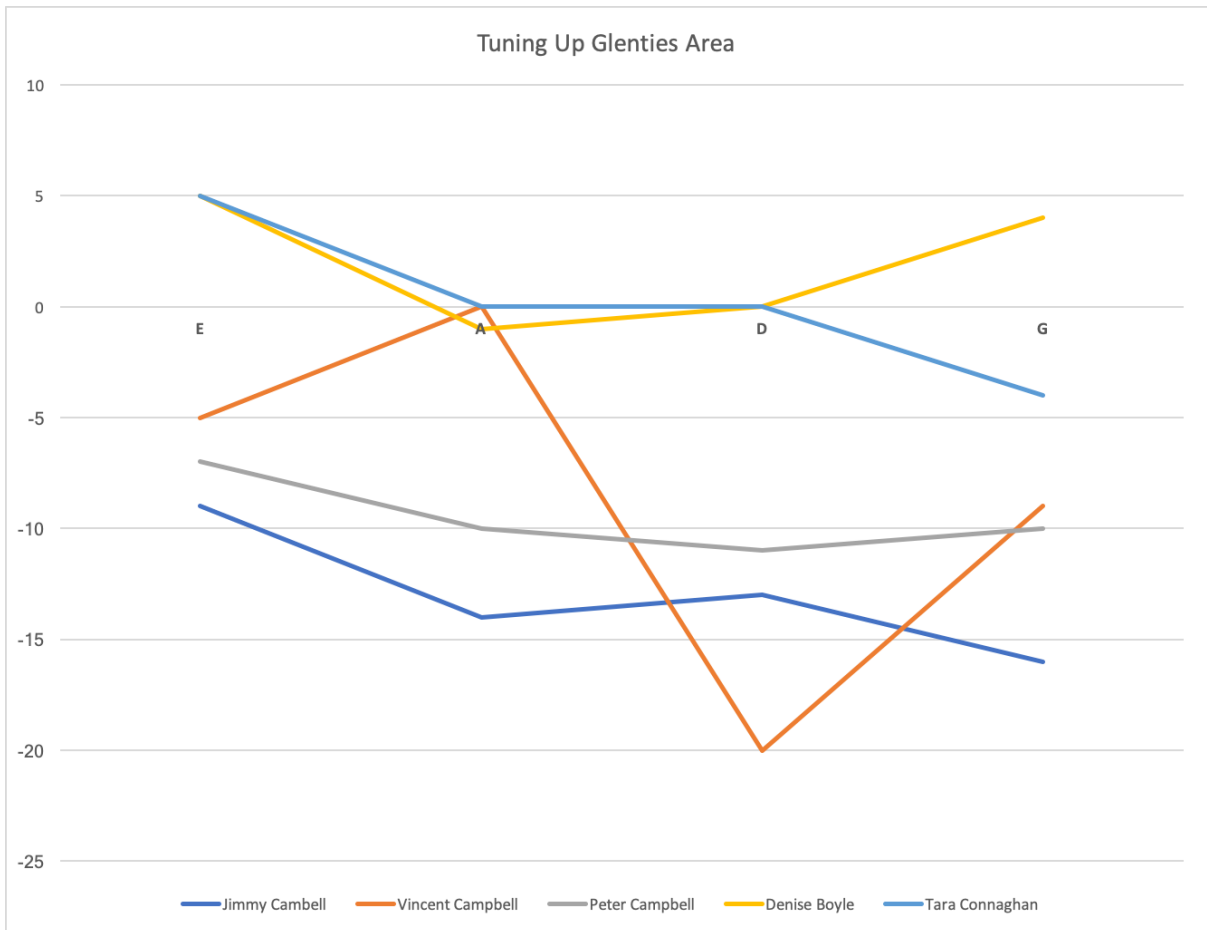


Fig. 4.27: Tuning up values for the local area of Glenties town and its environs

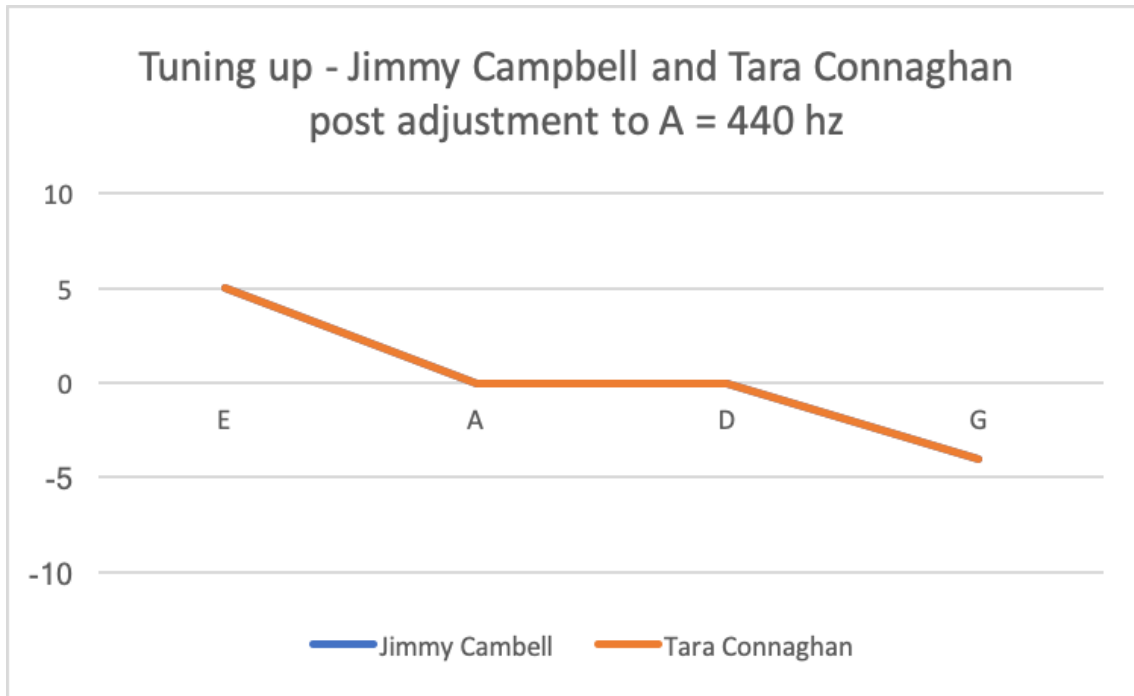


Fig 4.28: Tuning up values for Jimmy Campbell and Tara Connaghan post adjustment of Jimmys Fiddle to A = 440 Hz. Note a singular line is observed as values are identical.

Ciarán Ó Maonaigh and Mairéad Ní Mhaonaigh are from another place within the Glenties electoral area, Gaoth Dobhair. A wide discrepancy was initially observed between both fiddlers, but when Mairéad's values were adjusted to A = 440Hz, the similarities in their overall tuning pattern clearly emerged. In essence, what is observed is that while the individuals may be tuning to their individual sonic compass, than when a starting point for the measurement tuning discrepancies is consolidated, patterns emerge.



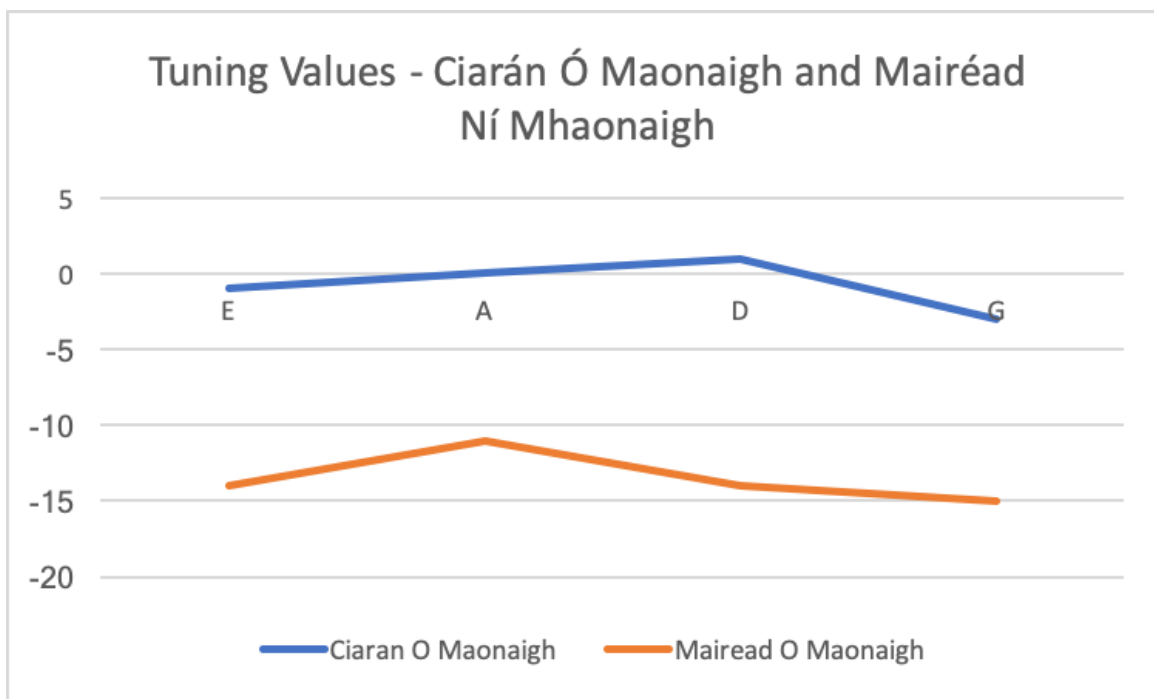


Fig 4.29: Initial individual tuning values of Ciarán Ó Maonigh and Mairéad Ní Mhaonaigh

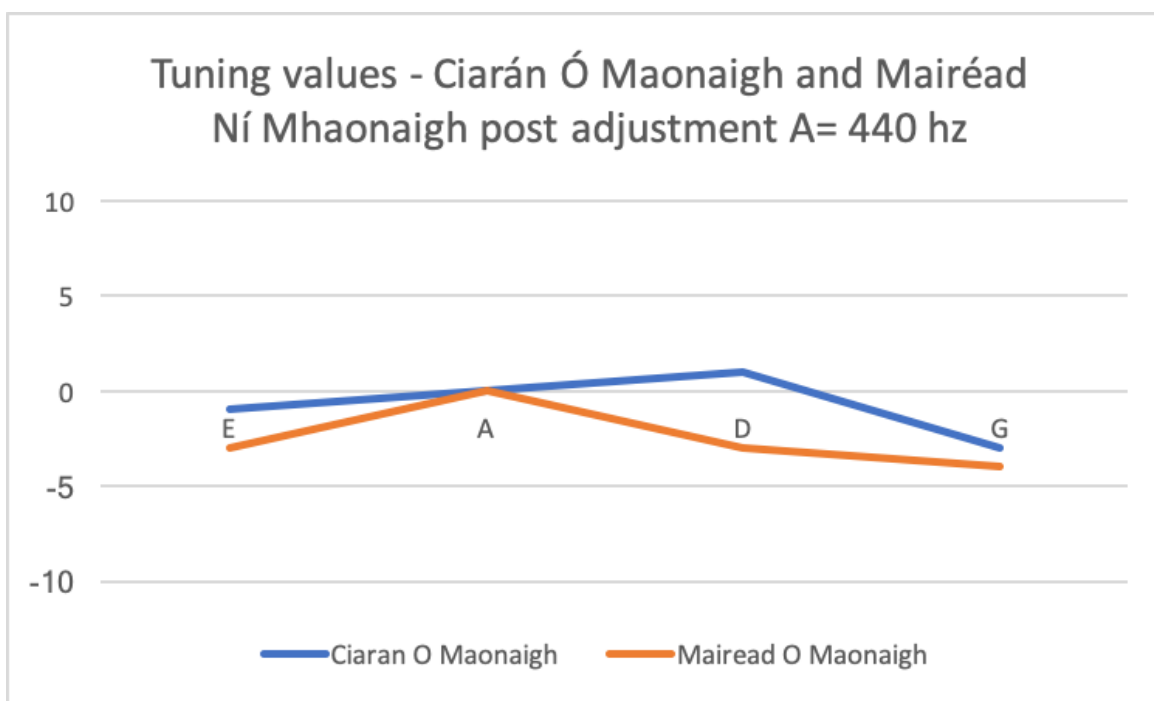


Fig 4.30: Tuning values for Ciarán Ó Maonigh and Mairéad Ní Mhaonaigh post adjustment to A = 440 Hz  
 However, this is not consistently the case across all the geographic areas represented in this study. Indeed, for the most part, it is clear that there is no local/micro level tuning pattern emerging from each locality. Glenties is the exception. Again, this is clear from an examination

of the relevant graphs, where individual senses of tuning are clear, but patterns directly associated with the local area are not.

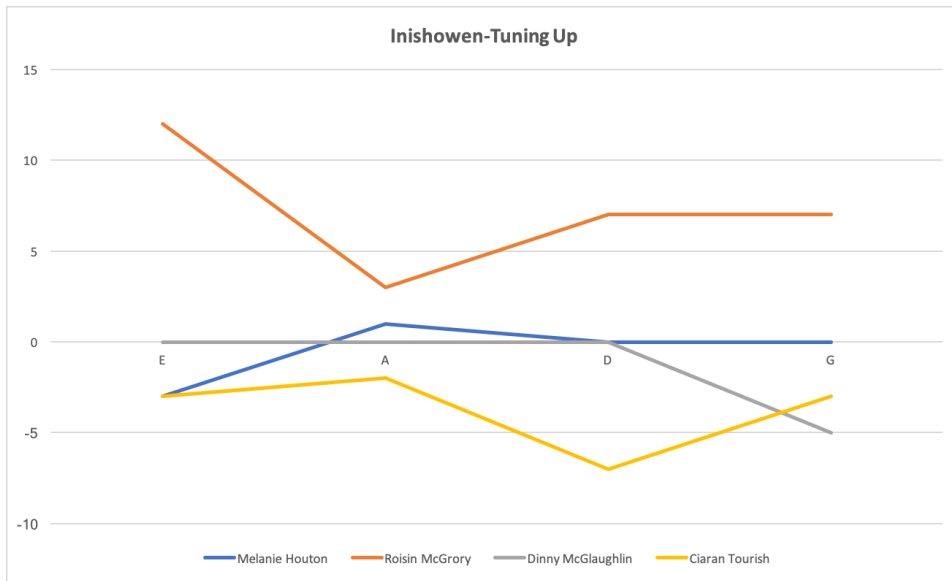


Fig 4.31: Tuning values for the Inishowen electoral area

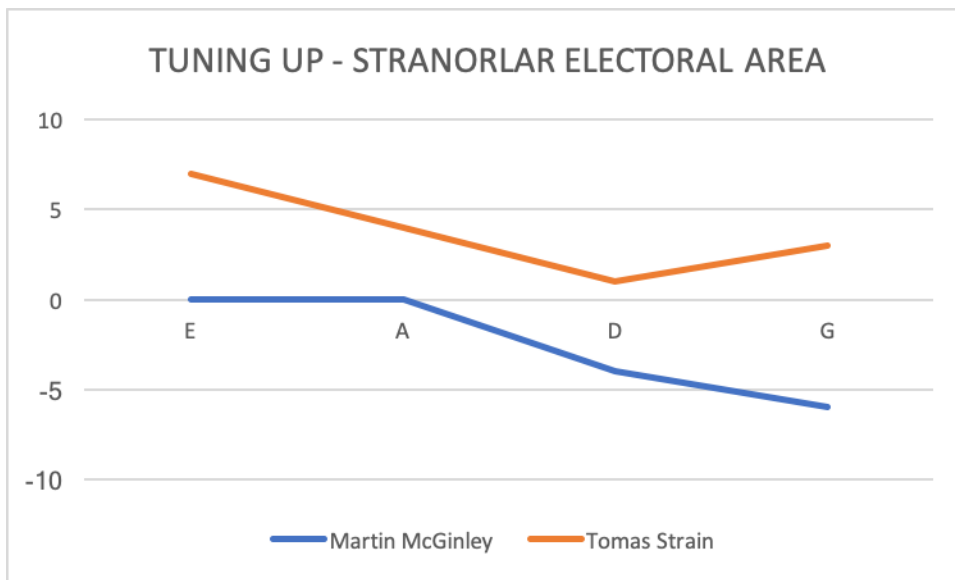


Fig 4.32: Tuning up values for the Stranorlar electoral area

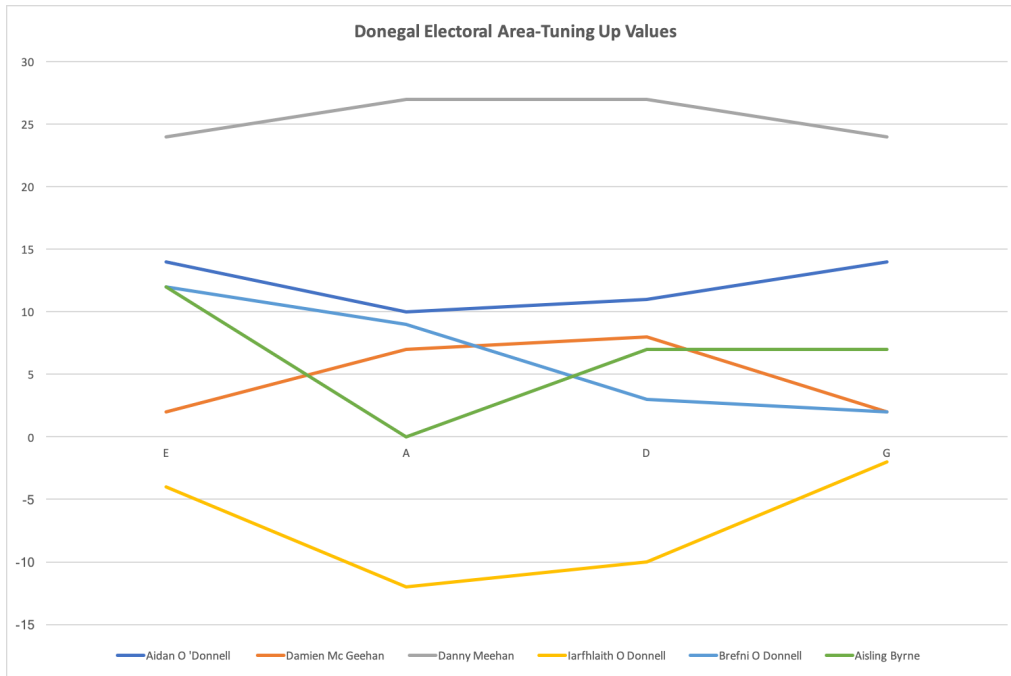


Fig 4.33: Tuning values for the Donegal electoral area

#### 4.10 Use of electronic tuners

Electronic tuners were also a topic of discussion with some of the participants, particularly those who were actively performers in a professional context, or those who played other genres of music with fixed pitch instruments. Tuning with electronic devices was not considered the normal practice for all of the sample. Instead, it was communicated by those who used electronic tuning devices (such as tuning apps for smartphones, clips or pedals) that such devices were used exclusively in a professional context, especially if other fixed pitch instruments were involved in a shared performance. Examples of this are Damien McGeehan and Denise Boyle, who are both active members of the professional Irish ‘Country’ music scene (McGeehan playing with Daniel O’Donnell and band, Boyle with Ciaran Rosney band). Both suggest in their interviews that the changed performance context is what has dictated their choice to adopt electronic tuners in their practice. Pressure to conform to an expected tuning standard is of significant importance in this performance context. It is implied that similar pressure is not experienced when playing in a traditional context. Such evidence foregrounds the expectation of a paying audience (or otherwise) in assessing the use of electronic tuners in this context. Breffni O’Donnell makes some interesting points about the use of a tuner in his own performance experience. He references the importance of mood with regard to achieving good tuning, and suggests that in certain situations that getting tuning right can be problematic, e.g. situations where nerves may come into play such as concerts. In these situations, a tuner is used to achieve the A in tune, and from this, his normal tuning practice is employed to achieve

the correct tuning for the remaining strings. However, this process changes with regard to performing with the band where a pedal tuner (accessed through a fiddle pick up) is preferred.

“the thing is with that, because you’re playing with guitar, piano, bass, if its not perfect when you’re playing with different instruments, its more important. It has to be more perfect. I’d use the tuner but I’d just use the A for traditional music.”

(Appendix A: Breffni O’Donnell interview)

I suggest that my experience of playing with the band FIDIL further highlights this issue, where in traditional contexts, closely rooted to the formative ideals of the band, tuning discrepancy was an acceptable element of spontaneous performance. In contrast, in a professional performance context, we felt pressure to eradicate individual tuning discrepancies, as even though our individual fiddles were ‘in tune’, the collective sound was deemed ‘out of tune’. To compensate for such discrepancy, we invested in vibration pick-ups for the fiddles, and each tuned to a BOSS chromatic tuner, ensuring that each fiddle onstage was tuned to the same values. Therefore, a standard was achieved which was an acceptable compromise to each of us, but to which none of us would deem appropriate for tuning in an individual or informal session context.

As part of his interview McGeehan (a member of FIDIL) also tuned his fiddle to a tuner (tuning app on an i-phone). This was an interesting insight into the question of tuning by ear and I was curious what adjustments (if any) would have to be made to the basic tuning of the instrument to accommodate an ‘in tune’ reading on the electronic device. It transpired that according to the tuner, each string was ‘in tune’. This was signified by a green light over the meter on the screen of the tuner. Upon uploading this recording to Melodyne, I was curious by the range of ‘in-tune’ values that the tuning app had registered. I was interested if the margin of success / error for assessing tuning allowed by the tuner was similar to values that other studies had shown were audible (to the average musician’s ear)<sup>64</sup>. However, each value recorded was considered ‘in tune’ to the equal tempered standard of the tuner, despite not being entirely constant. The values for the strings of Damien’s fiddle post tuning with the tuner (iphone app) were as follows (values in cents):

---

<sup>64</sup> Studies include Zatorre (2003), Schellenberg (2001), Peretz et al. 2009

E	+3	-1	+2	+4	-2	-1	-9	-1	+2
A	+1	0	-4	0					
D	+4	0	+4	+3					
G	+3	+4	+1						

Table 4.9: Values for Damien’s fiddle post tuning with the electronic tuner (iphone app)

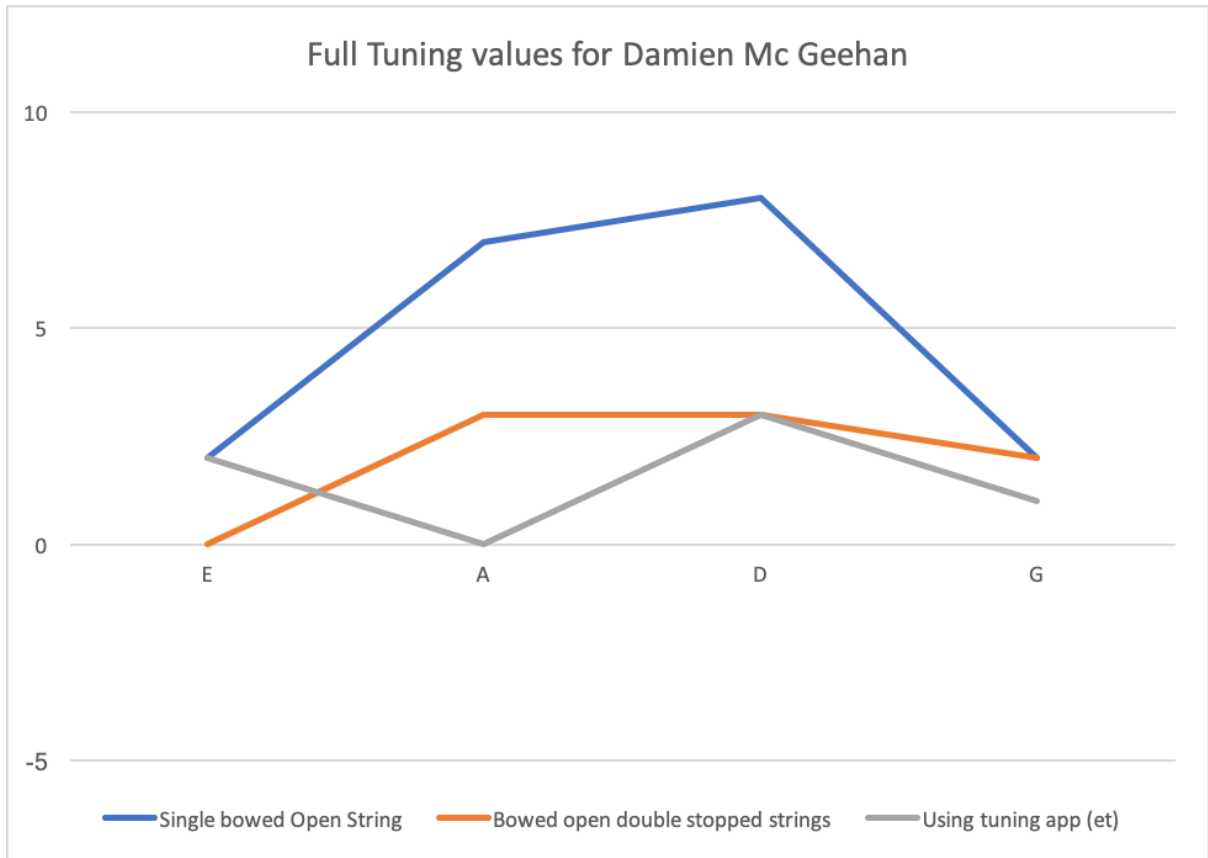


Fig 4.34: Full tuning values for Damien McGeehan

As discussed earlier, bow pressure is observed to have been a factor in the variation of values recorded, as no other outside adjustments were made to the fiddle during this trial. However, it is clear that while the general pattern is similar, that tuning by ear and tuning by electronic device achieved slightly discrepant results, further indicating that a ‘sense’ of tuning is maybe something abstract to the individual player themselves.

#### 4.11 Tuning practices associated with playing at sessions

In modern Irish traditional music, the session is the primary public performance context for the majority of musicians. While this is generally an informal event open to anyone of any standard to join, certain rules and etiquette apply. Many enthusiasts have published online guides

outlining what they suggest these rules are, but in truth, etiquette varies from session to session, depending on the context and those present. The ‘Field Guide to the Irish Music Session’ (Foy, 2008) is regarded as a useful resource in understanding such nuances, while I suggest another useful guide is the Irish music society of Oulu website<sup>65</sup>, which outlines rules a novice should follow with regard to performing in a session situation. The issue of tuning (either tuning up or etiquette regarding tuning discrepancies) does not feature in a meaningful way in either of these publications. I suggest that this is an important omission, as from personal experience, hierarchies are present where a session leader(s) form an integral core from which a tuning standard can occur, and the act of tuning in can occur. This hierarchy is fluid from situation to situation based on circumstances such as instrumentation (where generally tuning is attained from reference to the fixed pitched instrument), and even session size, where larger sessions can have a wider range in discrepancies.

While to my knowledge, no specific research has been carried out around tuning practices employed by musicians in this context, some of the participants make reference to their experiences of playing in such group contexts, and how that affects their basic tuning practices.

Melanie Houton offered an analysis of playing in a session situation and with her sister Paula (also a well-respected musician within the wider Donegal tradition, who plays flute). When asked as to whether she tunes/ re-tunes in a session situation, Houton replies:

“Yeah, definitely. When I'm playing with the flute definitely. Even when I'm playing with Paula, her bottom D takes an awful long time to warm up, so I would usually always have my D flatter when I'm playing with her and then as we move it I'll sharpen it up again. Especially in a session with other instruments and say it was all fiddlers in the pit. I wouldn't leave my D as it is, because it wouldn't be right”

(Appendix A: Melanie Houton interview)

This answer suggests two points. Firstly, that Houton is conscious that the D, played with her sister's flute *is* flat and therefore discrepant to what her individual sense of tuning would be. Secondly, that the individual's sense of tuning is secondary to the general tuning of the group (itself a collection of individual sounds) and instead a further act of ‘tuning in’ is described. This is coupled with the assertion earlier in this chapter by Houton that playing bang on in tune can be a “wee bit dull” and that generally a sharpened sound was preferred. This further

---

<sup>65</sup> <http://www.irishmusicsocietyofoulu.org/media-files/General%20Session%20Etiquette.pdf>

highlights the potential of changing mental representations of acceptable values for notes with regard to changing performance contexts.

Mícheál Cherry relates that in his experience, tuning is achieved exclusively by ear, basically by receiving an A as a benchmark from a member of a session. He also relates to that in his opinion, each individual has their own sense of tuning that is “near enough the same”. Cherry compares his experiences of tuning practices within the fiddle tradition in Donegal to that of playing sessions in other areas outside the county.

“In Donegal anyway, I think there are mostly just fiddles so they could just tune to anything they, like, wanted whereas in other counties there’d be boxes... set notes with boxes and concertinas... flutes things like that.”

(Appendix A : Mícheál Cherry interview)

This echoes the sentiments of both Roisín McGrory and Melanie Houton with regard to tuning as part of a multi- instrumental group, where it is suggested by each that the individuality of the sonic palette with regard to tuning is compromised for the purpose of ‘tuning in’ to the session and those participants who play fixed pitch and/ or fretted instruments. This is further implied by his suggestion that tuning each string of the fiddle using an electronic tuner can have negative consequences in attaining the appropriate sound for traditional Irish fiddle music (Appendix A: Mícheál Cherry interview). This again supports my view that there is a flexible tuning practice which is fluid and alters according to context.

MacAoidh (Appendix A: Caoimhín Mac Aoidh) also makes reference to the hierarchies at play in a session context and gives one example of how that may affect communal tuning.

“... in relation to session playing there are people who are lazy about tuning. ... you never tell a person older than you that they're out of tune. You know that's disrespecting. That's really as much as to say look, you know, you're such a bad musician you can't even tune your instrument or play it in tune. So there's always been a reluctance to do that. There are subtle ways around it. You've seen this a million times of things like where rather than tell the person that you say lads maybe we'll just all retune here. Maybe we'll just check the tuning here which really means we're all in tune and you're not, so you better collectively agree with this here. That kind of carry on.”

This quote highlights two distinct issues around the session context. An age related hierarchy is highlighted, where respect plays a major role in assessing variance in individual tuning values. This is significant as it suggests that tuning is not of primary importance in such a situation, but rather the communal nature of the session, where individuals of a certain age gain status by nature of their past experiences as part of their sound community, rather than a judgment based on their immediate context.<sup>66</sup> Secondly, MacAoidh describes how telling someone they are out of tune is not considered good practice, but instead, good manners/etiquette requires approaching it more sensitively, where they highlight the communal sense of tuning, forcing the individual in such a situation to ‘tune in’ to that sound. This both highlights the importance that ‘tuning in’ to a communities’ sound can have as well as the inferred meaning it possesses. To those ‘in tune’ in such a session context, the sound of the individual out of tune is discrepant to their values, and therefore it at some level acts as a means of membership of a sound community in a specific context. Offering the communal session participant the opportunity to tune acts both as an invitation to ‘tune up’ the instrument in question, but also acts as an invitation to join the communal sound community in that moment.

Similarly, Iarflaith and Breffni O’Donnell’s discussion around tuning in a communal context proved of interest in this regard. This related specifically to the two brothers playing together. In such a duet context, Iarflaith was satisfied to proceed with the tuning he had achieved when performing solo. However, Breffni, by comparison, tuned to highly discrepant values to that of his brother, despite tuning up directly after Iarflaith, using the same tuning fork as a reference. Before embarking on a duet performance, Iarflaith retuned his fiddle to iron out the audible discrepancies between both individuals. This act interested me, not only from a simple musicological perspective but also from a sociological perspective. For example, I questioned why Iarflaith tuned to Breffni and not the other way around? Could they have met at some ‘middle’ pitch in compromise. Perhaps, but interestingly, they adhere to the same hierarchal format that happens in a session context as suggested by MacAoidh, where the younger individual in question (Iarflaith) tunes to the older person (Breffni). I suggest that this is also

---

<sup>66</sup> This is sort of age related hierarchy and ‘forgiveness’ is common in Ireland in a range of social contexts. In terms of an example specific to Donegal, my grandmother offers that when playing cards (another popular pastime with the older community – playing games such as 25, whist etc.) in certain contexts, mistakes that are associated with age (related to eyesight or speed) are forgiven, especially if it is the case that the person in question was a good card player in their youth.



an area where more in- depth research is necessary, as I suggest that age is not the only element that may affect such hierarchal structures in Irish traditional music. In my personal experience, individuals of a younger age can also attain higher hierarchal advancement, but that this may be dependent on factors such as experience, talent, and ‘authenticity’ as perceived in terms of the sound community. By this, I mean situations where individuals associated with certain families and clubs/ organisations may be seen as being more authentic than others who come from outside such experiences.

It appears that in this particular instance Iarfhlaith was happy to modify his tuning values for performance. As a result, new tuned values were settled on by Iarfhlaith. The table below highlights the values for Iarfhlaith’s fiddle after his initial tuning process compared with those when he had ‘tuned in’ to Breffni’s fiddle .

	Values for open strings after initial tuning process	Values for open strings post adjustment (tuning to Breffni’s fiddle)
E’	-4	+12
A	-12	+2
D,	-10	-5
G,	-2	0

Table 4.10: Tuning values for Iarfhlaith O’Donnell, including initial values recorded and adjustment to Breffni’s fiddle

Values for Breffni O’Donnell’s open strings, post tuning process, using the same tuning fork as a reference were:.

E: +12  
A: +9  
D: +3  
G: +2

Towards the end of their interview, replicating the ‘pass-the-fiddle’ test conducted with Jimmy and Peter Campbell, I invited both participants if they would exchange fiddles. The objective was to ascertain the response to each other’s tuned instrument; basically to observe what perceived differences (if any) existed between their senses of tuning of the strings of the

instrument. As with the Campbell interview, I became involved as a participant in this experiment.

The ‘pass-the-fiddle’ experiment involving Iarfhlaith and Breffni revealed the following data: when asked to tune his own fiddle following it being passed round and retuned, Iarfhlaith retuned his fiddle. I was interested to find that the E’ string was flattened by 8 cents, closer to what his original value for the string had been., but that the values were significantly discrepant to those previously recorded. He was also asked to tune Breffni’s fiddle. The values recorded for both the tuning of his own fiddle and Breffni’s fiddle are outlined (in cents) below:

	Iarfhlaith retuning his <b>own</b> fiddle	Iarfhlaith retuning <b>Breffni’s</b> fiddle
E’	+4	+10
A	+4	+14
D,	0	+9
G,	+7	+4

Table 4.11 : Tuning values for Iarfhlaith O’Donnell during the ‘pass the fiddle’ experiment

This result is not consistent with results achieved when the same experiment had taken place with Jimmy and Peter Campbell and myself, where each individual tuned the fiddle to within a few cents of their original achieved tuned sound. What is of particular interest is that by way of aural analysis, discrepancy in tuning to the degree indicated by the data collected was in no way obvious, and furthermore, when performance of the pieces for analysis took place, each performance sounds ‘in tune’. The discrepancies which stand out during these performances seem to be very conscious and deliberate deviations from the normal scale suggested by the keys of the pieces (discussed below). I questioned whether the change in fiddles (i.e. using his own fiddle, followed by using Breffni’s fiddle) may have been an underlying issue in this regard. I found that the data reflected that when each individual was asked to tune a specific fiddle, then results were consistent with regard to the fiddle rather than to the individual. This relates strongly to the seminal publication ‘Tuning, Timbre, Spectrum, Scale’ (2005) by William Sethares, where the affect of certain aspects of timbre and spectrum on how we can perceive the sound of certain instruments is discussed.<sup>67</sup> For example, if we examine the table

---

<sup>67</sup> I suggest that this is a worthy area of further research, using this research, and the work of Sethares as a springboard where more insight could be gained into the specific influence the instruments that musicians play may affect how we hear and interpret their sound.

below, we can see that discrepancies in values recorded for the open strings on each fiddle are negligible, yet are highly discrepant to the initial values recorded for the performers while tuning their own instruments.

### Iarfhlaith O'Donnell – Complete Tuning values

<u>Tunes his own fiddle</u>		<u>Tunes to Breffni's fiddle</u>	
E:	-4	E:	+12
A:	-12	A:	+2
D:	-10	D:	-5
G:	-2	G:	+0

<u>Retunes his own fiddle</u>		<u>Retunes Breffni's fiddle</u>	
E:	<b>+4</b>	E:	<b>+ 10</b>
A:	<b>+4</b>	A:	<b>+ 14</b>
D:	<b>+0</b>	D:	<b>+9</b>
G:	<b>-7</b>	G:	<b>+4</b>

### Breffni O'Donnell – Complete Tuning values

<u>Tunes his own fiddle</u>		<u>After Iarfhlaith tunes to him</u>	
E:	+12	E:	+13
A:	+9	A:	+8
D:	+3	D:	+1
G:	+2	G:	+2

<u>Retunes his own fiddle</u>		<u>Retunes Iarfhlaith's fiddle</u>	
E:	<b>+10</b>	E:	<b>+ 4</b>
A:	<b>+14</b>	A:	<b>+ 4</b>
D:	<b>+7</b>	D:	<b>+0</b>
G:	<b>+8</b>	G:	<b>+0</b>

Again, the linear graphs below highlight this finding.

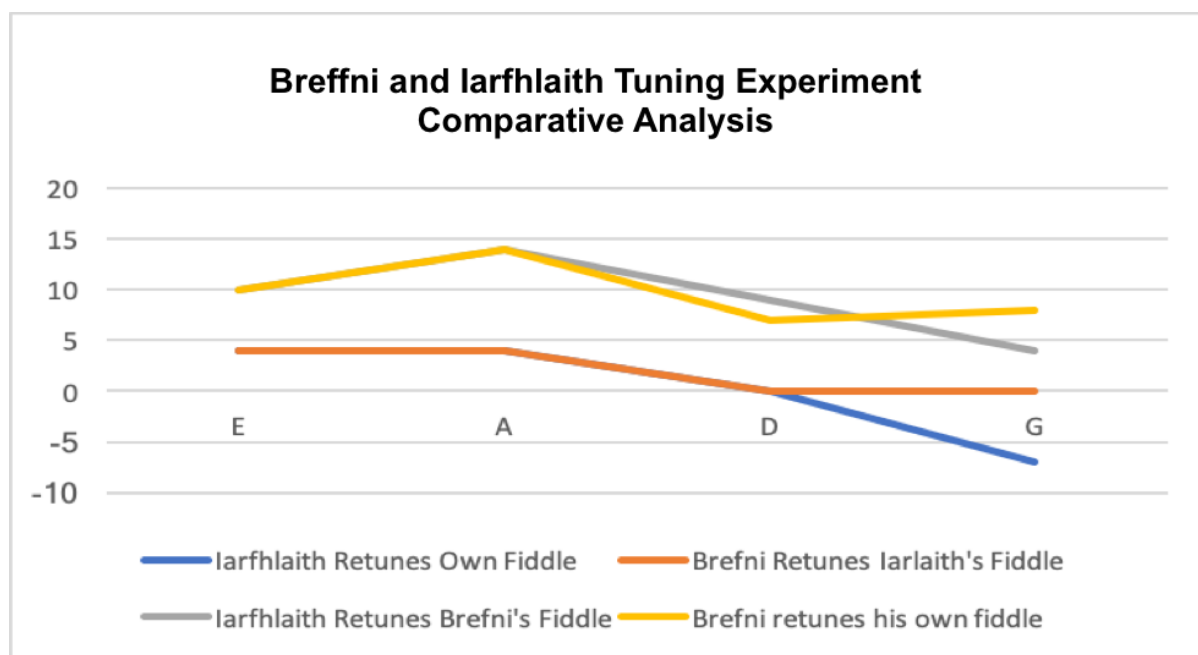


Fig 4.35: Graph comparing the values recorded by Iarfhlaith and Breffni O'Donnell as part of the 'pass the fiddle' experiment conducted during their interview.

As is the case with the experiment carried out with the Campbells, a pattern emerges here. Individuality is apparent in the initial tuning of an individual's own instrument, but when asked to tune another, then the individual is likely to change their idiosyncratic perception of their individual sound to one more closely aligned with that of the instrument they are tuning. This is supported by evidence from the same experiment that was carried out with Jimmy and Peter Campbell. Where Jimmy suggested that I tune his fiddle. In terms of his initial tuning of the instrument, after taking an A from the supplied tuning fork, Jimmy primarily bowed the fiddle starting with the E' and A strings. An adjustment was made instantaneously on the tuning of the E' string, from - 32 cents to a value of 0. This process was repeated by bowing the A and D, strings, making an adjustment on the D, from -10 to - 13 cents. No adjustment was made to the G. Values recorded after the completed tuning process were:

- E': -9 cents
- A: -14 cents
- D,: -13 cents
- G,: -16 cents

Peter Campbell was initially asked to play Jimmy's fiddle and state whether he thought it was in tune or not, and if not, how should it differ. The values of the strings as they were initially bowed by Peter were:

E': -4 cents  
A: -10 cents  
D,: -15 cents  
G,: -10 cents

Note the difference in values from the initial reading taken from Jimmy post tuning, prior to his performance. This is most probably due to a variant in bow pressure, while there is the possibility that Jimmy's fiddle may have shifted tuning slightly while in the process of being played. Peter suggested that both the D, and G, strings "didn't sound right" to him (Appendix A, Jimmy and Peter Campbell interview). He was then asked to tune this fiddle to what he suggested was 'in tune'. He initially tuned the fiddle by use of the tuning pegs as opposed to the fine tuners, something that was uncommon throughout this fieldwork. This technique was employed for the tuning of the D, string only. The fine tuners were used as usual in order to tune the G, string. A combination of bowing and plucking was used. This string was tuned down from a value of G, = -12 cents to -24 cents, before being tuned back up to G, = -10 cents. Final values for the retuned fiddle according to Peter's sense of tuning were:

E': -9 cents  
A: -11 cents  
D,: -8 cents  
G,: -10 cents

In immediate response to this, Jimmy was asked whether he thought the fiddle was now in tune and if not, to tune it back to his preference. Upon drawing the bow on the A and D, string in unison, he exclaimed "Oh that's not right at all!" (Appendix A, Jimmy and Peter Campbell interview). Adjustment was made to the D, string, to the point of D, = -15 cents (1 cent away from his initial recorded tuning value) at which point he stated "That's mine now!". Final values for Jimmy's retuned fiddle were as follows:

E': -10 cents  
A: -11 cents  
D,: -14 cents  
G,: -16 cents

I was also asked by Jimmy to tune his fiddle. I immediately found his sense of tuning to be discrepant to mine. I suggested at the time that the G string was sharp, and that the D string was a little flat (Appendix A, Jimmy and Peter Campbell interview). In actual fact, the values of the fiddle as I had bowed them immediately before that particular statement were as follows:

E': -4 cents  
A: -14 cents  
D,: -14 cents  
G,: -7 cents

Again, no outside influence other than the bow was applied to the fiddle, yet discrepancies in the values recorded are apparent. I immediately engaged in my own process of tuning Jimmy's fiddle which involved bowing primarily the A and D strings in unison while sharpening the D string with the fine tuner, using my bow hand to make any adjustments. This process was repeated with the G string. I also deemed that it was 'out of tune'. One difference in terms of process was the fact that I used the fingered chord of D (A, played with the first finger on the G string, along with the open D) to check the tuning of the D and G string, while I also played a variable set of notes across the range of the fiddle to check the tuning of the fiddle as a whole. This was similar to the use of such chords and motifs as used by others in the sample (discussed earlier) to trial a tempered approach to tuning. Following this process the values of the strings of the fiddle were:

E': -5 cents  
A: -10 cents  
D,: -10 cents  
G,: -18 cents

The table below shows the tuning values (in cents) for each individual recorded during this process:

	Jimmy Campbell	Peter Campbell	Aidan O'Donnell
E'	-10	-9	-5
A	-11	-11	-10
D,	-14	-8	-10
G,	-16	-10	-7

Table 4.12: Tuning values for Jimmy Campbell, Peter Campbell and Aidan O'Donnell during the 'pass the fiddle' experiment.

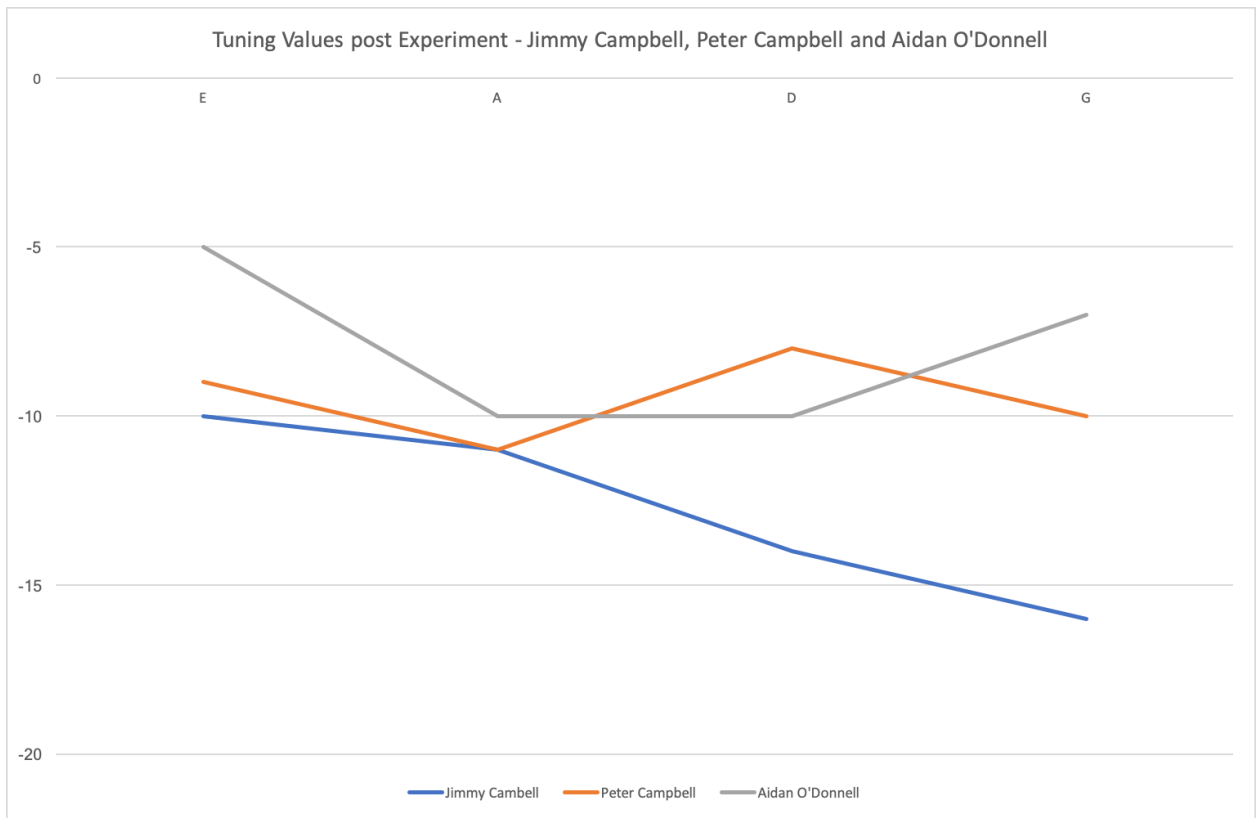


Fig 4.36: Tuning values for Jimmy and Peter Campbell, and myself during the 'pass the fiddle' experiment.

The results of this process validate both Jimmy and Peter Campbell's suggestion that individuality in terms of achieving the basic tuning of the fiddle is apparent within the tradition.

I also witnessed that my own perceptions of tuning discrepancies were flawed, much in the same way as were Keil's predictions of his own temporal discrepancies (Progler, 1995), and similar to the results suggested by Siegel alluded to above. While I suggested that the G string of Jimmy's fiddle was sharp, I tuned it flat and then sharp again until it arrived at the exact value from which I started. However, the experiment does reveal interesting data with regard to senses of tuning and individual perceptions of it.



Another pattern became noticeable in relation to the tuning of Jimmy Campbell's fiddle. As was the case with Iarfhlaith and Breffni's interview, similarities in tuning values were observed with regard to the specific fiddle tuned (in this case Jimmy Campbell's fiddle). This is plain to see from the charts below, where despite individuality being observed in terms of initial tuning, a relative convergence is observed when the same fiddle is tuned by all.

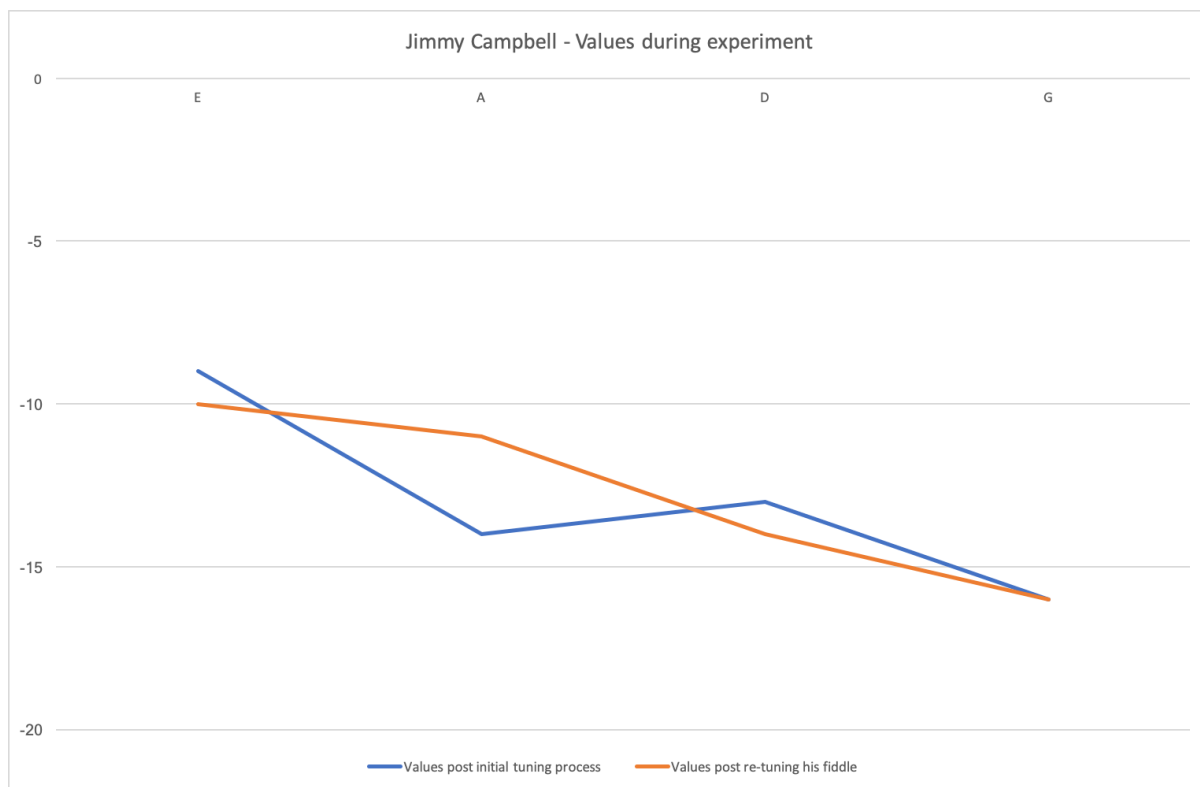


Fig 4.37: Jimmy Campbell's values during the 'pass the fiddle' experiment.

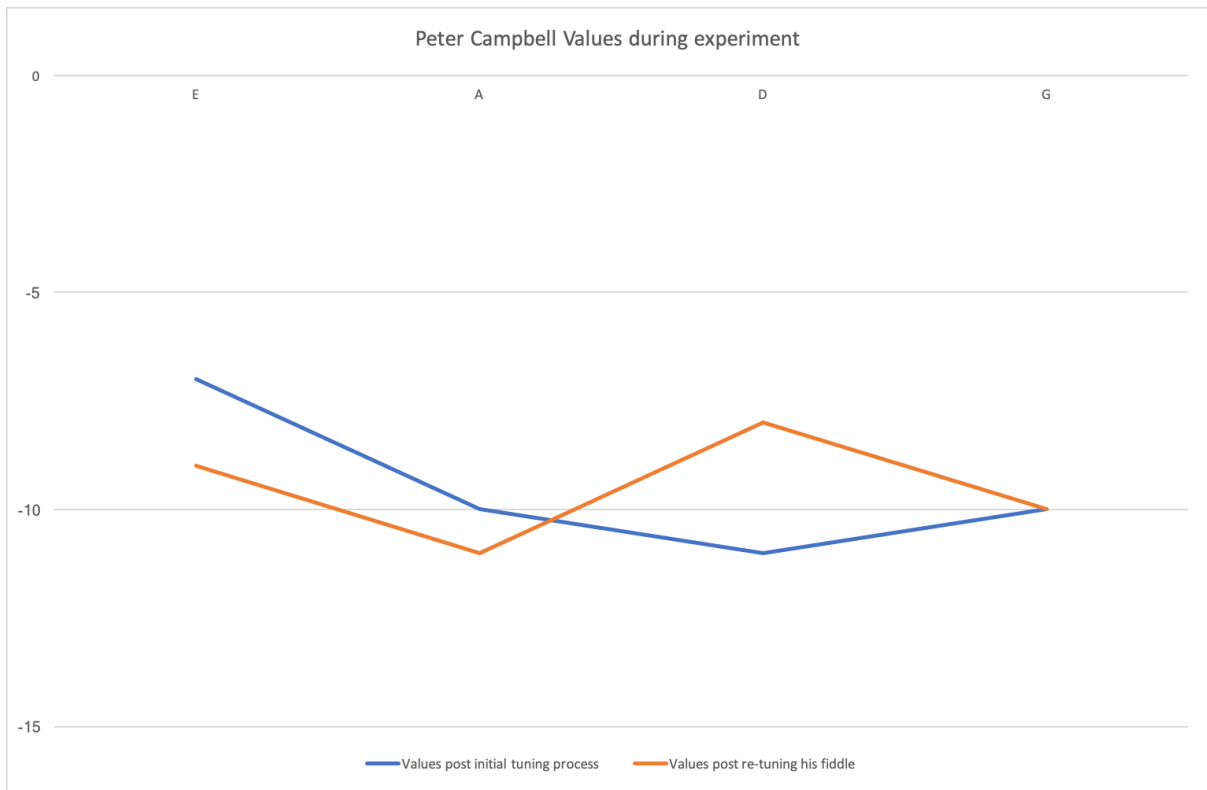


Fig 4.38: Peter Campbell's values during the 'pass the fiddle' experiment

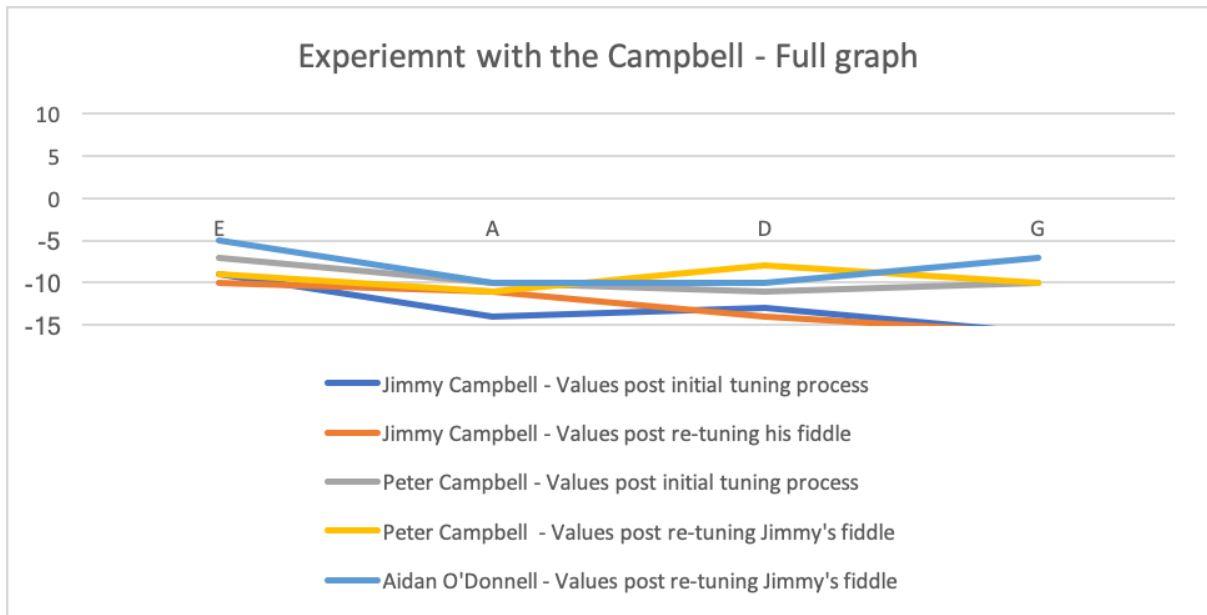


Fig 4.39: Full graph of values for Jimmy Campbell, Peter Campbell and Myself during the 'pass the fiddle' experiment.

This finding is significant, as it suggests that the instruments themselves may play a role in the context of the basic tuning values recorded.

#### 4.12 Conclusion

This chapter clearly outlines some of the processes through which the individuals create sound, with specific regard to the tuning of the strings of the instrument. The evidence cultivated here suggests that the creation of a ‘sound’ is primarily individualistic, but that individuals go through similar processes to achieve their particular sound. These processes are quantitative and qualitative; they involve actions taken by the fiddle player to physically tune the instrument, and actions that allow them to access a communal sound, in particular, the act of ‘tuning in’ to specific performance contexts. This study has identified that fiddlers may have an idiosyncratic perception of tuning, but that it is fluid and readily changes in relation to changed performance contexts. It also identified that for those players over the age of 65, the idiosyncratic perception of how sharp or flat the fiddle should be pitched (tuned) was widely discrepant. However, when each of their respective values was adjusted to a comparative point (i.e. adjusting each of their A string values to A=440 Hz, and adjusting each of the other strings by the relative increments<sup>68</sup>), it was observed that 3 out of the 4 fiddlers had achieved tuning values comparable to their younger contemporaries (i.e. the fiddle was in tune, but to a discrepant pitch value from some of the younger members of the sample). This is a significant finding, and is the first time that such data has been observed with regard to tuning in the Irish fiddle tradition. I suggest that this finding highlights the clear need for more research on this specific topic, where for the first time the ‘sound’ of an individual can be accurately quantified with regard to their contemporaries. This particular finding also clearly highlights the space through which an individual can have their own sound (by way of pitching their fiddle in an individual way) while also possessing elements of the communal sound (as evidenced by the comparative nature of their adjusted pitch values). The processes of conceptualization of the sound of the fiddle in the county are an important finding, where the embodiment of sound, in particular from categoric exemplars or older performance contexts such as the house dance tradition, has been referenced throughout. While many referenced that a preference existed in relation to pitching the fiddle slightly sharper, (in particular the E’ string), only marginally more than half of the sample actually tuned their fiddles this way. Therefore, this research finds that the communal perception of the sound of the Donegal fiddle tradition is not immediately related to the actual values recorded that describe that sound. However, as stated previously, this research is breaking new ground in this regard, and perhaps this finding may

---

<sup>68</sup> For example, if A was sharpened by 20 cents, then each of the other strings were also sharpened by 20 cents.

be challenged by fresh research with a larger sample. Also, it is likely that the communal perception of a 'sound' will change over time due to changed social realities and experience.

It has been observed that bow grip, pressure and direction (velocity) has an affect on some tuning discrepancies. While this is the first time that this this has been recorded specifically in relation to Irish traditional music, it is suggested that further research is necessary in this field. While the results outlined above provide evidence of the existence of such bow related discrepancies, the technology to empirically study their exact causes (in particular issues of tension and pressure) would be better suited to an independent dedicated scientific study, and unfortunately falls outside the remit of this research.

It was also demonstrated that when a fiddle was passed to different individuals the fiddle itself may prove to be a factor in terms of the tuning values recorded. The two tuning experiments carried out with Jimmy and Peter Campbell and Iarfhlaith and Breffni O'Donnell demonstrate successfully that individuality is a key element of tuning the fiddle, and that each individual has a slightly different 'sound' in terms of the basic tuning of their instruments. However, it is similarly demonstrated that participants tuned fiddles to values that were consistent to the fiddle rather than to the individual sense of tuning. This again highlights the complexity of examining such issues, as the process of 'tuning in' is extremely common, and the idiosyncratic perception of an individual's sound is remarkably fluid.

It was noted that physiology may be a factor in some discrepancies recorded between fiddle players. This was well demonstrated by Jimmy Campbell where by adjusting his grip in increments up the finger board, the tuning of the strings of the fiddle also sharpened, without any outside factor of influence. This is also an area worthy of further research.

In terms of geographic variation / typicality it has been observed that based on the divisions of Donegal into electoral areas that values do not indicate a specific set of tuning values which could encapsulate a Donegal sound. Similarly, on a micro level, evidence suggests that fiddlers in this sample do not tune to a similar 'standard' in the majority of the aforementioned areas. One exception to this is the Glenties electoral area, especially in the area around Glenties town itself, where it has been observed that fiddlers employ similar patterns in their tuning values, especially with regard to a sharpened value for the E' string, It was also demonstrated that when adjustments were made to account for changed mental representation of A to A=440 Hz)

that patterns were similar. However, the sharpening of the E string was a common feature in the county generally also, and therefore such commonality may be a feature of the more general sound rather than that of the immediate area.

Therefore, this chapter clearly highlights the processes and actions through which the individual fiddle player achieves a personal sound and how that personal sound relates to the creation of a sound representative of the larger community of practice. As per the suggested framework, it is these processes and actions that are of particular relevance to this research and the core of studying the step of an individual (or sound community) rather than the footprint.

## Chapter 5

### Finger related pitch differences in the fiddle tradition of Donegal

#### 5.0 Introduction

In this chapter the focus moves away from the tuning of the fiddle strings to the performance practice of finger related pitch differences. Again, the use of Melodyne has been central to the study of this aspect of the research, where patterns of practice are clearly visible, in the majority of cases, for the first time in relation to the Irish fiddle tradition. These patterns are the systems of practice that again link the individual to the larger community of sound. As with the tuning of the fiddle, this happens on two levels; in terms of the actions carried out by the fiddle player in the performance of the actual notes, and the conceptual (in some cases subconscious) actions, in particular the performance of participatory discrepancies and acts of ‘tuning in’.

#### 5.1 Assessing finger related discrepancy in the fiddle tradition of County Donegal

As with the discrepancies directly associated with the tuning of the strings of the fiddle discussed in Chapter 4, the method of examining discrepancies was to record the fiddlers in question in as a relaxed environment as possible. The recording of performance pieces was the third phase of the same interview process, where the interview was the first phase, followed by the tuning of the instrument, subsequently moving on to recording the performance of musical pieces once satisfactory tuning had been achieved. As with the tuning process, recordings of the performance pieces were uploaded to Melodyne for analysis, and coupled with the information relayed from the interview process, the data cultivated illuminated the topic, in particular in relation to the processes and shared values alluded to in the framework. I feel it is important to state that the fiddle was already tuned at this point of the recording, however, if an individual felt that they needed to readjust their tuning during the performance of the pieces in question, they were not inhibited from doing so.

Discrepancy in relation to the position of fingered related intonation to that of the tuned open strings was not the primary focus of this study, rather to record the existence of discrepancy in the first place. As has been observed in Chapter 4, idiosyncratic perception plays a unique role in how individuals may differentiate their particular sound in terms of experience and

context. In the examination of fingered pitch discrepancies, the existence of a similar idiosyncratic perception cannot be ruled out. Therefore, by measuring fingered pitch differences against the equal tempered scale (as suggested as part of the methodology) via Melodyne, comparable results can be cultivated. Where necessary, commentary on the open tuning of strings and their potential affect on certain recorded discrepancies will be discussed.

## **5.2 Expressive intonation**

I suggest that the terms ‘expressive intonation’ (Kanno, 2003) and ‘expressive intentions’ Keller (2014, p. 260) are a valuable lens through which to assess the individualities recorded in the practice of Donegal fiddle music by this sample of participants. Kanno (2003, p. 38) states that

“intonation is a powerful tool of expression for violinists and can play a critical part in the interpretation as a whole; and, second, that it can be articulated in infinitesimal detail and is available to every violinist. These points explain the importance violinists still attach to the issues of intonation in preparing a performance.”

While Kanno is describing the issue of intonation as it relates to a classical violinist, I suggest that this sentiment can correlate directly to the fiddle music of Co. Donegal. As we have observed by way of the recorded data regarding the basic tuning of the fiddles themselves, individuality is a meaningful ingredient in the performance of the fiddle music of the county; however, the idiosyncratic perceptions of the basic sound values that are associated with that individuality may be fluid, and reconfigured according to different performance contexts.

I suggest that this is also the case in terms of the performance of some finger related discrepancies, where ‘expressive intonation’ provides a platform for an individual to express a desire for membership of a certain community / context on a subconscious level by tuning in / out in terms of their performance practice. This process highlights their ‘expressive intention’, musically and socially.

### **5.2.1 Melodic Tuning**

As stated earlier in this thesis ‘Melodic tuning’ as outlined by Fyk occurs when intonation sharpens when played as part of an ascending melody and flattens when played as part of a descending melody. With regard to the fiddle music recorded in this sample, melodic tuning

seems to be a major consideration in assessing the type of action related differences at play between fiddlers. However, in this sample, as distinct to Fyk’s research, melodic tuning appears both as expected (in terms of sharpening with regard to an ascending melodic tune contour and flattening with regard to a descending one) and in direct contrast to this, where patterns for some individuals highlight this same process but in reverse (continually flattening with regard to ascending motifs and sharpening when played as part of a descending motif).

For example, one pattern of interest is Vincent’s use of D’ in the first part of the tune ‘The Gravel walks to Grannie’ (example below, D’ played using the third finger on the A string).

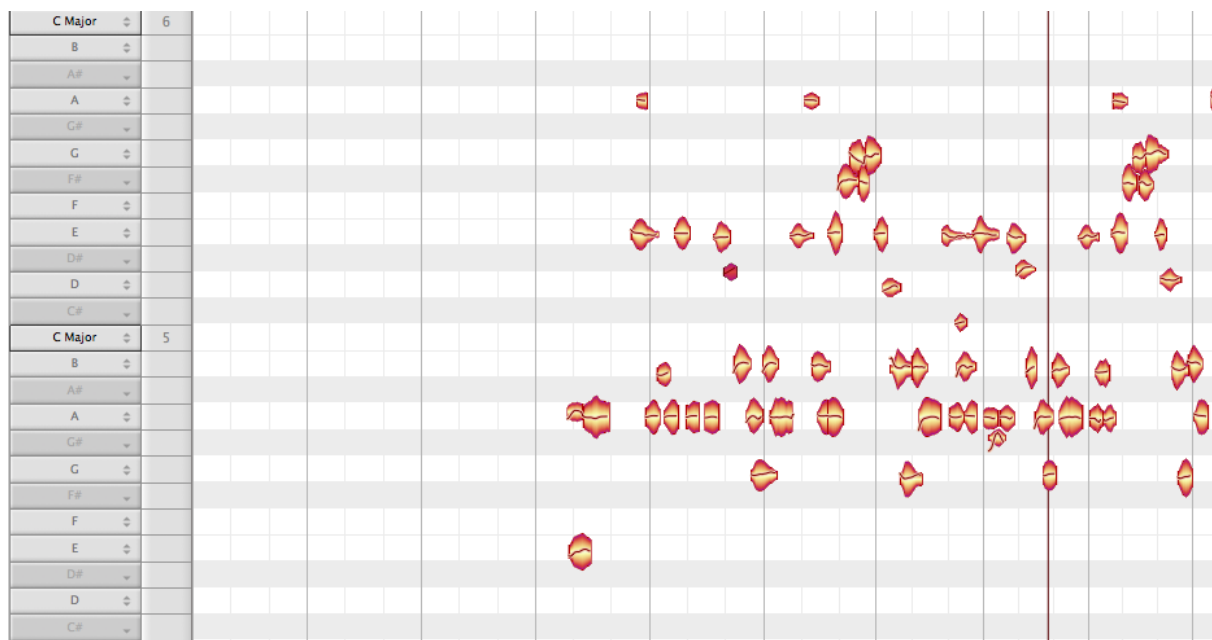


Fig. 5.1: Example of Vincent Campbell’s use of D’ in the opening part of ‘The Gravel Walks to Grannie’ with the D in question highlighted in the Melodyne window.

From a primary glance at Fig. 5.1 it is clear that discrepancy occurs in terms of the note D’ (D5, highlighted). Melodyne records values for each of these four notes are as follows: **D’# - 48**, **D’ - 11**, **D’# - 41**, **D’ +17**. These notes occur at 00.02 and 00.07 of the audio file for this piece. I was immediately drawn to the wide discrepancies recorded for this particular note. I searched for any potential patterns which could be seen in terms of the Melodyne file. I noticed



that the consistent sharpening of the D' to D'# (-48, -41) occurred exclusively as part of a descending motif in the first part of this tune.<sup>69</sup>

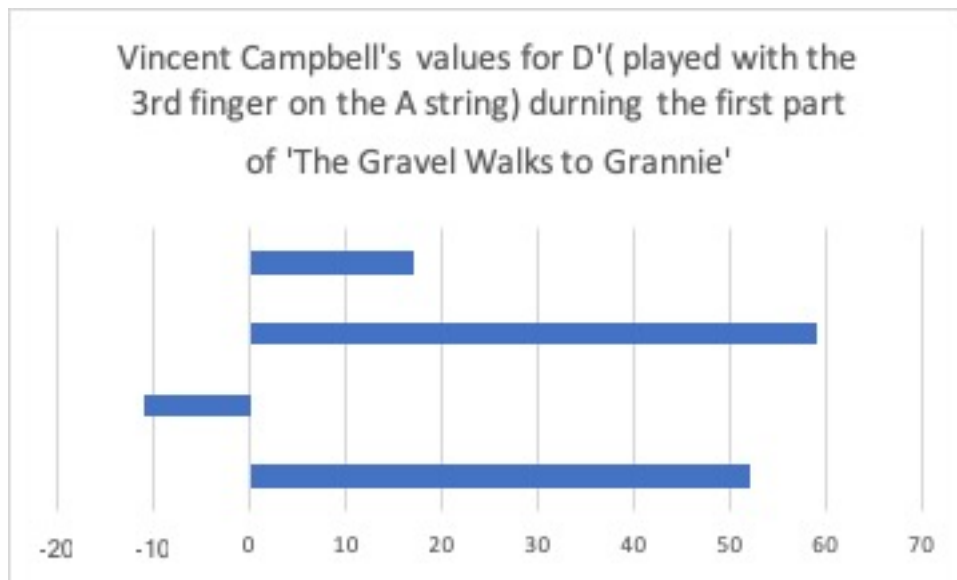


Fig. 5.2: Vincent Campbell's Values for D' in The Gravel Walks to Grannie

Similarly, in the second part of this tune a pattern emerges around a similar descending motif. The recorded value of the tonic note of A' (the first note in this motif) is 0. However, similar to the motif described above, the 2<sup>nd</sup> note of the motif is sharpened significantly to G#' -50 (played with the second finger on the E' string), instead of the expected G' natural of the scale. On the two remaining occasions that a G' is used, values indicate a dramatic adjustment to +11 and +13 cents respectively.

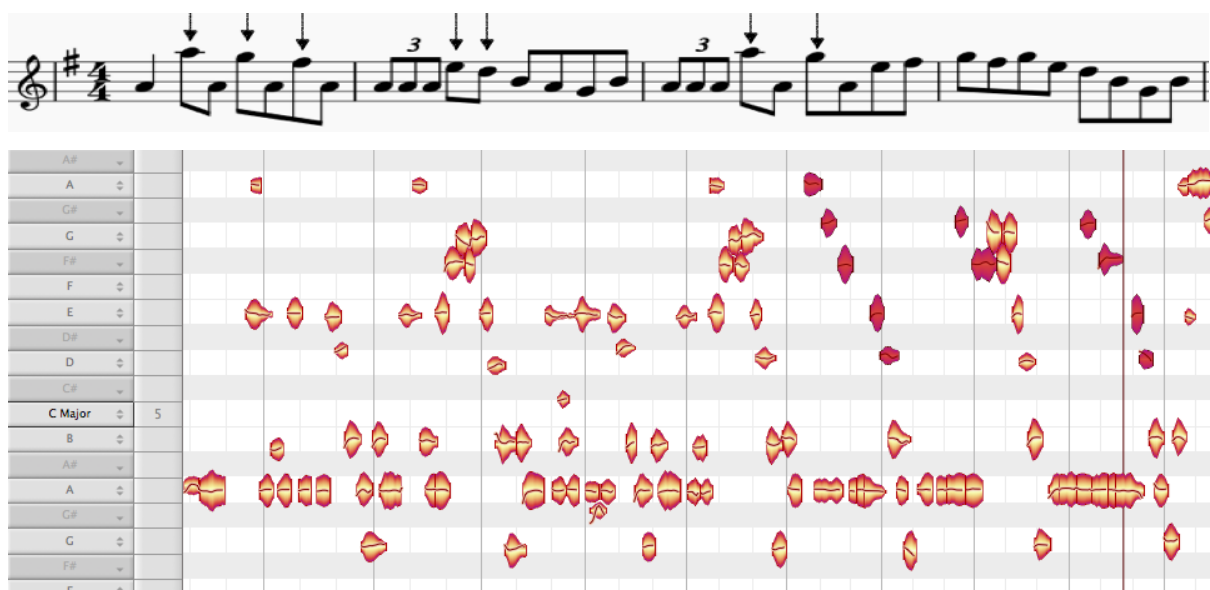


Fig. 5.3: Descending motif in Second part of Gravel Walks to Grannie (Highlighted). The first highlighted note in the Melodyne example corresponds directly to the first notated A' of the transcription above.

<sup>69</sup> This is clearly visible in Fig 5.1. above. The highlighted note is D# - 48. Motif is E', D#, B, A, G, B.

This suggests that this particular type of discrepancy may happen only when the A' played on the E' string with the third finger is played before the note in question (G' – played with the second finger on the same string), descending from that note.

Similar patterns are also observed with regard to Denise Boyle's performance practice of the same tune. Of particular interest are the values of +26, +21 and +33 recorded for C natural (played with the second finger on the A string) as performed as part of a descending passage in the first part of the tune (highlighted in the example below). In terms of the results cultivated by Fyk, the expected values for these notes should be lower than the values recorded for the played note (C) which occurs as part of the tune immediately before this passage, as part of an ascending melody. However, Boyle's performance of this piece indicates sharpened values for the note in the descending passage, where the values (in cents) sharpen to +26, +21 and +33 from the values of +6, +10 and +9 that were used in the ascending passage played immediately before.

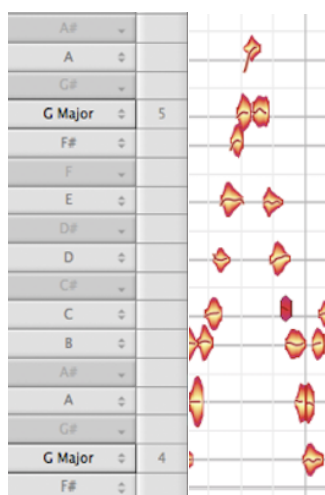


Fig. 5.4: Example of the regular sharpening of C (highlighted) when played in a descending passage. Note the visual deviance from the C played immediately before each highlighted note.

This occurrence was not unique to the performance of the C note, but rather was a common feature of performance. It is clearly evident in her use of D' (third finger on the A string) while performing the same tune, 'The Gravel Walks to Grannie', in which consistently raised values

were recorded for the said note while played in a descending passage immediately after the same note was played as part of an ascending passage.

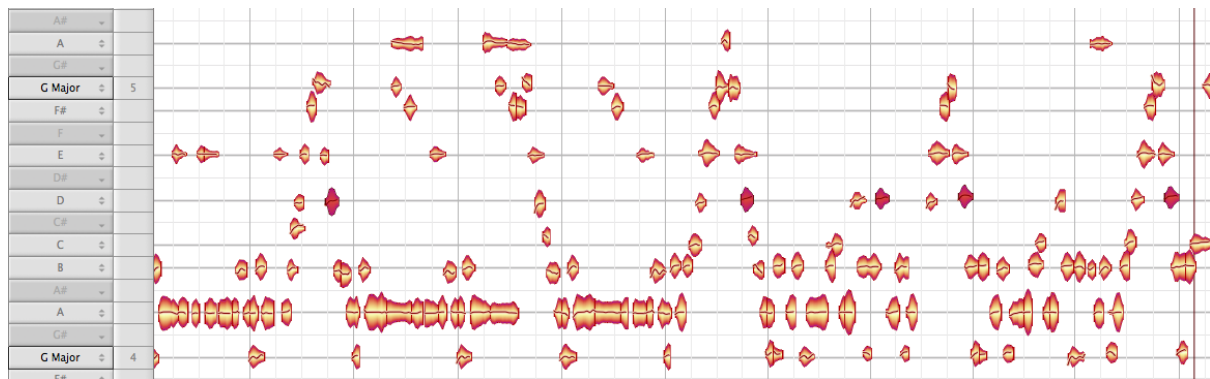


Fig. 5.5: An example of the use of a sharpened D' (highlighted) when utilised as part of a descending passage in the immediate aftermath of the same note being used in an ascending passage. Again, note the visual contrast between the highlighted note and the D' played immediately prior.

Patterns also emerge with regard to ascending and descending motifs as played by Mairéad Ní Mhaonaigh. However, these occur as suggested by Fyk (1995) and in direct contrast to Boyle and Campbell. As with many others in the sample, Ní Mhaonaigh exhibits many examples of ‘Melodic tuning’, where the Hz value of the note is either sharper or flatter depending on the direction of the motif in which the said note is performed. A good example of this in Ní Mhaonaigh’s performance is ‘All the way to Galway’. It is noted that upon a primary examination that much variance in values was observed in the finger placement of the E, (first finger on the D string) and the G (third finger on the D string) for this piece in particular. However, such variation was pattern orientated.

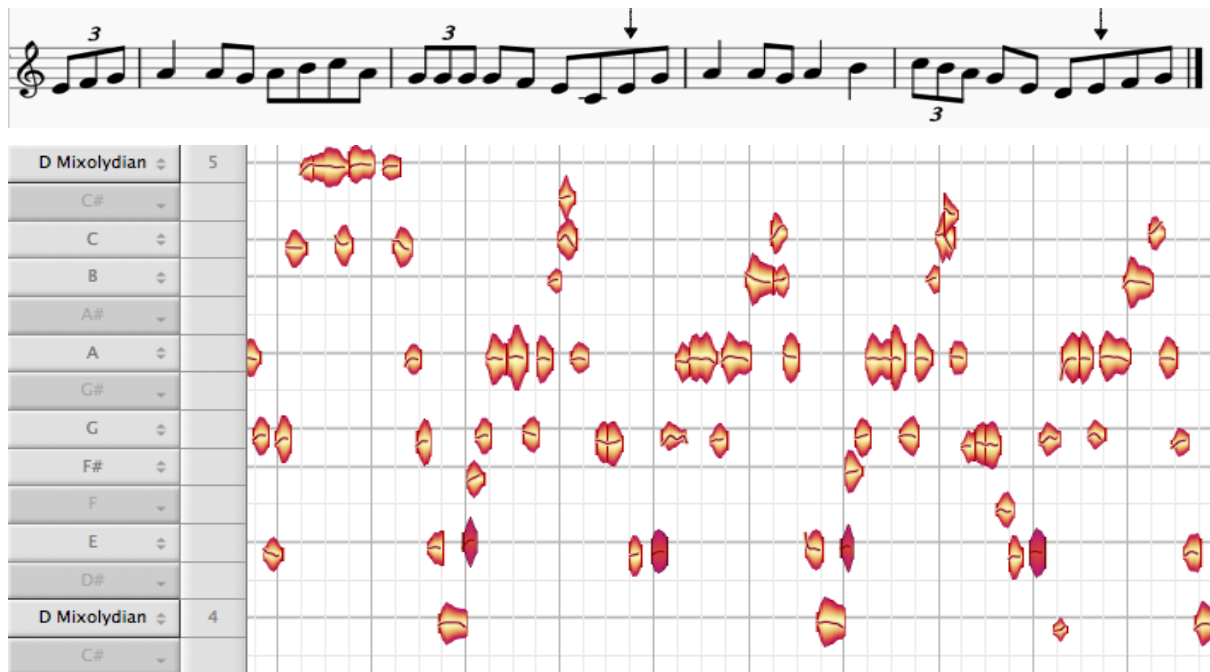


Fig. 5.6: Example of ‘Melodic Tuning’ in Ní Mhaonaigh’s performance of ‘All the Way to Galway’. Note the E, (highlighted) which is sharpened each time as an ascending motif is played (Melodyne example is repeated A part).

When examining the performance of the note E, (played with the first finger on D string) it was clearly notable that while melodic tuning was occurring each time the said note was performed as part of an ascending motif, that the values recorded as a whole were also discrepant. The example above shows the first part of the final round of ‘All the way to Galway’ as played by Ní Mhaonaigh. The values (in cents) recorded for the E, notes were as follows : -16, +1; -35, -26; -19, -14; -39,-28. While the paradigm of Melodic tuning can be applied to the performance of this section, it is more difficult to account for the wide range of general discrepancy recorded, in particular due to the fact that aurally such levels of discrepancy as are suggested by the data are not apparent to my ear.

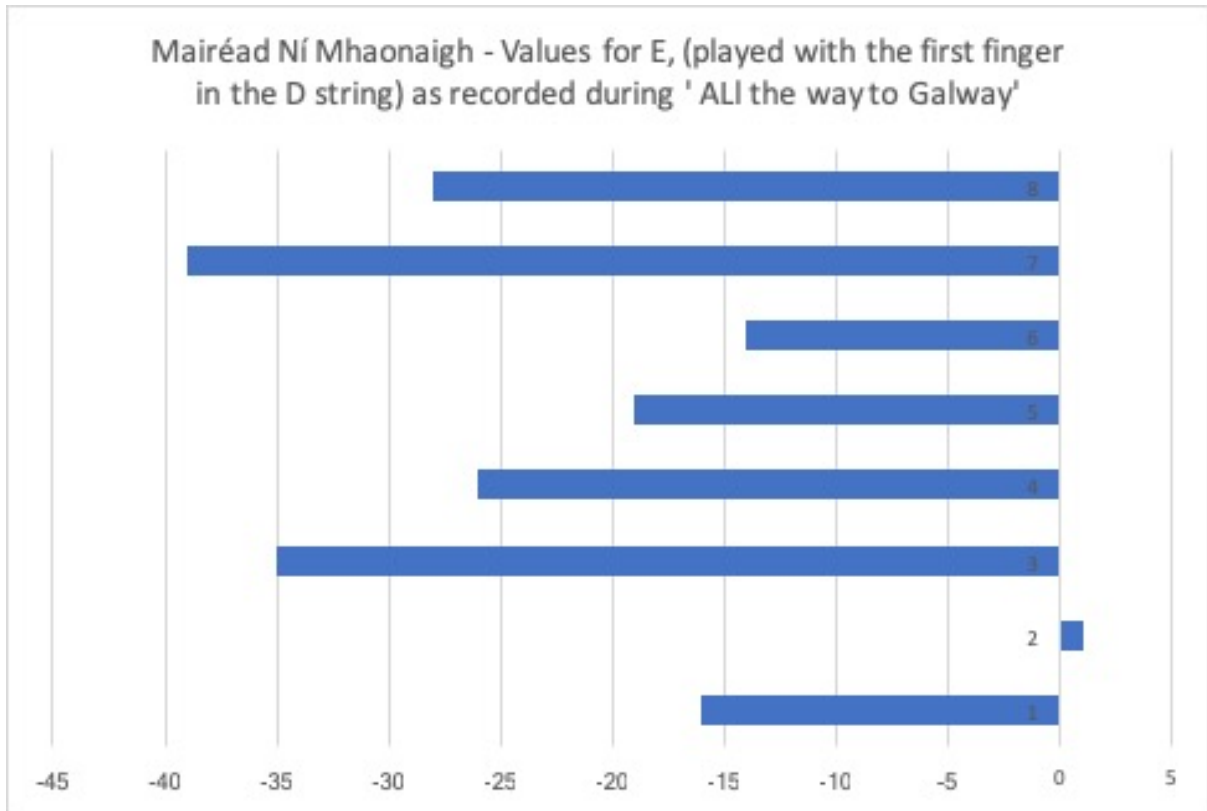


Fig. 5.7: Values for E, played by Mairéad Ní Mhaonaigh in All the way to Galway

Melanie Houton exhibits a keen sense of individuality, highlighted by her individual sense of tuning and her willingness to play her own compositions as part of this sample. Her use of the note G# played with the third finger on the D string when playing an untitled Jig in the key of A major is of note due to the fact of its presence in the melody as an intentional G# rather than an accidental (a common feature in the fiddle tradition which will be discussed as part of a stand alone section later in this chapter).

Values of this note as played in this tune are:

G# (values in cents): +69 (Described in Melodyne as A – 31), +42, +54,  
 +79 (Described as A – 21), +44, +6, +38, +45, +33.

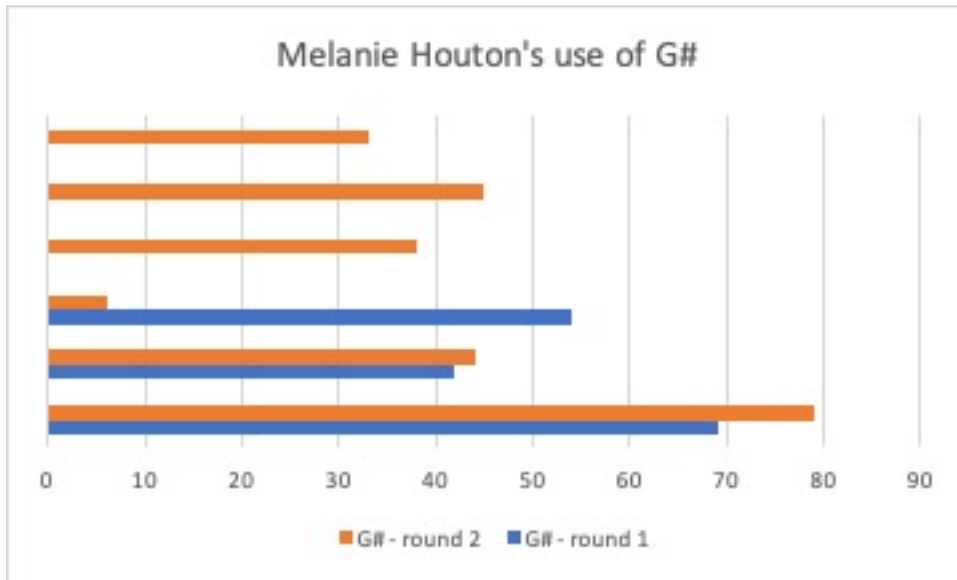


Fig 5.8: Melanie Houton's use of G#

Of note is the sole low value of + 6 cents which was recorded in Houton's only passage where a note lower than G# was playing in its immediate aftermath. Also, it is visible in the graph above that while there may be a spread of values apparent across the performance of the tune, that where they were played at the same sections of the repeated melody, that values are directly comparable. In this way, Fyk's 'Melodic Tuning' may fit as a descriptor of this type of discrepancy, where the sharpened notes appear as a reaction to an ascending motif (with the G# the lowest note in the given motif) while significantly flattened values appear when played as part of a descending motif.

While Roisin McGrory's data from Melodyne initially suggests that she is playing sharp of standard A = 440 Hz (as was predicted as natural by herself, see Fig 4.25), when adjustment is made to allow for her tuning practice, (her idiosyncratic perception of A) it becomes apparent that McGrory's fingering of the instrument is constant in terms of value and finger position. However, some discrepancies do become apparent which include melodic tuning as part of ascending and descending motifs. As was the case with Denise Boyle, in the majority of cases McGrory inverts what would be the normal practice in terms of the paradigm, instead sharpening values when performing descending scales and flattening them for ascending motifs.



Fig. 5.9 : Example of inverted Melodic tuning as performed by Roisin McGrory in Miss Drummond of Perth.

This was also the case with Dinny McLaughlin’s performance practice, where when examples were observed, they were also inverted.

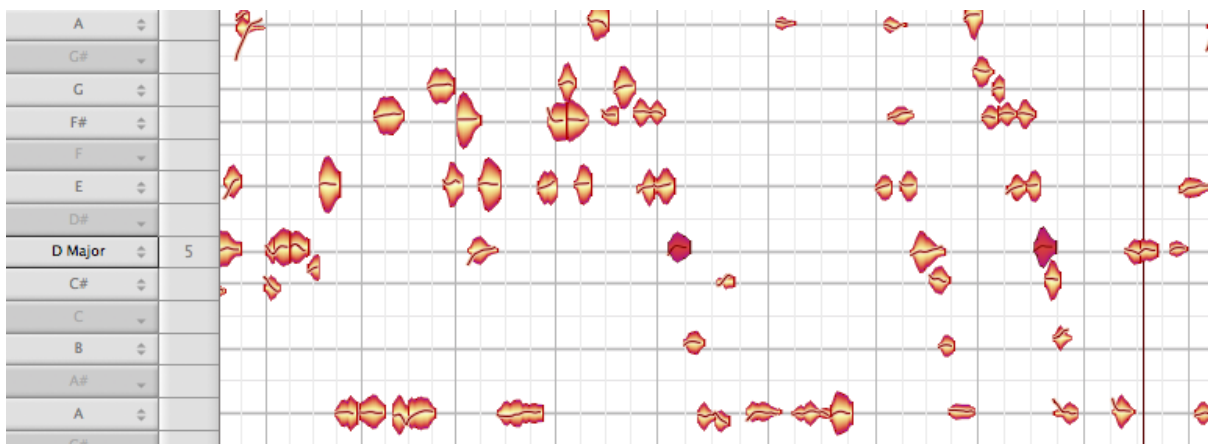


Fig 5.10: Example of inverted Melodic tuning with regard to Dinny McLaughlin’s performance practice.

This research indicates firmly that patterns consistent with Fyk’s suggestion of melodic tuning are observed as part of ascending and descending motifs. However, it is further observed that these are inverted in some cases, and are not uniform in terms of their recorded values. It is not clear as to why these are inverted by some members of the sample. Set divisions associated with the research topic (for example geographically, in terms of electoral areas or generationally) to not suggest that this is common to any grouping, but rather is an idiosyncratic aspect of the appropriate performance. Therefore, it is clear that the melodic tuning is an active process through which fiddlers engage with the local music tradition. The data presented here highlights that communally, the fiddlers of Donegal engage readily (sub consciously) in melodic tuning, but that they do so in an entirely individualistic capacity.

## 5.2.2 Harmonic Tuning

As observed in Chapter one, Fyk suggests that through ‘Harmonic Tuning’ that the violinist (or in the case of this research, the fiddle player) will attempt to conform to pulls of harmonic structure when playing with harmonic accompaniment. However, while the pieces recorded in this sample are solo, I suggest (and as has been demonstrated in chapter one (Dillane, 2000)) that each individual member of this sample of participants has a harmonic consciousness (which can be both conscious and sub-conscious); thus, even when not playing with harmonic accompaniment, that rules regarding the set chordal nature of certain tunes may influence the performance of certain notes related to such chordal structure. This suggests a pitch hierarchy within a scale as a consequence of gravitational pitch centres. Such pitch hierarchies in turn dictate the size and direction of intonational inflections, in particular with regard to notes that are less important in terms of the pitch hierarchy. I suggest that this may also be the case with the fiddlers of Co. Donegal, and that structural tones associated with embodied and contemporary contexts may play a role in understanding some fingered pitch differences performed by them.

### **5.3 Harmonic structure, rhythm and context**

I suggest that it has been observed through this research that certain sonic discrepancies have become embodied as part of the sonic fabric of the community, both by way of their context in expressing or communicating information in a particular performance context (e.g. the older house dance tradition) or as part of a collective harmonic consciousness. These are clearly visible by way of recorded patterns of fingered discrepancy collected by this research.

#### **5.3.1 Examples of discrepancy with regard to the tonic chord of a given piece.**

It has been observed through this research that participants were more likely to be less discrepant from an equal tempered standard when playing a given note as part of the tonic chord of a piece when it was played at a rhythmically significant point of the tune. For example while performing the highland ‘Miss Drummond of Perth’, in the first part of the tune alone Vincent uses the D’ note (played with the *third finger* on the A string) on 10 occasions. These note values ranged as follows (measurements in cents): +16, +29, +5, +13, +7, +28, +36, -6, +23, +6. It is observed that a wide range in values is recorded, +36 cents at its sharpest while -6 cents is the flattest D’ in this section. In the second part of the performance of this tune, the values for A’ (played with the *third finger* on the A string) are as follows: 0, +27, +12, +6, +21, 0, +28, +23. In looking at this data without listening to the recording, it would seem that



there is a high level of inaccuracy in the execution of consistent third finger placement with regard to Vincent's performance practice. I suggest this is not the case. Note the values of 0, +6 and 0 recorded above. Each of these notes occur on the tonic note of the piece and also on the premier beat of the bar.<sup>70</sup> These 'in tune' values are in direct contrast to the fingering of a section directly after them in the tune which moves from A' G' to A' in quick succession. In each instance the value for the first fingered A' in the sequence is +27,+28, while values for the second A' are +21 and +23. In my opinion this highlights the intentional and personal nature of Campbell's particular textural discrepancies in the performance of this piece.

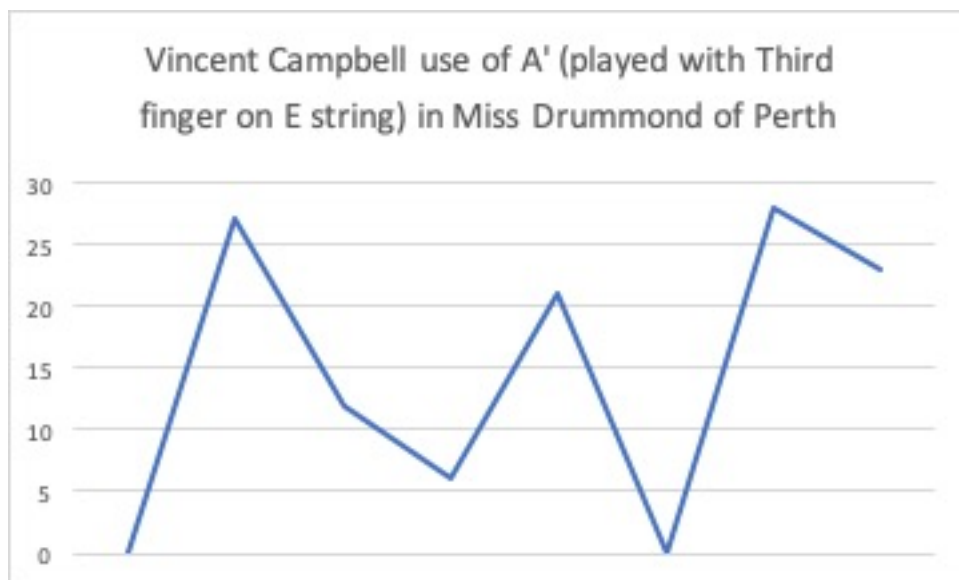


Fig 5.11: Vincent Campbell's use of A' in Miss Drummond of Perth

Similar patterns can be identified during Vincent's performance of 'The Gravel Walks to Grannie'. On each occasion that the tonic note of the piece (A) is played during the performance some variant of either tonal or temporal emphasis is employed. For example, each A (440) played during the performance of the opening part of this tune is played with a fourth finger drone to accentuate this note as the rhythmic and tonic centre of the piece. Despite the more challenging use of both the open string and the fourth finger, recorded values of this note are consistent. Values of each of these 4 recorded notes are (in cents) - 3, - 3, -2, -4. For each other instance that an open A is played in this section values range from -3 to +1.

### 5.3.2 Changes in textural patterns associated with chordal progression.

<sup>70</sup> These occur at 00:10, 00:19 and 00:21 secs respectively on the recording of Miss Drummond of Perth (Appendix ii).

Further than an adherence to the tonic chord, I suggest that certain patterns observed indicate slight deviations with regard to other chord or chordal patterns. Connaghan's performance of 'The Cameronian' is offered as one example of such deviation in intonational practice, with specific regard to her performance of the notes C (played with the second finger on the A string) and F, (also played with the second finger, on the D string), and B (played with the first finger on the A string). Upon interrogation of the phrases of which these notes are a part it is observed that two actions are happening simultaneously. Firstly, Fyk's 'Melodic Tuning' again seems to play a significant part. Each time these notes are played, they are flattened significantly as they appear before notes of a lower pitch (the C = -19 cents and -13 cents to a B note, C = -20 cents and -12 cents as part of an C / F chord inversion C A F,). However, as well as their presence in such a descending motion, on each occasion further analysis highlights the fact that these notes are played as the penultimate notes before a chordal change in the tune. I suggest that this is a major factor in assessing this discrepancy, as compared to other instances of 'Melodic Tuning' observed in Connaghan's playing. The discrepancy recorded in this instance is notably wider. It is not clear whether the level of discrepancy recorded for these notes is a conscious or sub-conscious action, but still highlights the capability of a traditional fiddle player such as Connaghan to hear harmonic changes and communicate the coming change in chord by means of the accenting of the said note by flattening its pitch. As a whole, the A part of this tune seems to be pitched at a lower overall pitch value than is normal for Connaghan in terms of her general performance practice. In particular, the note of B is played consistently flatter throughout the A part of this tune than would be normally expected when examining Connaghan's textural practices (the tune, 'Rocking the Cradle, excepted, see below). However, it is subsequently sharpened when played in the B part of the tune. I suggest that the discrepant (extremely flattened) values for B in the first part of this tune stem from a chordal (harmonic) issue. The first chord of this tune is an F, in which key the B should be played as a B flat. However, the tonal centre immediately changes back to the key of G theoretically sharpening the B from a B flat to a B natural. The microtonal values for the B recorded lies consistently somewhere between both these notes.

Values for B

	<u>A Part</u>	<u>B Part</u>
<u>Round 1:</u>	<b>-20</b> , -11, -11, -18, -20, -19, -16, <b>-20</b> , -16, -7, -13, -11, -15, -11, -12, -11	-5
<u>Round 2:</u>	<b>-16</b> , -17, -14, -15, -16, -12, -10, -9, <b>-12</b> , -11, -10, -11, -6, -1	0, <b>-16</b>

(leading back to final chord of F)

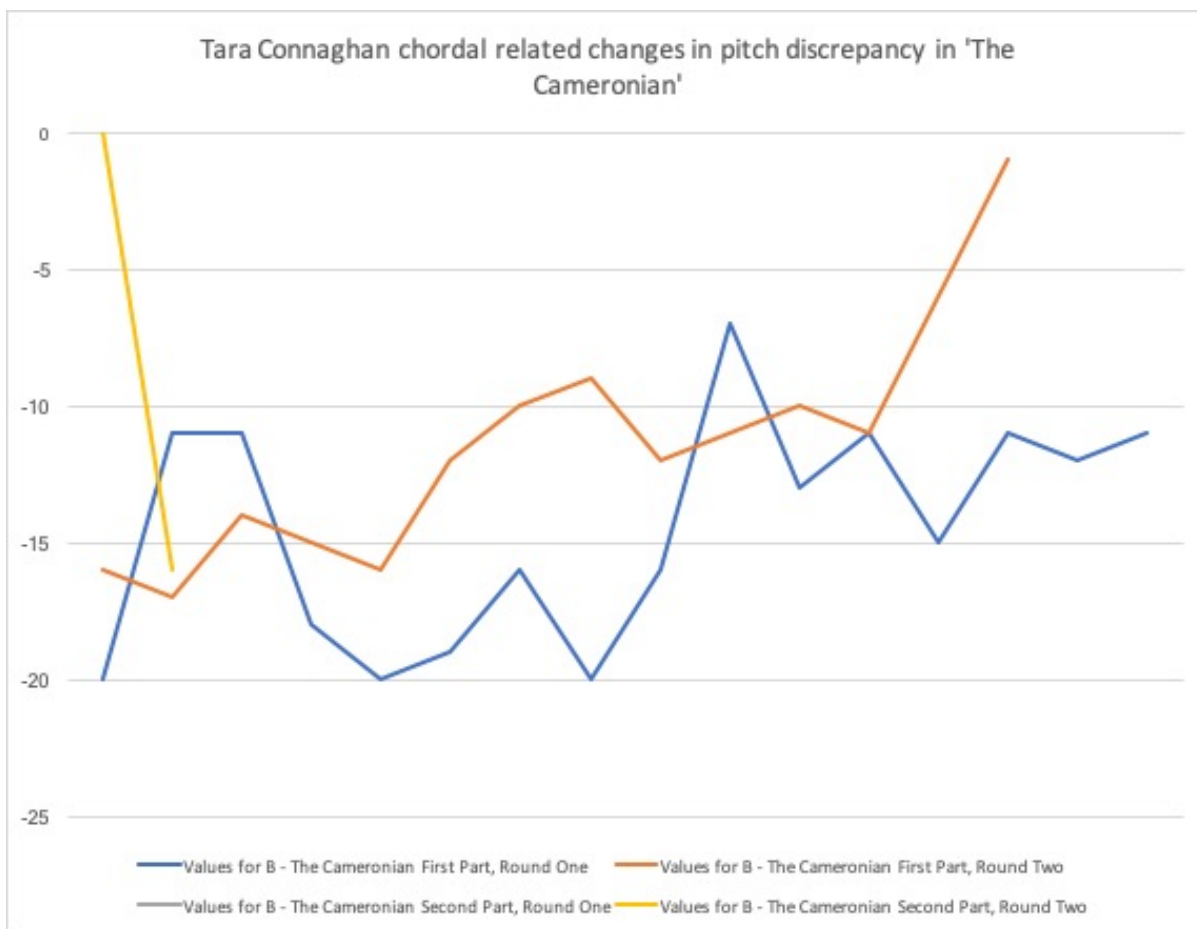


Fig 5.12: Example of chordal related changes in pitch discrepancy in Tara Connaghan’s performance of ‘The Cameronian’.

It is interesting to note the dramatic change in values for the B when played in the B part of the tune (-5 cents and 0). I have also highlighted in bold the values for the B notes played immediately before returning to the chordal F pattern. This further illuminates the level of intended discrepancy. I suggest that the variation in the playing of certain notes (i.e. the flattening of these notes) is a direct result of the musician reacting to the tonal centres of the tune. As a fundamental part of this reaction, hand position in terms of the neck of the fiddle must be considered as a potential reason for such consistent discrepancy. As Jimmy Campbell

suggested in his interview (above), variance in terms of where you hold the fiddle on the neck can have huge consequences in terms of the fingered intonation of the instrument. I suggest that this is a practice that is also employed by some musicians in terms of playing some of the ‘flat’ keys (such as E flat, B flat and F) whereby the performer in question shifts their hand back towards the peg box in an effort to achieve the appropriate sound for that key. Alternatively, some suggest that playing with a flat palm under the neck can have effective results in this regard (Caldwell 2013, p. 112.). I offer this as another potential explanation of the variance in textural discrepancy associated with the piece. I further suggest that the mental representation of the sound of a specific key may play a role in assessing the fingered discrepancies performed by traditional fiddle players in Co. Donegal. The tune in question as played by Connaghan, ‘The Cameronian’ is in the mode of G mixolydian, beginning with an F chord, which is unusual in the traditional canon. Instead, tunes usually begin on the tonic chord of the relevant key, and any chordal changes from the tonic happen after having that tonic established. I suggest that the tonal centre of the first chord in each part may have played a role in the fact that Connaghan’s performance practice is continually flatter in terms of the recorded finger discrepancies observed for the first part of the tune when compared to the second part of the tune. The tonal centre established in the first chord of the tune is F, where as the second part starts as normal, with the establishment of the tonic, followed by deviation chordally from there.

Similar results with regard to fingered discrepancies associated with harmonic (un) consciousness and modal difference were observed from Iarfhlaith and Breffni O’Donnell. I recorded each individual playing both scale of G and the scale of C. The results for each individual are outlined below. Note that I have written the values for each note under the symbol for each note. Therefore, the top line of each line should be read as normal from left to right where as the second line of each scale should be read from right to left. This provides a clearer comparison between the played notes as played when ascending and descending the scale.

**Iarfhlaithe:**

Scale of C:

C,	D,	E,	F,	G	A	B	C
<b>+15</b>	+4	+13	+0	<b>-3</b>	+4	+14	+7
<b>-7</b>	+5	+11	+5	<b>+14</b>	+4	+24	+9

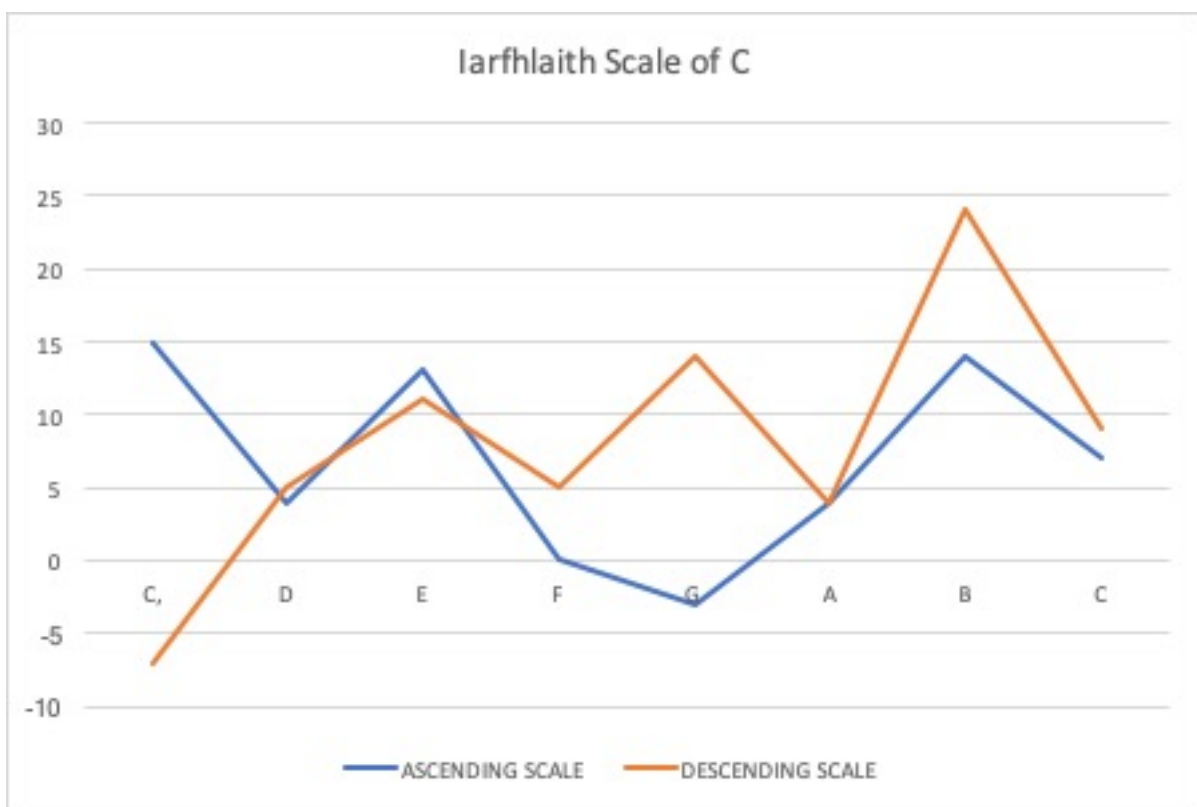


Fig 5.13: Iarfhlaithe O'Donnell's scale of C

Scale of G:

G,	A,	B,	C,	D,	E,	F#,	G
+5	+18	+21	<b>+9</b>	+5	+11	+10	<b>-5</b>
+0	-8	+11	<b>+12</b>	+5	+0	+16	<b>-5</b>

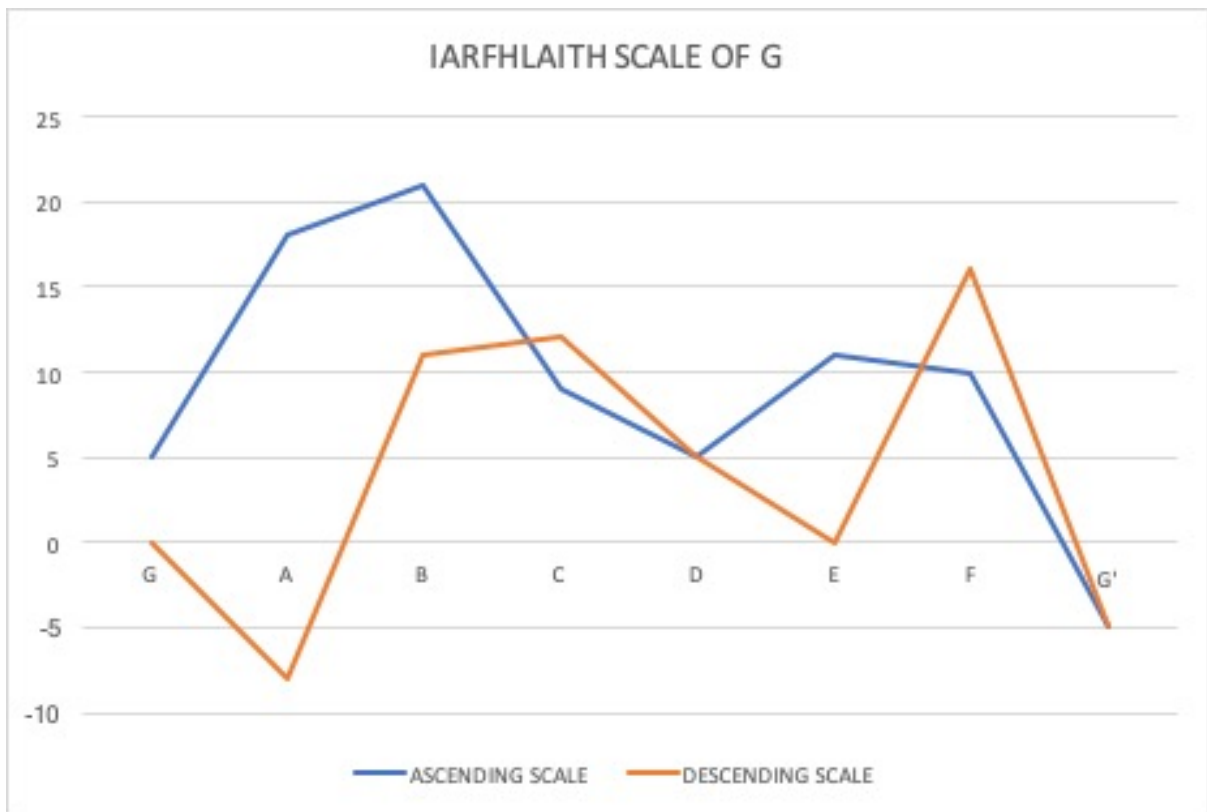


Fig 5.14: Iarfhlaith O'Donnell's scale of G

**Breffni:**

Scale of C:

C,	D,	E,	F,	G	A	B	C
<b>-11</b>	+4	+28	+0	<b>-1</b>	+9	+33	<b>+32</b>
<b>-2</b>	+4	+17	+2	<b>+0</b>	+12	+27	<b>+22</b>

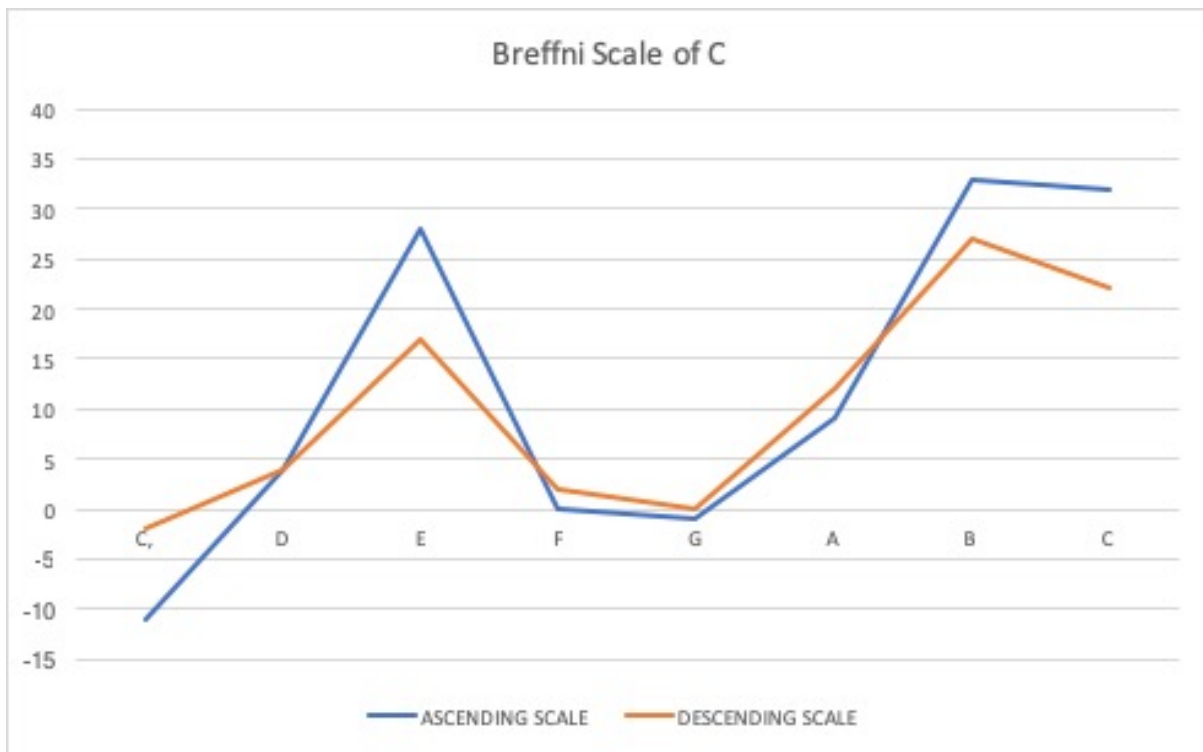


Fig. 5.15: Breffni O'Donnell's scale of C

Scale of G:

G	A	B	C	D'	E'	F#'	G'
<b>+15</b>	+14	+38	<b>+13</b>	+0	+14	+41	+17
<b>-3</b>	+14	+31	<b>+17</b>	+11	+14	+41	+15

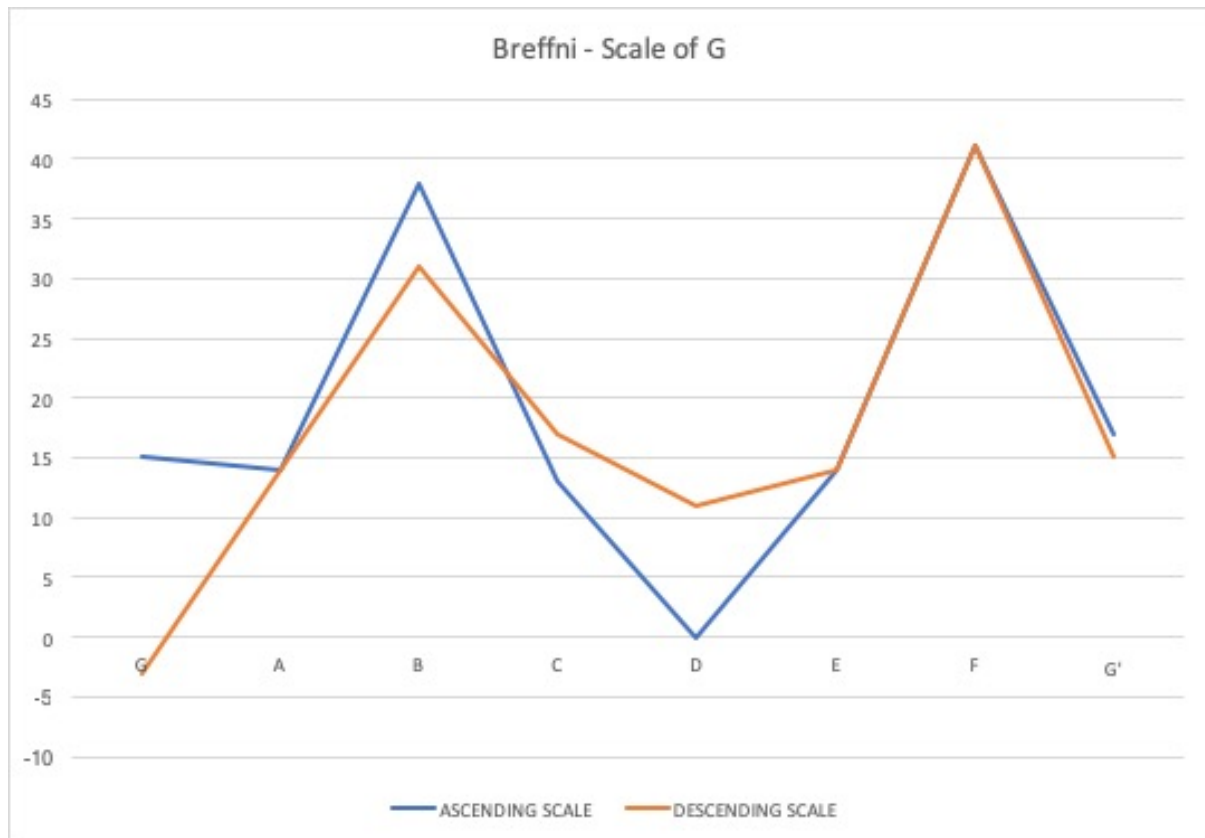


Fig. 5.16: Breffni O'Donnell's scale of G

\* Note that values in bold are those that appear in both scales, and are therefore comparable.

Upon examination of the scale values played by Iarfhlaith O'Donnell, discrepancies in how the note is played are indicated but no discernible pattern emerges with regard to the comparable notes of G and C. Exception to this is the value of +14 cents played for the G during the scale of C which can be clearly heard to be a mistake by the performer rather than an intentional choice.

However, with regard to the scale values played by Breffni O'Donnell, larger variance is recorded. Values for G change from -1 and +0 cents when played as part of the scale of C to



+15 and -3 when played as part of the scale of G. Values for the note of C (as played with the second finger on the A string) are also highly discrepant with values of +32 and +22 cents recorded when played as part of the scale of C as opposed to values of +13 and +17 cents when played as part of the scale of G. I suggest that some adjustment has been made to achieve the sense of tuning to scale associated with the mind of the individual, much in the same way that individual tuning is achieved with the open strings at a basic level, but that harmonic consciousness associated with the typicality of what that key sounds like to them may also be at play. It is also worthy to note the values recorded for the sharpened penultimate notes in the ascending scales, each significantly sharpened. This will be dealt with again later, with regard to McKerrell's use of modal complex and pitch hierarchy in traditional music.

Melanie Houton's visible deviations from equal tempered values in terms of fingered intonation is negligible. Upon a primary aural examination of her performances no extraordinary level of discrepancy is detected, apart from two tunes played by Houton which she had declared that she had not played in a while. These were 'Miss Drummond of Perth' and 'The Gravel Walks to Grannie'. Values seemed more discrepant with regard to these tunes, in particular her use of A' (third finger on the E string) and G' (second finger on the E string). However, this seemed more as a result of unintentional deviation rather than a pattern associated with the performance of the tune itself. Instead, upon examination through the prism of Melodyne, patterns emerged with regard to the constant positioning of Houton's second finger (in particular her playing of C# with regard to tunes rooted in the key of A major) and her third finger (again in particular when playing the notes of D' on the A string or A' on the E string, both played with the third finger). The example below shows a section of an untitled composition of Houton's played in the key of A major. In this example it is clear to see that Houton employs constantly sharpened values for the C# (played with the second finger).

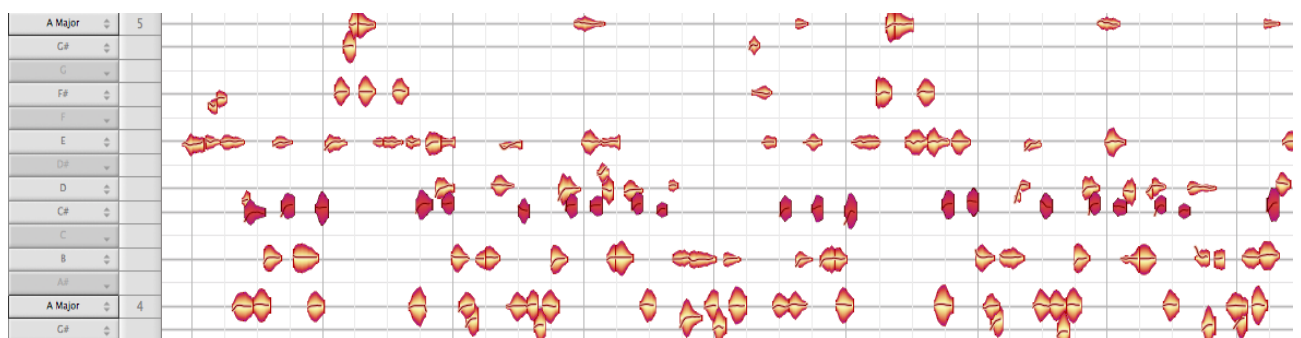


Fig. 5.17: Section of Houton's performance of her self composed reel. Note the use of continuously sharpened values for C# (highlighted).

Again, as is the case with Tara Connaghan, while some element of Melodic tuning may be a factor in these discrepancies, I suggest that harmonic (sub) consciousness may be the primary factor. This is based on the observation that the discrepancies recorded are sharper for the note of C# (central to the ‘sound’ of the key of A, and the tonic chord of the tune) than when played in tunes outside of this key.

### **5.3.3 Modal complex**

As discussed in Chapter one, I suggest that adopting aspects of McKerrell’s work on modal complex may be useful as a framework through which to examine some of the discrepancies observed with relation to the fiddle music of Co. Donegal. McKerrell suggests that the modal complex is the overall set of structures through which traditional Scottish musicians engage (in some cases sub consciously) with the music (2005, p. 140). While McKerrell highlights 7 separate structures of analysis of the performance of specific pieces in the examination of Scottish bagpiping, (each of which I suggest are translatable to act as a framework of any wider examination of Irish traditional music), I suggest that the formation of a smaller specific ‘complex’ may be more beneficial in engaging the specific observations relating to pitch discrepancy with regard to this research. The elements that I suggest that are included in our complex are pitch hierarchy, structural/ diagnostic tones and motifs. Each of these are relatable to each other, but will be dealt with separately as much as possible.

#### **5.3.3.1 Structural/ Diagnostic tones**

Pitch discrepancies directly related to structural / diagnostic tones as suggested by McKerrell have been directly observed in the fiddle music collected from this sample of participants. The observation of structural tones is also linked to notions of harmonic consciousness, motifs and performance context. This section aims to deal with this issue as separately as possible, however where major overlaps occur, these will be discussed as part of the narrative.

As outlined by McKerrell, structural or diagnostic tones are those tones that are integral to the structure of a given tune. Therefore, they are directly related to both the harmonic structure of the tune, and also pitch hierarchies established within the tune. This also links these tunes to motivic changes within aspects of certain tunes. With relation to competition bagpiping, McKerrell (2005, pp.148, 149) examines how certain tones act as leading notes by

causing tension against a tonic drone produced by the pipe, and subsequently, when the tone passes and is resolved, the tension dissipates. I suggest that this process is similarly observed with regard to this sample. However, I suggest that this concept can be expanded with regard to the examination of the fiddle music of Co. Donegal, as structural tones can not only exist as leading notes, but can be any number of notes central to the structure of the piece, most importantly of which is the tonic. Similarly, it has been observed that leading notes may not sit at the end of a part/ piece as suggested by McKerrrell, but may also appear in the course of a tune, in particular to communicate information regarding important motifs in a tune and the rhythm of the piece itself. In terms of this topic, Dave Flynn’s discussion on the relationship between traditional Irish Music and classical music through the prism of his own compositional practice is of relevance (2010, pp. 254, 261). Flynn makes reference to the 3<sup>rd</sup> and 7<sup>th</sup> notes of the scale as notes that have a particular variance across both genres, and in particular when referencing traditional music (he makes reference to James Byrne and John Doherty as particular examples), while also discussing the influence of piping drones in the development of harmonic consciousness in Ireland; it is suggested that while the south of the country may be influenced by the D drone of the pipes, that in Donegal, fiddlers have been influenced by an A drone, (likely as a result of the higher pitch of the bagpipe, which was more popular in the county), and therefore have specific discrepancies in terms of their tuning and intonational practices as a result. This relates directly to the analysis of structural tones in relation to the fiddle music of Co. Donegal as suggested here.

Examples of this are prevalent throughout this sample of participants. Two types of conscious discrepancy are mentioned by Breffni O’Donnell during his interview. The alternate use of G# or A flat played with the third finger or fourth finger on the D string in conjunction with the A string is used regularly in place of a crotchet A (50% of the performed occasions). His played example of this is transcribed below.



Fig. 5.18: Example of the use of an A flat accidental, played with the fourth finger in place of a crotchet value A in the Gravel Walks to Grannie as played by Breffni O’Donnell.

“Even though I know its an A, it’s a different tone of an A. It’s kinda unique and I like it.”

(Appendix A: Breffni O’Donnell interview)

The recorded values for these notes show that the margin of discrepancy intended for these played notes is very small. The open A in question had a value of +4 cents, while the A played with the fourth finger registered a value of A -2 cents, before resolving back to A + 0 cents. This is the preferred variation that is played in his performance practice. It would seem that due to this level of nuanced acknowledgment of the use of discrepant notes, that O’Donnell’s ability to hear the differences between note values is acute. O’Donnell suggests as part of the interview that this variation can be substituted and instead a G# will be used instead of a flattened A. In terms its use, a larger variation in regular values was observed. It was played twice in an example where values for the G# were recorded as -8 cents and + 49 cents.



Fig. 5.19: Example of the use of a G# accidental in place of a crotchet value A in the Gravel Walks to Grannie as played by Breffni O’Donnell.

O’Donnell also talks about the rhythmic use of slightly sharpened notes in the playing of a Highland.

“It gives it a rhythm and tone, gives it a drive. Sometimes it does affect the tuning aswell...James (Byrne) used to do it all the time”

(Appendix A: Breffni O’Donnell interview) (brackets by author).

The notes in question are leading notes, played just before a return to the tonic note of the key or another rhythmically important point in the tune. Breffni relates that the sharpening of these notes is accompanied with an upbow to put extra emphasis on the accented note. This combined rhythmical and intonational effect communicates information about the tune, especially with regard to the major accented beats and motifs audible in the tune. I suspect that this is a direct embodiment of the house dance tradition, where that communication was integral to the function of the dance. In the modern context, these ‘techniques’ seem to carry entirely different information. Identity is the main information carried by way of these nuances, in terms of ‘belonging’ or partaking in a particular sonic community. Examples of this type of effect are outlined below with regard to Breffni’s playing of ‘Miss Drummond of Perth’. From the Melodyne example it is clear that the highlighted notes are played sharper than the rest of the

notes associated with the line for F#. The values (in cents) for F# as played by Breffni in the first part of this piece are: F# +13, **+24**, +9, +18, +12, **+29**, +13, +19, +18. The values in bold are the values in question which occur immediately before the rhythmical change to the second bar of the piece.

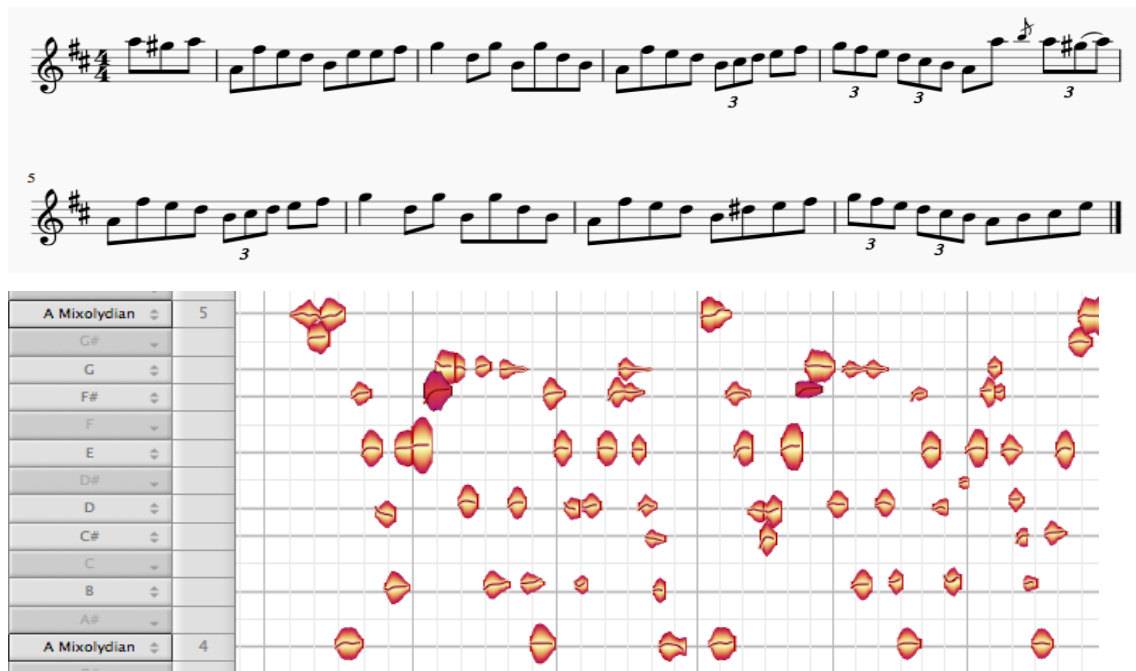


Fig. 5.20: First part of Miss Drummond of Perth as played by Breffni O'Donnell. Note the highlighted F# notes with values of + 24 and +29 cents respectively.

The data outlined above indicates that there is a conscious deviation from normal performance practice with regard to the highlighted values for the F#. These fall as predicted by the performer at specific intervals in the tune and are played as predicted. While these discrepancies also fall under the category of 'Melodic tuning' due to the fact that they are significantly sharper than normal, played in an ascending passage, it has been observed that they are also structural tones. These notes are played as the penultimate notes before a chordal change in the tune. It is not clear whether the level of discrepancy recorded for these notes is a conscious or sub-conscious action, but still highlights the capability of a traditional fiddle player such as O'Donnell to hear harmonic changes and communicate the coming change in chord by means of the accenting the said note by altering its pitch.

Roisin McGrory also sharpens notes leading to rhythmically important centres of a tune, where the note preceding the note in question is a previous note in the appropriate scale (e.g. G/G# to A when playing The Gravel Walks or Miss Drummond of Perth). This is similar to

the practice observed in the playing of Iarfhlaith and Breffni O'Donnell, where they stated that this was a stylistic trait of their sound community, in particular a technique used by James Byrne.

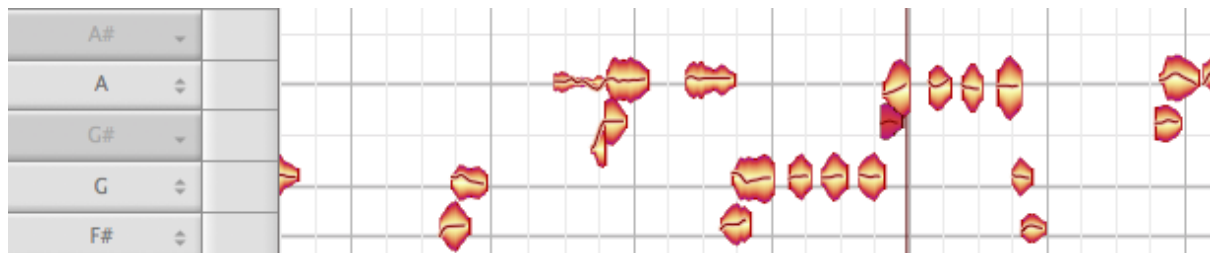


Fig. 5.21: Example of sharpened 'leading' note as played by Roisin McGrory. A clear distinction is observed between the usual G note and the both distinct values for G# (the leading note).

These notes are reminiscent of similar discrepancies found at similar points of the tunes played by Jimmy and Vincent Campbell. These will be discussed in the later section on motifs. However, in terms of this research, it is of interest that comparable discrepancies are happening at the same place in a tune. To me this indicates in a real way the notion of a living cultural memory in this area, where certain traits are passed down through a generation while the relatable context for such a trait or action is no longer in popular existence, in particular the house dance tradition context.

### 5.3.3.2 Discrepancy associated with the performance of motifs

It has been observed that fiddlers are more likely to perform certain patterns of discrepancy when associated with related motifs in a tune. Therefore, when playing a certain motif in a tune, a fiddle player may deviate from usual intonational practice, where recorded values are flattened or sharpened. Similarly, it has been observed that this practice may have become embodied in certain motifs played in certain tunes in the tradition, although more research with a wider sample of recorded tunes would be necessary to definitively report this finding.

Evidence for this type of discrepancy, centred around particular motifs, is particularly evident when examining those in the sample who played the highland 'Miss Drummond of Perth'. The motif played in bar 2 of the piece is repeated throughout the tune, and falls on an important structural/ chordal changes. It falls on the downbeat of the tune, and also relates to a significant change in the steps of the relevant highland dance.

### 5.3.3.2.1 Relationship between pitch discrepancy and the downbeat - Case Study: Miss Drummond of Perth

Examples of this include Denise Boyle's performance of the piece. Discrepant patterns are visible (and clearly audible) in Denise's execution of this piece. Her deviation from normal practice when executing the motif from bar 2 (below) consists of a continual sharpening of the G' (second finger on the E string) throughout the tune. This is consistent with Jimmy Campbell's performance of this piece. I suggest that these deviations from normal performance practice are an imitation of Campbell's textural idiosyncrasies in an effort to infer the earlier context associated with this tune (a tune to be danced to). This also raises issues of identity and authenticity as a conscious effort is made by one individual to deviate from their own common performance practice to imitate that of another individual.

#### Example A – Denise Boyle – Miss Drummond of Perth

The image displays a musical score for the piece 'Miss Drummond of Perth' in G major, 4/4 time. The score is presented in four staves of music. The first three staves contain the main melody, which is characterized by a rhythmic pattern of eighth and sixteenth notes. The fourth staff shows a simplified version of the melody, likely representing the pitch contour. Below the score is a pitch contour visualization, which is a grid-based representation of the pitch changes over time. The vertical axis represents pitch, with labels for B, A#, A, G#, G, F#, F, E, D#, D, C#, C, B, A#, and G. The horizontal axis represents time, with a vertical line indicating the downbeat. The visualization shows a series of red and orange diamond-shaped markers that represent the pitch of the notes in the melody. The markers are arranged in a way that shows the pitch rising and falling over time, with a notable sharpening of the G' (second finger on the E string) throughout the tune.

Example B – Jimmy Campbell – Miss Drummond of Perth

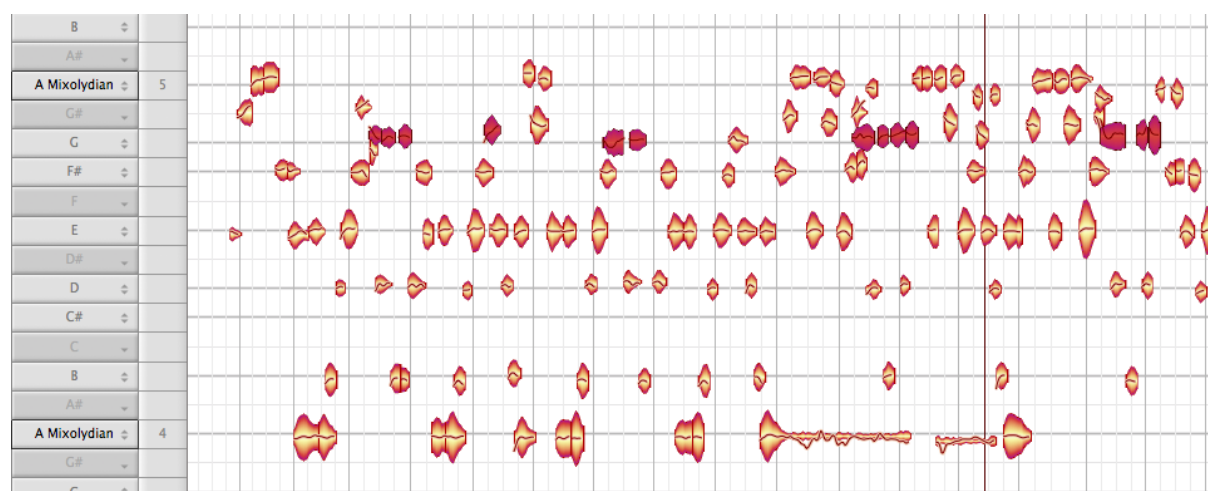


Fig. 5.22: An example of the sharpened G' motif (highlighted) in the performance of Miss Drummond of Perth as played by Denise Boyle (A) and Jimmy Campbell (B).

In Tara Connaghan's performance of 'Miss Drummond of Perth' it is clearly visible upon examination of the relevant Melodyne file that discrepancies occur with regard to her finger placement of certain notes. Most obvious are the discrepant values recorded for her performance of the G' note (again played with the second finger on the E string), with particular regard to the phrase first heard in the second bar of the tune (G'\_D'G' BG'D'G'). Upon the first round of this tune alone the values of these notes as played on each occasion are:



G'    -13-10 -3 -7                    -11, -16, -6, -7,                    -8,-12,-10, -6                    -8, -5, -6,  
n/p<sup>71</sup>

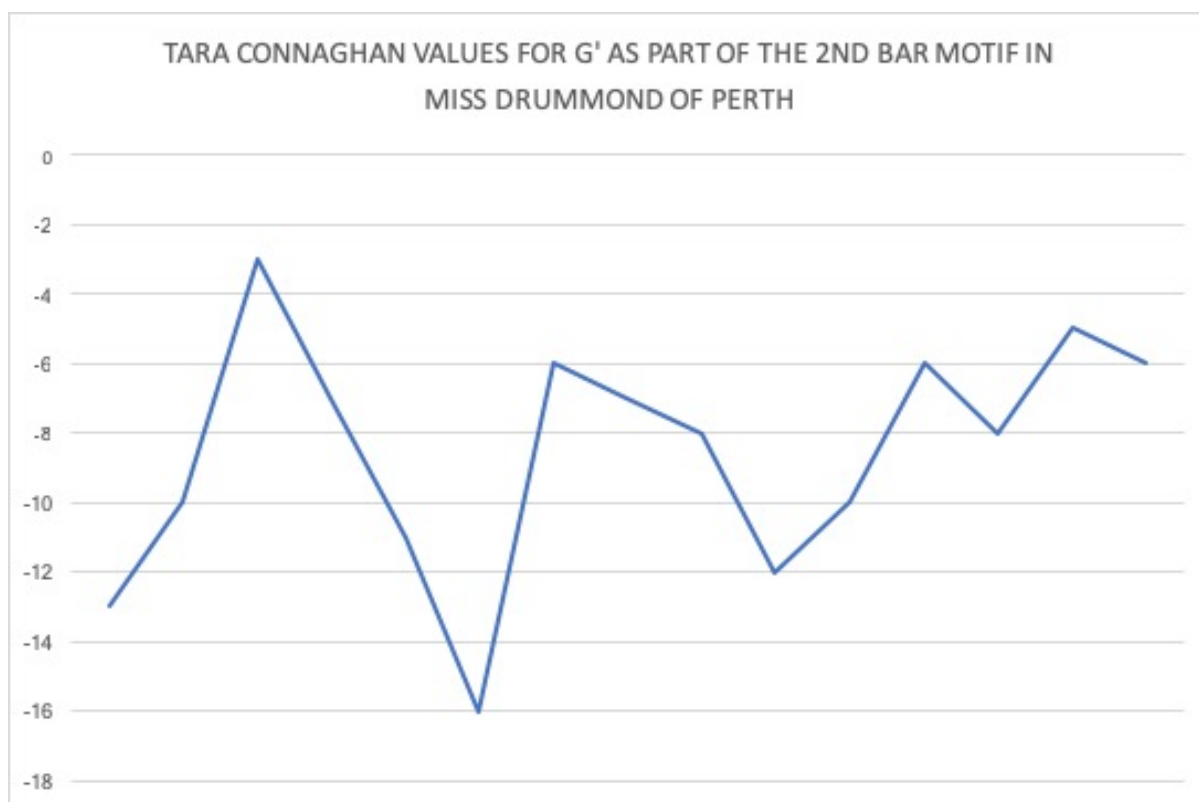


Fig 5.23: Tara Connaghan values for G' as part of the 2<sup>nd</sup> bar motif in Miss Drummond of Perth.

There is no discernible pattern that emerges from these values. I suggest that this type of discrepancy is a conscious deviation from normal practice by the performer in an effort to imitate versions of the tune performed by other categoric exemplars of the area, for example the version played by the Campbells and subsequently Denise Boyle. It should be noted in each of the performances of ‘Miss Drummond of Perth’ recorded by Peter Campbell, Denise Boyle and Tara Connaghan (the younger generation of fiddlers in this area) that while textural differences in terms of the tuning of the instrument and intonational action on the fiddle are apparent between them, each conform to the notion of emphasising this passage by means of a deviation from their normal performance practice. This highlights an embodiment of certain aspects of the local house dance tradition in this area, where by individuals removed from the context of this tradition in terms of era attempt to conform to the sonic palette associated with it. When played in the appropriate cultural context (for example the one in which Jimmy and Vincent Campbell perform this tune) textural discrepancy becomes important as a means of

<sup>71</sup> n/p : not played.

communication, and so the passage is played in this way to correspond to a particular part of the associated dance and infer meaning. While the original context of this performance practice is gone, it should be noted that a certain revival of the house dances of the area have taken place under the auspices of Cairdeas na bhFidiléirí.

Others from the sample from outside the immediate Glenties similarly emphasised this motif. Upon examination of Martin McGinley’s performance of ‘Miss Drummond of Perth’ and ‘The Gravel walks to Grannie’, it is apparent that his use of G’ (second finger on the E string) is continually sharp (96.2% of the entire number of times played). However, these sharpened notes have varying values according to where in each piece they are played. In the performance of ‘Miss Drummond of Perth’ examination of the recorded data shows that when performing the motif played in the 2<sup>nd</sup> bar of the piece, a continued sharpening of the played note is employed. The table below shows the values for G’ recorded for each of these sections throughout the 4 rounds of the tune performed. From an examination of the values, it is clear that wide numerical discrepancies are apparent between the lowest and highest values for G’ and that the higher values recorded in each case are found towards the end of the motif.

Values for G’ (2<sup>nd</sup> bar motif Miss Drummond of Perth)

Round 1:	+4, - 10, -1	-9, +2,+9,+8	+9, +11, +13	+13,+18,+17,+17
Round 2:	+7, +17,+14	+5, +13,+17	+12, +17,+19+30*	+14, +17, +24
Round 3:	-7, 0, 0	+1,+10,+13	+4,+9,+9	+4,+10,+9,+9
Round 4:	+1, +3,+9,+8	+13, +,17, +23	+9, +14,+12	+12, +10, +17, +2 +20,+22

\*This Value is a leading note, consciously sharpened in anticipation of the A’ played directly after.

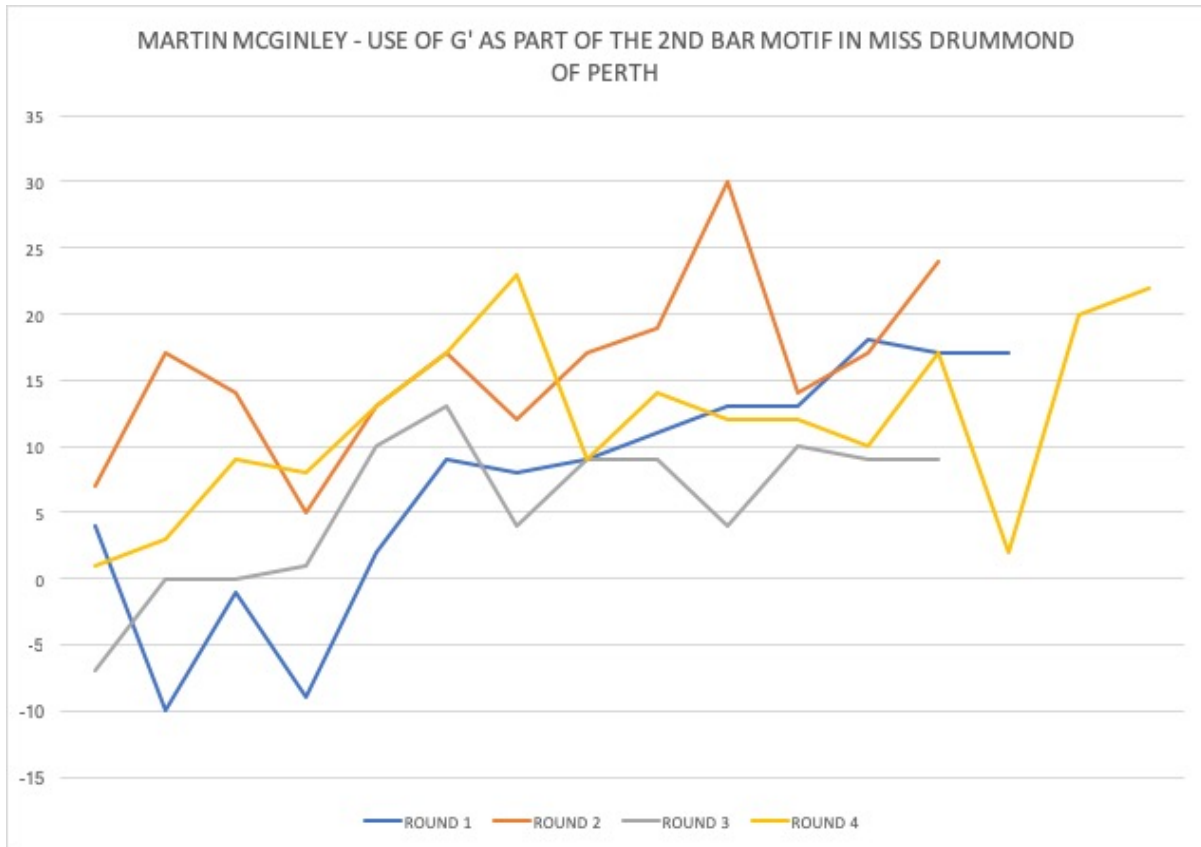


Fig 5.24: Martin McGinley’s use of G’ as part of the 2<sup>nd</sup> bar motif in Miss Drummond of Perth

This pattern echoes the sharpened use of this note by other members of this sample when playing this tune. To this end, it can be suggested that McGinley is conforming to the suggested narrative; that a form of aural communication is apparent at this point in this particular tune, and that the technique used for such communication (use of a sharpened G’ at that point of the tune) has become an embodied part of the tradition to many members of this sample.

Again, when performing ‘Miss Drummond of Perth’, the use of a sharpened G was abundant in Michéal Cherry’s performance. As with others in the sample, Cherry sharpens this note during the motif played at bar two of the piece. This is indicative of Cherry’s embodiment of the fiddle tradition of south west Donegal and his awareness of the elements that make up that particular sound.

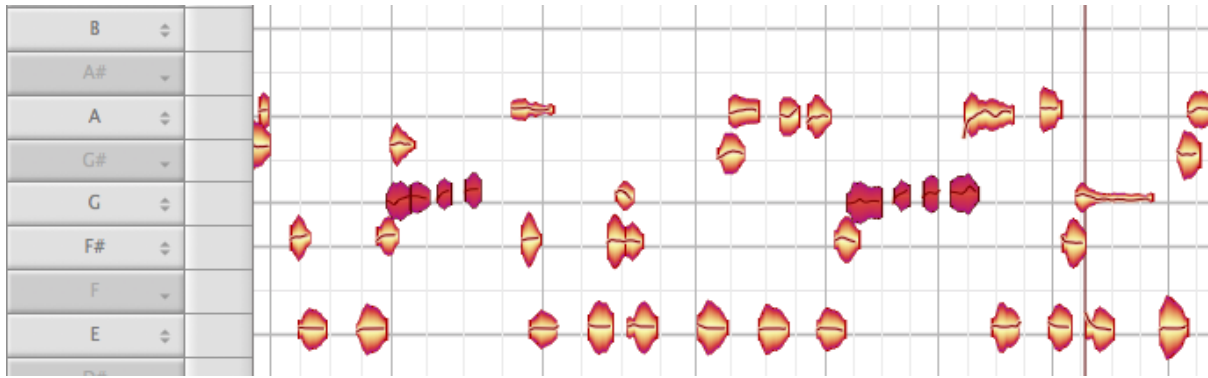


Fig. 5.25: Example of Cherry’s use of sharpened G’ during the playing of the motif in bar two of Miss Drummond of Perth.

Breffni O’Donnell also emphasised the second motif of this tune, but not with relation to the G’ (second finger on the E string), but rather the D’ (third finger on the A string). The D’ note in question is flattened (+7 cents) before descending and ascending from a B note (played with the first finger on the same A string), before being sharpened (+29 cents) when played for the second time.

### 5.3.3.2.2 Further examples of motif related discrepancy in the sample

McGinley similarly employs the use of a sharpened G when performing the Gravel Walks to Grannie, in particular with regard to the premier motif of the final part of the tune. Because of the nature of the physical demand associated with the playing of the said motif (using the second finger to play consecutive notes on two strings in rapid succession) I examined the data to ascertain if physical aspects of the performance had a direct correlation with the textural discrepancies performed. While others in the sample exhibited issues with regard to such discrepancy, data suggests that McGinley does not display such issues. Values collected are comparable to his performance of the said notes as performed at other stages throughout the performance of other pieces recorded. Also of note in relation to this is his performance of ‘The Pigeon on the Gate’, where a similar physical demand is required for the playing of the primary motif of the piece (using the first finger over the A and D strings to play consecutive notes in prompt succession). While his performance of each of these notes exhibit flattened values compared to the equal tempered scale used for analysis by Melodyne, they are consistent with his general performance practice.

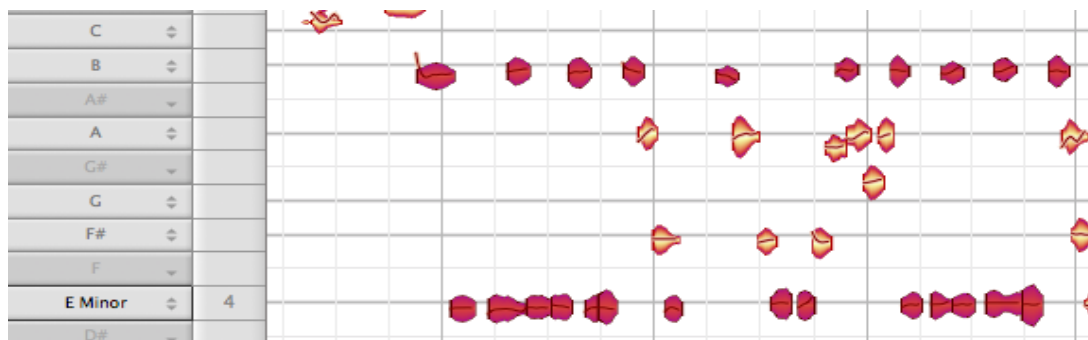


Fig. 5.26: Example of consistently flattened values recorded for B and E, when played with the first finger on the A and D strings. Note the relatively consistent values recorded for the performance of each note.

Similarly, Maireád Ní Mhaonaigh exhibited variation with regard to her third finger discrepancy with regard to specific motifs. Her finger placement with regard to the third finger also seems to be less standardised than others in the sample. This is across the board in terms of her general performance practice. Examples include her use of the D' (played with the third finger on the A string) in 'Tommy Peoples' and G (played with the third finger on the D string) in 'All the Way to Galway'. It would seem that certain discrepancy patterns for Ní Mhaonaigh also fall outside the patterns expected for melodic/ chromatic tuning as Fyk suggests, but rather are consistent for small repeated section of a piece. A good example of this is in the first part of 'Tommy Peoples'. The excerpts below show the staff notated section taken for the performance of the tune, with the Melodyne example of the same piece underneath. Note the highlighted motif, and its corresponding flattened values.

# Tommy People

Section (Round 3) as played by Mairead Ní Mhaonaigh

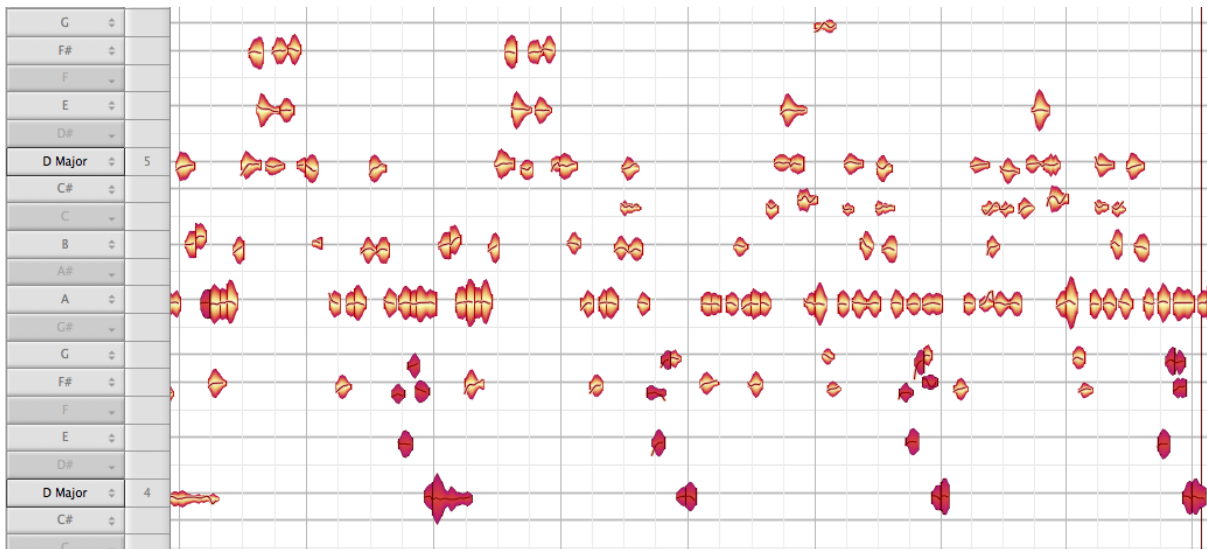


Fig 5.27: Examples of section of Tommy Peoples' as played by Mairead Ní Mhaonaigh. Note the discrepant values visible for F# in playing the motif in bars 4, 8, 12 and 16.

What these observations suggest is that certain discrepancies are employed by individuals to emphasise certain motifs in a given piece. Therefore, it is implied that these motifs are of significance to the structural construct of the tune, or they are communicating specific information regarding the tune itself. I suggest that two actions are happening simultaneously with regard to such motifs. I suggest that in the case of ‘Miss Drummond of Perth’ that it is reasonable to suggest that an embodiment of the discrepancies associated with that tune have become embodied as part of the tradition, and that these are directly related to the house dance tradition context, where such discrepancies communicated information, marking a simultaneous aspect of the corresponding dance. Similarly, motivic related pitch discrepancy can occur in any tune, as can be observed with regard to Mairéad Ní Mhaonaigh’s example of Tommy Peoples’ Reel. Again, while it is significant that these discrepancies have been identified, further research with a wider sample of tunes and participants is needed to fully understand their particular significance and inferred meaning in changed contexts.

#### **5.4 Use of conscious accidentals**

The conscious use of accidentals has been observed as part of this sample. These are notes which are consciously sharpened by the performer as a variation to the tune, and are generally played with either the third finger or fourth finger, depending on the individual stylistic choice of the performer. This is a technique that was used by many fiddlers in south west Donegal, (in particular, players such as Con and Frank Cassidy, Francie Dearg Ó Beirne) and is still used in that area today (Mac Aoidh, 1994; Caldwell, 2013).

On a first listening to their interview, I had made note of the fact that both O’Donnell brothers had made reference to the use of sharpened accidentals played with the third finger (or in some cases the fourth finger), something that was suggested that was central to the desired sound of a ‘Donegal’ fiddle player. Evidence for the use of such accidentals in Iarfhlaith O’Donnell’s sample is prevalent. For example, if we compare O’Donnell’s version of ‘Miss Drummond of Perth’ with those played by some of the other members of the sample that played the tune, we can see that there is a clear discrepancy that sets this feature apart. It should also be noted that some would suggest that these discrepancies constitute a different version of the tune in its own right. However, in my opinion the use of such intonational difference on the whole is a feature

of O'Donnell's playing rather than a compositional prescription and rather may be evidence of the use of individual intonational difference as a means of achieving a sound associated with a particular sonic context, identity or community.



Fig 5.28: Use of accidentals as part of the main performance practice. Notes highlighted.

The above figure highlights the use of the D# note (using the third finger on the A string ) by O'Donnell, played on each occasion immediately before the use of E'. It also appears as part of an ascending motif each time. However, this note is so discrepant from the expected norm for O'Donnell's performance practice that it is less likely that the discrepancy in question can be attributed to Fyk's melodic tuning and more likely that it is a regular conscious occurrence. This is supported by the recording of the piece, where it is clearly audible that the note in question is intended as an accidental. If this note is compared to others in the sample, it becomes similarly clear that this type of pitch discrepancy is different from others.

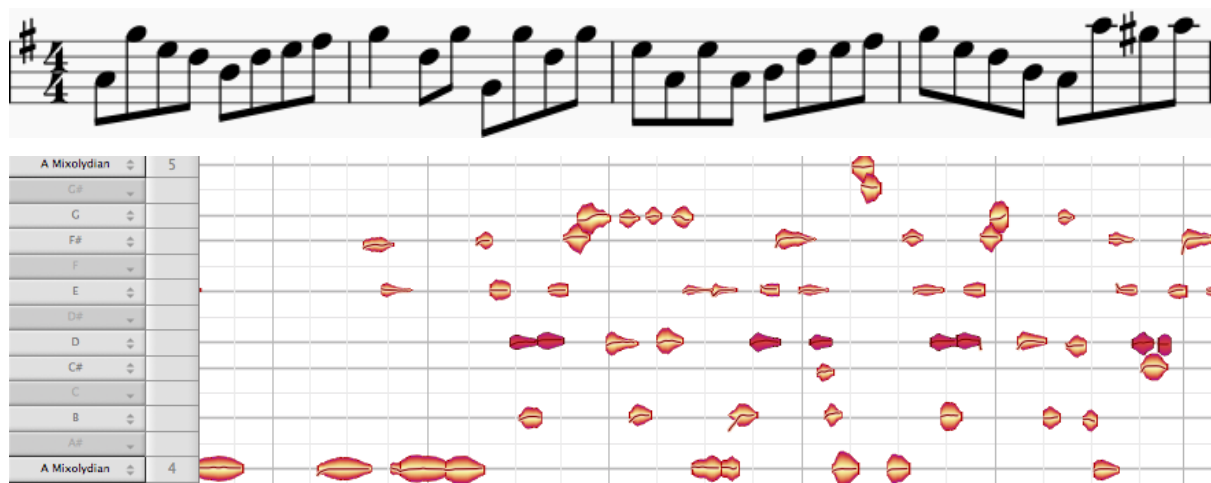


Fig. 5.29: Example of Tara Connaghan's playing of the first part of 'Miss Drummond of Perth'. Note the relatively uniform values indicated by the line for the playing of D'.





Fig. 5.30: Example of Damien McGeehan’s playing of the first part of Miss Drummond of Perth. Note again the relatively uniform values indicated by the line for the playing of D’.

It is interesting to note upon examination of both figures above that both McGeehan and Connaghan’s intonational practice are similar. In both examples, the D’ (played with the third finger on the A string) is sharpened marginally on both the first and second times that the motif is played, where as it is flattened on the last occasion. It is obvious that at no stage is there a conscious deviation to sharpen the D to the degree that the semi-tonal value of the note changes to D#. However, when compared to O’Donnell’s performance practice we can observe that this is a common feature. Below is an example of where this happens throughout his version of ‘Gravel Walks to Grannie’, in particular when played immediately before the open string of E’ as part of an ascending motif. He has consciously changed the tonal centre of the piece to vary between major and mixolydian modes. This is an indication of the degree to which such substitution of tones (playing of conscious accidentals) exists in O’Donnell’s fiddle playing.

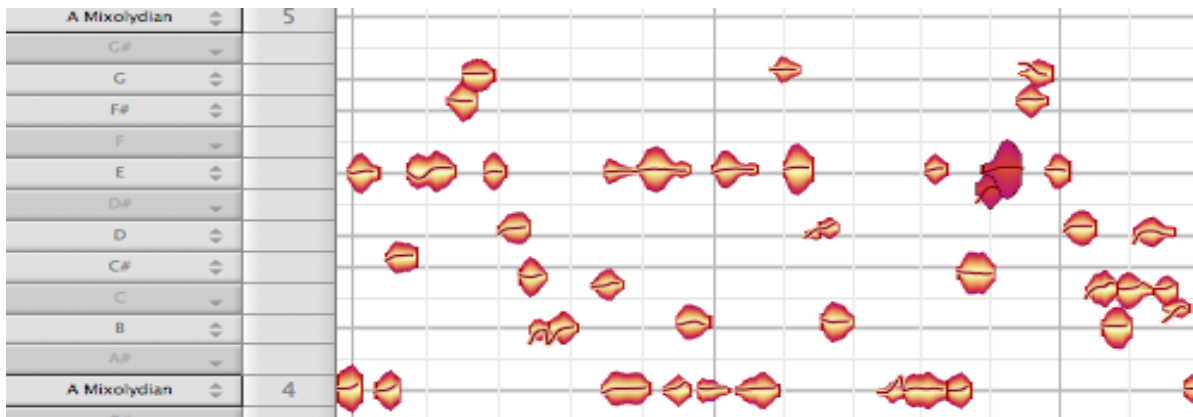


Fig 5.31.: Example of sharpened D in an ascending motif to the E’.

The use of sharpened accidentals is prevalent in Ciarán Ó Maonaigh’s performance, including the use of sharpened accidentals as have been used by others in the sample, such as Iarfhliath and Breffni O’Donnell or Damien McGeehan, using the third finger or fourth finger as a means of ornamenting a single note played on an open string (e.g. A G# A as opposed to A G A or A\_\_\_). Ó Maonaigh also embellishes these accidentals with the use of glissando, where he can slide through multiple micro tones until achieving the desired note. This is a unique stylistic trait to Ó Maonaigh with regard to the sample collected in the course of this research. An example of this type of microtonal glissando is below, taken from his playing of ‘The Harvest Home’ hornpipe. In this particular example, he makes seven micro tonal adjustments, F#+3, F# -8, F# +27, G +39, G# +22, A+40, A +39. The values for A’ played as part of the main melody in the rest of the piece range from -8 cents to +3 cents. Therefore, the values of +40 and +39 cents indicate a major conscious deviation in terms of intonational finger placement. This is similar in sentiment to the sharpening of notes as described by Breffni O’Donnell with regard to the use of such notes as an anticipation of certain important points in the tune rhythmically.

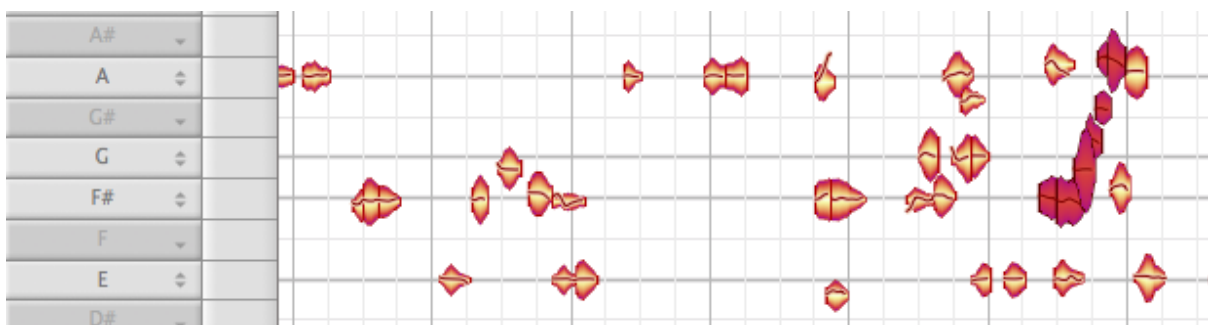


Fig. 5.32: Melodyne example of Ó Maonaigh’s use of glissando microtones. Note that seven notes are used between F#’ (played with the first finger on the E string) and A’ (played with the third finger with the same string).

Microtonal increments are abundant and played at the discretion of the performer. As such textural discrepancies such as those given as an example serve not as ‘mistakes’ in terms of intonational / textural accuracy, rather as an extra set of notes to communicate various changes to the music. While the context may have changed from that of performing for a primarily dancing public to that of performing for a primarily listening one, the use of textural discrepancy to infer meaning to the music seems to be a constant nevertheless.

Other examples of this type of conscious use of accidentals were observed in this sample, by Damien McGeehan, Melanie Houton, Tara Connaghan and others. However, I do not suggest that this research can definitively declare that it is a core element in performing a ‘Donegal’ sound. While it is observed, a much wider sample of pieces and players would be needed to make a concrete declaration that the use of such accidentals is central to the sound of Donegal fiddle music. I suggest that variables dependant on context, identity and tuning in or out to a community may be at play in assessing the use of these accidentals. Therefore, while they have been observed and assessed as part of this research, I don’t think that they can be counted as central to the sound of Donegal fiddle music, based on the sample of music collected for this research, the purpose of which was to explore the existence of pitch and tuning discrepancies in the fiddle music of Donegal generally.

## **5.5 The impact of physiology on the performance of fingered pitch practice.**

This research has highlighted that physiology may be a factor in the performance of certain fingered pitch inflections. This section deals with each set of examples that highlight this issue. Again, this is the first time to my knowledge that physiology has been highlighted as a potential issue in the performance of the ‘sound’ of traditional Irish fiddle music.

### **5.5.1 Issues regarding the playing of successive notes on adjacent strings using the same finger digit.**

One common type of discrepancy observed were those performed when playing notes on adjacent strings (e.g. the A and D strings) in quick succession with the same finger. Reasons for this range from the physiology of the individual, the dimensions of the fiddle itself, as well as the issue of the speed of execution of performance. In some cases (outlined below) examples of ‘corrective tuning’ were observed, where in reaction to discrepancies performed in such a situation, the individual performer reacts to that discrepancy in order to correct it to

what sound correct. This also highlights where a player may consider a note to be ‘out of tune’ or discrepant from their sound.

For example, in Peter’s performance of ‘The Pigeon on the Gate’, the note B (first finger on the A string) is played 78 times. On 52 of these occasions the note is played flat (i.e. has a negative value). Upon analysis of the remaining 26 notes where it is played sharper (and has a positive value), it is interesting to note on each occasion that the B is used in the last part of the tune, a positive value is recorded (12 occasions).

Following such a finding, an acute syntactical analysis was undertaken with regard to use of the 1<sup>st</sup> finger in Peter’s performance practice. I immediately noted the first motif in the tune where the B was used to precede the tonic note of E, (first finger used on the A and D, strings). The recorded values of this B note as played in the initial motif are B: – 27 cents, - 39 cents and -33 cents. Upon the repeat of the same motif the values for the same note are B: – 16 cents, -37 cents and – 45 cents. Rather than showing a relative pattern in terms of the communication of a certain meaning to a potential audience, this seems to be (and sounds like) a mechanical issue in terms of the playing of the instrument. The same finger is used to perform both notes in quick succession. When listened to on the recording, it is clear to hear that Peter is moving the pressure applied by his finger from side to side in an attempt to achieve the best sounding note possible. Two reasons are offered for why these notes raise issue in terms of analysis: (1.) The physiological nature of Campbell’s finger may prove restrictive in terms of applying the relevant pressure to the string at the required time or (2.) The mechanics of this particular fiddle disallow a more accurate intonational performance due to the wide space between the strings.

In her performance of ‘The Pigeon on the Gate’, Denise Boyle’s values also become inconsistent in terms of her fingering of the first bar. As was the case with Peter Campbell’s performance of this tune, Boyle’s first finger is in a position where it must quickly readjust pressure from one string (B on the A string) to another (E, on the D string). In doing this, values for her B note indicate regular flattened values.



Fig 5.33: Example of the repeated flattening of the note B with regard to an immediate E, triplet (B and E highlighted).

A similar pattern of inconsistency is apparent upon examination of the final part of ‘The Gravel walks to Grannie’ as performed by Boyle, which includes successive notes played by the second finger on two adjacent strings (playing a C on the A strings and a G’ on the E string).

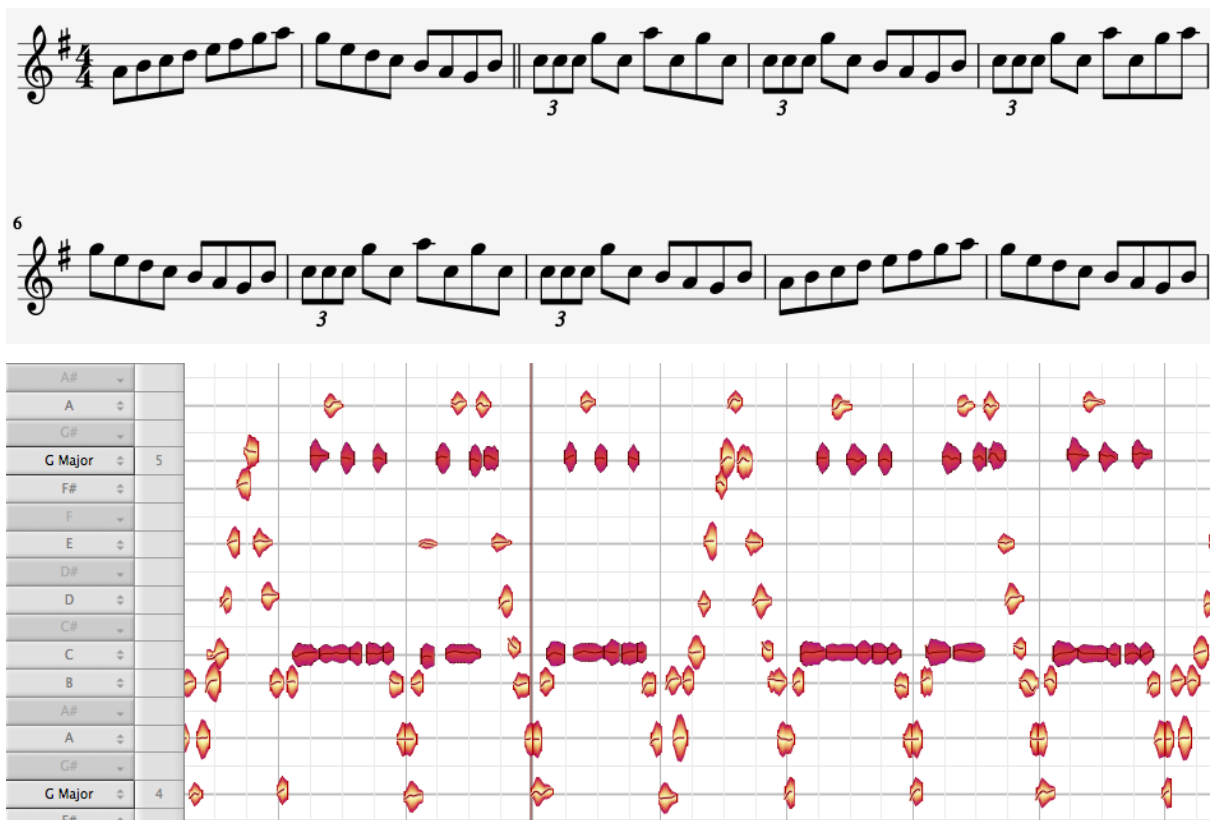


Fig. 5.34.: Example of discrepant C and G’ notes (highlighted) in the final part of ‘The Gravel Walks to Grannie’.

Recorded values for C are:

+1,+5, +4, +3, +6, -6, +6, +26, +5, +10, +7, +7, +9, +8, +15, +6, +10, +9, +6, +5, +8, +10, +21, +3, +4, +0, +5, +5, +9, +33.

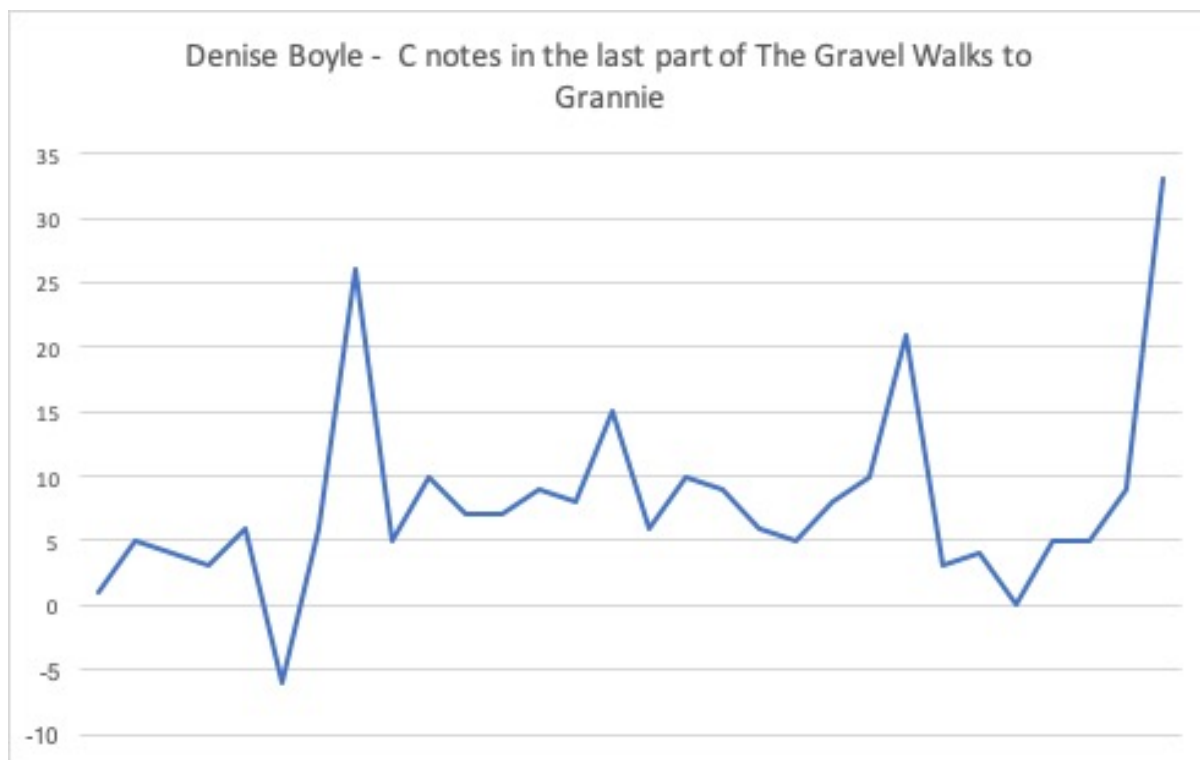


Fig. 5. 35: Denise Boyle's C notes in the last part of the Gravel Walks to Grannie.

Recorded values for G' are:

+19, +8, +8, +11, +1, +11, +14, +8, +9, +8, -1, +10, +3, +3, +11, +12, +17, +24, +16, +22.

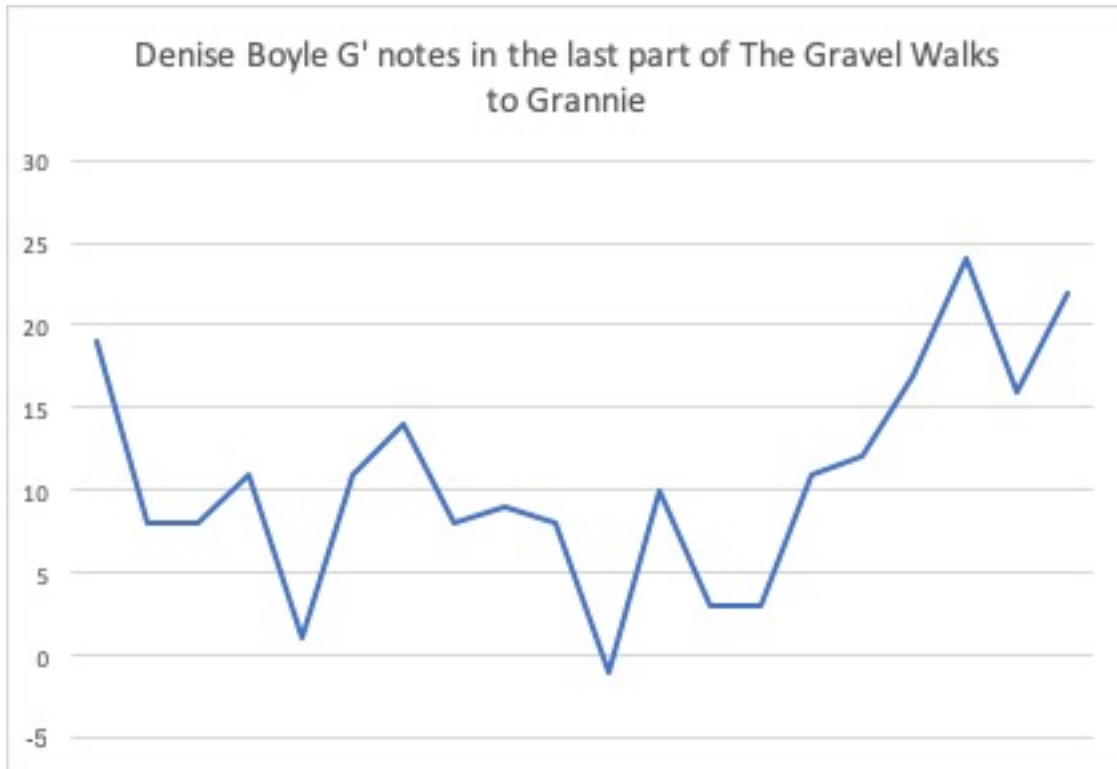


Fig 5.36: Denise Boyle's G' notes in the last part of the Gravel Walks to Grannie

Values for both notes indicate deviation from typical intonation, highlighting a wider variance in fingered values than normal in terms of Boyle's usual performance practice.

Issues with relation to the mechanical playing of successive notes with the same finger is also apparent with particular regard the same motif in 'The Gravel Walks to Grannie' as played by Tara Connaghan. As was the case with her peers, less intonational accuracy is recorded when playing such a motif. As previously suggested, physical attributes of both the performer and the instrument as well as issues of finger placement and pressure on the fingerboard may prove to be factors in this type of discrepancy.<sup>72</sup>

<sup>72</sup> In particular, the use of the finger between strings to apply pressure to both simultaneously.

Values recorded for C were:

\*(A.M) = Played as part of an ascending motif

(D.M) = played as part of a descending motif

Round 1

-5, -1, 0, 0, +5 (D.M.), +18 (A.M.), +5, +1, -4, +3, 0, 0, +6 (D.M.)  
 -10, -7, -8, -2, -3 +18(A.M.), +5, 0, -3 (D.M.) -8,+7, +7, +4, +7, +10 (D.M.)  
 +15 (D.M.)

Round 2:

+1, 0, 0, +2, +5, +8 (D.M) -2, -9, -8, +9 (D.M.) -7, 0, +9, +12 (D.M.) 0 (A.M) +1  
 (D.M)  
 -18, -9, -11, 0, 0, -8 (D.M) -2, +1, +4 (D.M.) -4, -15, -9, 0, 0, +3 (D.M) +3  
 (A.M), +7 (D.M)

Round 3:

-10, -4, -3, -5, -3 (D.M) +6, +11, +3 (D.M) -8, 0, 0, +1, +6 (D.M) +1 (A.M), -  
 1 (D.M), 0  
 -8, -3, 0, 0, 0 (D.M) +5, -1, -5 (D.M) -8, -16, -11, -12, -4, 0 (D.M) +3(D.M)

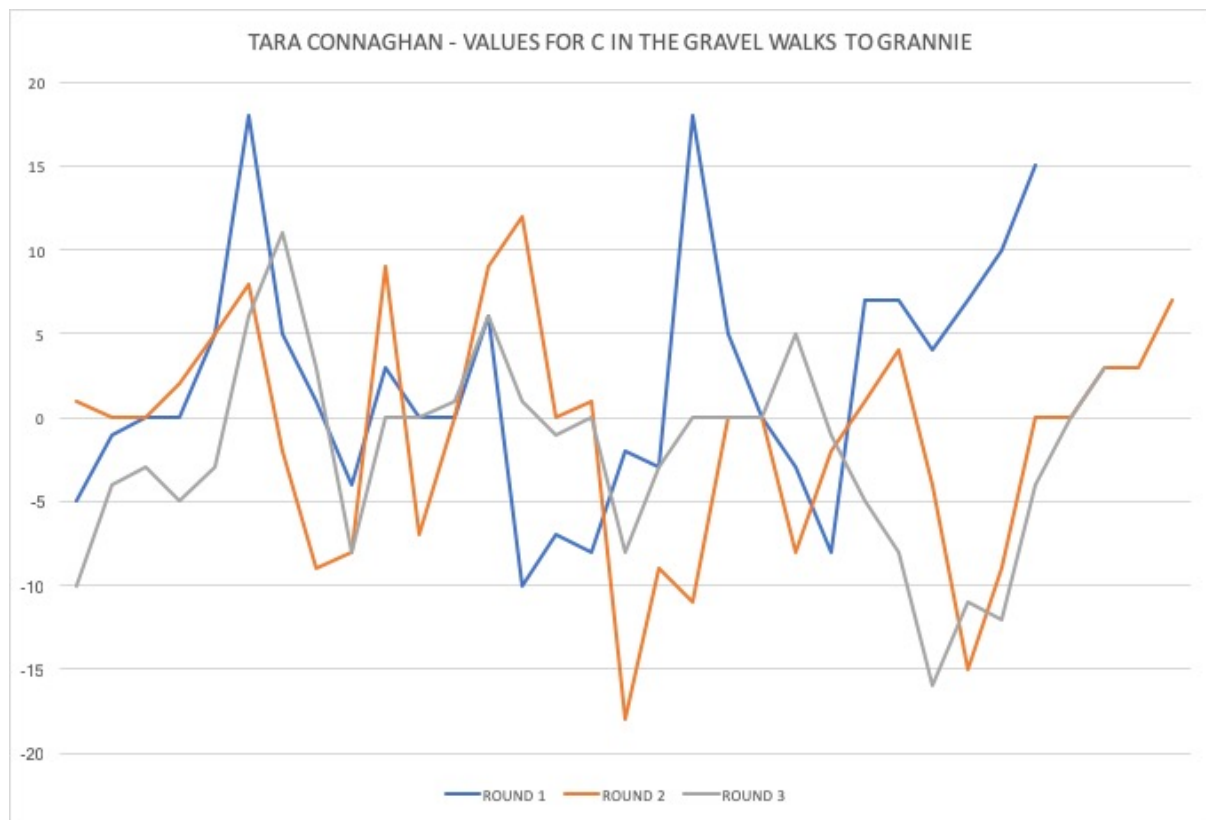


Fig 5.37: Tara Connaghan values for C in the Gravel Walks to Grannie



Values recorded for G:

Round 1:

+4, +5, 0	+7,+11, +7 (D.M)	+15, +4, +3	+14 (A.M), 0 (D.M)
+3, 0, +2	+15, +6, +8 (D.M)	+7, +9, +7, +5	+5, (A.M), +2 (D.M)

Round 2:

0, +9, +4	-5, -3, -1 (D.M)	-10, +4, +4	+12 (A.M), -2 (D.M)
-6, -10, -10	0, 0, +2 (D.M)	-15, -1, 0	+9 (A.M), -4 (D.M)

Round 3:

-10, -1, -5, -8	+14, +13, +11, +10 (D.M)	+4, +5, +6	+9 (A.M), +5 (D.M)
-1, -3, -2	-4, +6, +3 (D.M)	-18, -9, -2	-9 (A.M), -4 (D.M)

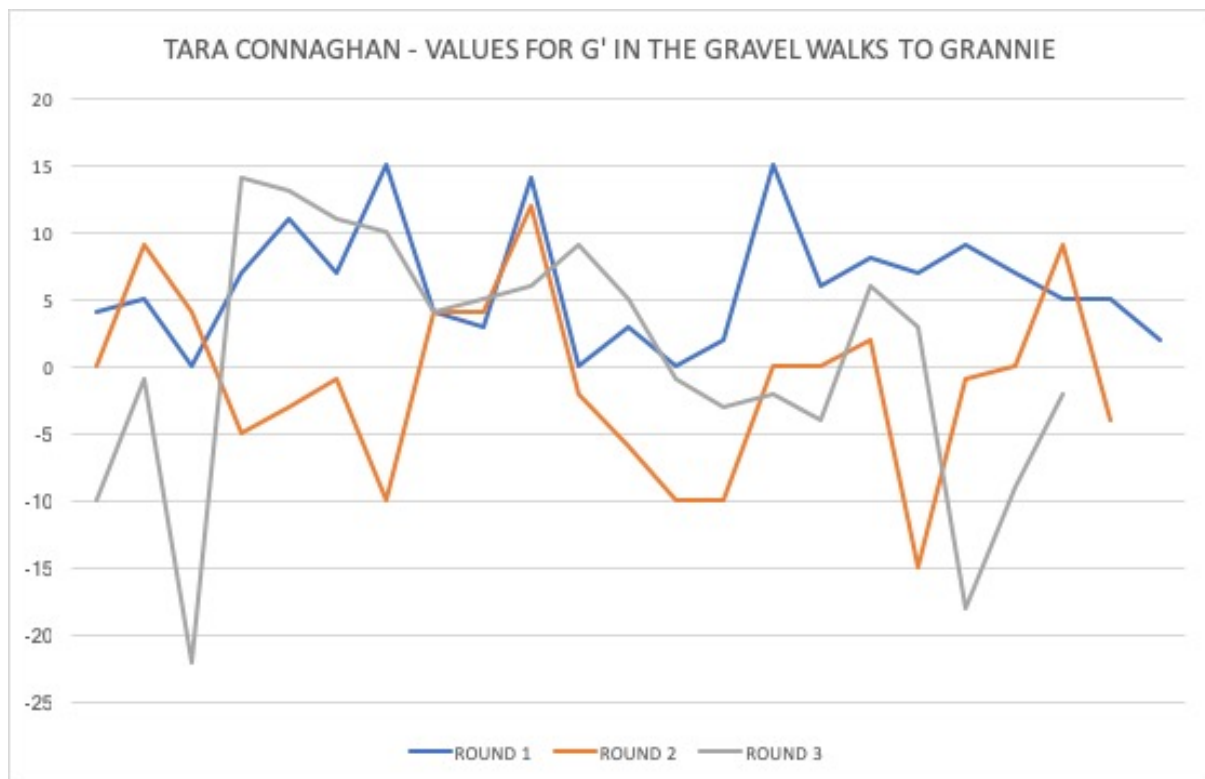


Fig. 5.38: Tara Connaghan's value for G' in the Gravel Walks to Grannie

Upon the examination of these values above, we can instantly see that there are wide discrepancies for the values of both C and G' when played during this part of the tune. The values of C range from a lowest value of -12 cents to a highest value of +18 cents. Values for

G' range from a lowest value of  $-18$  to a highest  $+15$ . However, notable in Connaghan's performance practice are patterns where similar patterns of representation in the graph seem to be directly related to the place in the tune they are played. There also seems to be a conscious effort to correct an original performed discrepancy. This conforms to Fyk's prescribed intonationally discrepant category of 'corrective tuning'. Note the value of  $+18$  cents recorded in round one of the performance of this part above. It is recorded again during the same phrase on the repeat of the part. As indicated, it occurs as part of an ascending motif and therefore the "melodic" tuning paradigm applies as to reason why this particular note at that precise point in the tune is discrepant. However, in each case that the phrase is played during round one, values for the following G' notes drastically change and become constant to as what would have been the expected value for the G' (allowing for the fact that the E' was consciously tuned sharp by  $+5$  cents at the start of the performance section of the interview). This pattern is also clearly seen in terms of the Melodyne window.



Fig. 5.39: Example of 'corrective tuning' as played by Tara Connaghan in the final part of the 'Gravel Walks to Granny' (round one). Values for the highlighted notes are  $+18$  (A.M.),  $+5$ ,  $+1$  (Round 1) and  $+18$ ,  $+5$ ,  $0$  (Round 2).

A similar pattern is apparent when analysing Connaghan's performance of 'The Pigeon on the Gate', again her performance of the first part of the tune where successive notes are played with the first finger. Recorded values for this phrase were as follows:

Values for E,

Round 1:

- n/p n/p 12, -14, -14, -1, -1 (D.M), -4 (A.M) -6, -6,-4,-4,-6,-4, 0  
(A.M)

-10, -5,-4, -5, -5, -5, -5 -1 (D.M), -6 - 50, 0, 0, 0, -4, -4, -2(A.M), -9, - 10

Round 2:

- 5, 0, 0, 0, -1 -8 (D.M) -2, 0, 0, -2, 0, -5 (A.M) -9  
-5, -3, +4, 0, -2, -1 +4 (D.M) 0,0, +5, +4, +5 -4

Round 3:

-1 (Chord with B), +5, +3, 0, -1 (D.M) +2 (A.M), +3 (A.M), 0 (A.M) 0,+4,+5,+3,  
0 -3 (A.M), -4

0, +3, +4, +3, -5 (D.M) +13 (A.M), -4 (D.M), 0 (A.M) -1, +5, +4, 0  
+8 (A.M), 0.

Values for B

Round 1:

-10, -14, -12, -17, -17 (D.M) -24, -10, -12 -1 (D.M), -12 (D.M)  
-19, -11, -13, 2 (D.M), -21 (D.M) -17, -5, -7 -2 (D.M), -8 (D.M)

Round 2:

-16, -3, -3, 0 (D.M), -18 (D.M) -18, -10, -10 0 (D.M), -6 (D.M)  
-15, -9, -7, -5 (D.M), +4 (D.M) -22, +4, 0 -3 (D.M), -5 (D.M)

Round 3:

-1 (Chord with E.), +2, 0 (D.M), -10 (D.M) -15, -5, -5 +2 (D.M), +4 (D.M)  
-17, -2, 0, +4 (D.M), 0 (D.M) -2, 0, 0, -1 +8 (D.M)+9 (D.M)

Elements of corrective tuning are apparent once more. It can be noted from the examination of the values above that a wide variance in values are recorded at the opening of round one of the tune. This is due to the fact that Connaghan trialled the tune to ensure she had the right tune, but instead of stopping when satisfied that she was in fact correct, she continued with the performance as she saw fit. This satisfactorily explains why for the first recorded section above that the first three notes played are discrepant with her usual performance practice by a relatively wide range (by Connaghan's acute tuning standards) of -12 and -14 cents. However, we can see that in the general performance of the tune, some smaller variance is also common, usually in the region of 0 to -5 cents when playing the referenced phrase.<sup>73</sup> However, upon examination of the values for the B note played at the corresponding times, we observe a shift on each occasion from a highly discrepant note to notes much closer to a satisfactory value. Below are the values for B again, but this time without the values for the note as played in the general performance of the tune. Instead, this table shows only the values for B as played in the relevant phrase where one finger is used to play both the E and B notes.

#### Values for B

<u>Round 1:</u>	-10, -14, -12, -17, -17 (D.M)	-24, -10, -12
	-19, -11, -13, 2 (D.M), -21 (D.M)	-17, -5, -7
<u>Round 2:</u>	-16, -3, -3, 0 (D.M), -18 (D.M)	-18, -10, -10
	-15, -9, -7, -5 (D.M), +4 (D.M)	-22, +4, 0
<u>Round 3:</u>	-1 (Chord with E,), +2, 0 (D.M), -10 (D.M)	-15, -5, -5
	-17, -2, 0, +4 (D.M), 0 (D.M)	-2, 0, 0, -1

---

<sup>73</sup> As an aside to this discussion, values for the tonic note in this piece seem to vary greatly (the note of E, since the tune is in the key of E minor), ranging from -9/-10 to 0.

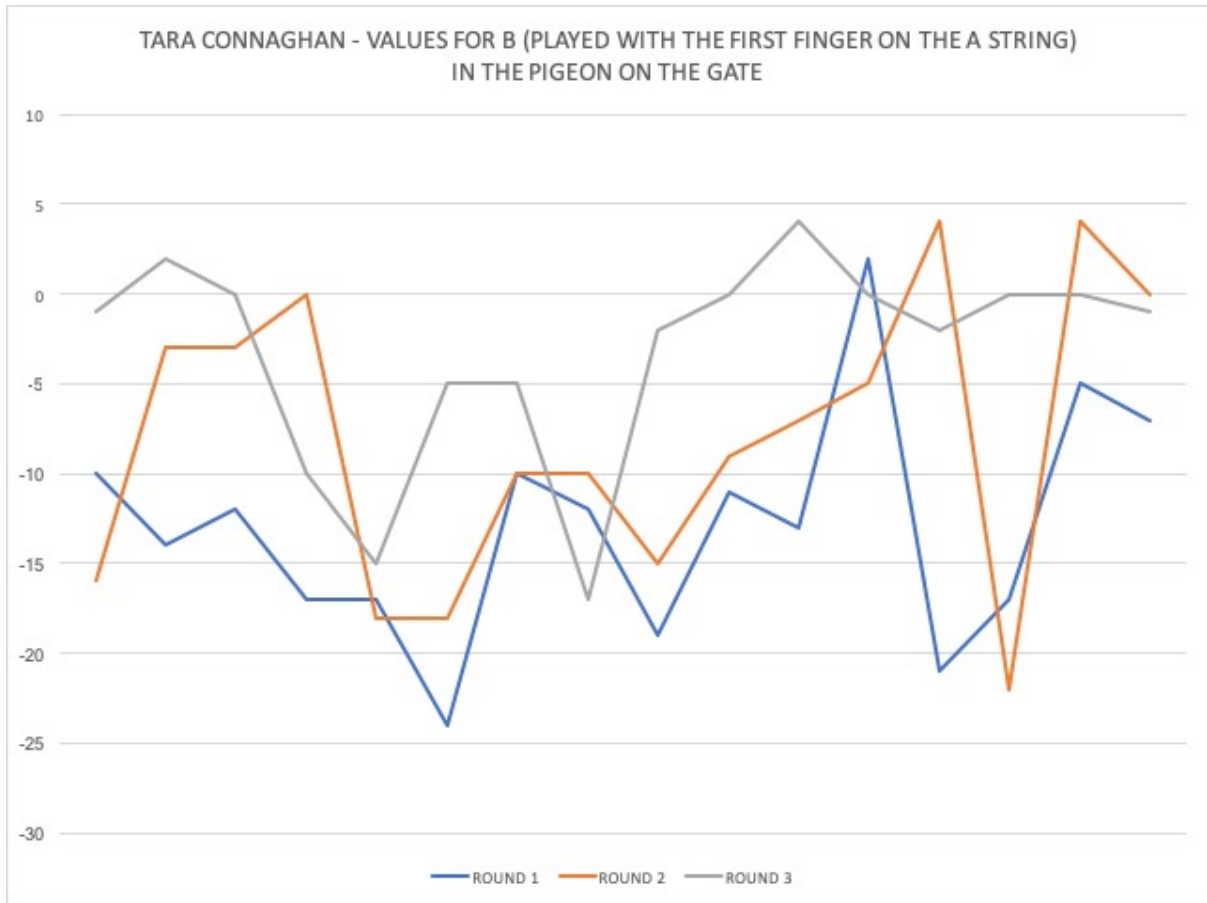


Fig 5.40: Tara Connaghan's values for B in the 'Pigeon on the Gate'.

It is clear to see on each occasion (bar the first section of round one as discussed above) that a highly flattened value is recorded, and then immediately sharpened before the playing of the subsequent note. This highlights the initial issue of the fingering of successive notes in terms of accurate intonational tuning. It also emphasises how tuned in Connaghan is to these sounds in her performance. This is an impressive feat considering that these notes are all played, considered and adjusted in an actual time value of c.1.5/ 2 seconds. However, it also highlights the fact that despite the adjustment of that note played on previous phrases that Connaghan consistently plays it flat to start with and works from there. Why is this? It is also interesting to note that the same value exactly was recorded for her playing of the E, and B chord at the start of round three (-1 cents for both). This shows an equal distribution of pressure from the finger when playing the note which can be heard over a longer time period. This deduction can be made due to the fact that both the D and A strings were tuned to a value of 0 during the initial tuning process. This may highlight the potential issue of the speed of performed notes as a factor in assessing textural discrepancies of this kind.

### 5.5.2 Potential issues regarding use of the fourth finger in traditional fiddle playing

In an email correspondence with regard to this project, Letterkenny based violinist/ fiddle player Seamus McGuire (originally from Sligo and performer with groups such as ‘Buttons and Bows’ and ‘The West Ocean String Quartet’) suggests that the over reach of individuals when trying to perform the B’ with the fourth finger on the E string is of consequence when examining issues of tuning in terms of finger placement on the violin. It is suggested that players over stretch their hand as a response to apprehension that they will not play the relevant note in tune. This is a sentiment I have had related to me informally on many occasions, most recently by Peter Campbell.

The use of the fourth finger is relatively common in the fiddle tradition in Donegal, in particular with regard to its use as a drone. Such a drone is achieved when the fourth finger is sounded on either the G, D or A strings, which results in the sounding of the same note as the adjacent open string. These are then sounded together to achieve a drone that imitates the drones of the bagpipes. Pitch discrepancies between the fingered note and the open note are desired to varying degrees dependant on the performer and the performing context, but those discrepancies add to the texture of the sound, communicating to all listening the imitation that is taking place in that moment. This technique has been well documented (Feldman and O’Doherty, 1981; Mac Aoidh, 1994; Nic Suibhne, 1995; Caldwell, 2013). From talking informally with other older players of the tradition (in particular Frank McHugh of Muckross, Kilcar (d. 2019) the little finger was traditionally favoured as a means of playing any open strings in any case, in particular when playing slow airs. It was felt that the use of the finger gave a softer sound to the note or was deemed ‘sweeter’. McHugh also made reference to the terms used to describe players with the capability to use the little finger in this way versus those who didn’t, stating that when discussing the prowess of local fiddlers many were classed as “good but only ‘open’ players”. This was in contrast to the term ‘closed’ for those who used the little finger in the desired fashion. These terms interested me at the time due to their use as terms in the piping tradition also, where open and closed styles of piping<sup>74</sup> exist to this day. While not in the remit of this research topic, an interesting question remains as to whether /

---

<sup>74</sup> The terms ‘open’ or ‘closed’ are used in piping to describe performance styles of playing the instrument. A closed style is a staccato style of playing, based on the placing of the chanter on the knee, with all holes covered following the playing of each note. This stops all sound of the instrument, giving the staccato style. An open style is in direct contrast to this. Many players are neither use a completely closed or open style of playing, but rather adapt their playing style based on the specific tune performance and their individual preference of style.

what link there may have been between the use of these terms alongside each other in the traditions of both instruments. I further suggest that this may have been an older tempered approach to fiddle playing, where the use of the little finger minimised the use of open strings and subsequently any potential tuning issues that may have occurred by sounding the open strings when tuned to a temperament discrepant to modern 12 tone equal temperament. This style of playing has for the most part died out in Donegal, as has the use of the terms open and closed, but the use of the little finger as a drone still exists and is considered an important technique in the arsenal of any of the expert fiddlers.

I suggest that this type of adjustment may affect other notes separate from the fourth finger in terms of their note values. Hand movement may be a factor, where an individual's physiology may dictate that they *must* move their hand in order to achieve a relative 'in tune' value for notes produced with the fourth finger. However, such movement may equally have an affect on subsequent notes, played with the usual standard grip, where in such a situation the player must move their hand back down the fingerboard in the direction of the peg box, and therefore deviate slightly from normal practice. This theory is based upon the results that I have observed in this project by way Melodyne coupled with the many informal chats I have had on this topic with other fiddlers of the wider Irish tradition. Hand movement as mentioned above (with specific regard to the use of the little finger as a drone) is a common feature of my performance practice and responsible for many of my own textural discrepancies when playing certain tunes. I will deal with this in greater detail when examining the case study of FIDIL later in this chapter.

While there is much literature that examines left hand position in terms of both pedagogical approach (Le Vine et al. 1984; Gholson, 1998; Colprit, 2000; Galamian et al. 2013) and more experienced performance (Kinoshita, 2009; Shan et al. 2003; Schwenkreis, 2007; MacLeod, 2008) but nothing meaningful (to my knowledge) has been offered on this topic with regard to the Irish question. I suggest that more research is needed on this issue as a stand alone topic. In terms of being able to fully understand the affects of hand position and movement with regard to traditional fiddle playing a study must engage fully and in depth with the kinaesthetic, motor- neurological and cultural aspects associated with it, something I feel that is beyond the scope of this study, which is acutely to observe and interrogate issues of textural discrepancy within the Donegal fiddle tradition.

However, some examples of fingered pitch discrepancies have been observed during the performance practice of others in this sample through which such physical factors may be at play.

During Tara Connaghan's performance of 'The Cameronian' reel, such issues in terms of the use of the fourth finger and hand movement are observable. I suggest that this may prove as an explanation for the variance in tuning associated with the B note played with the first finger on the A string during this performance. Just as there is an effort by the performer to stretch sufficiently to attain the correct level of tuning accuracy for the B' (played with the fourth finger on the E string), in a similar way I suggest that a reactionary hand movement is in question in terms of making sure that the stretching of the little finger has not moved the hand out of its primary position. Therefore a performer can be acutely aware of any micro adjustments that can happen during this short process, thus amending the hand position back towards the peg box to confirm a position that will allow for the correct (not sharpened) value for the instrument. However, over compensation of this action may lead to a situation where the performer has relocated the hand to a larger degree than is necessary, thus playing the required note at a slightly flatter value than would be normal in their general performance practice.

During Connaghan's performance of the slow air 'Rocking the Cradle' the double stopping of the strings with the little finger in an effort to achieve the suggested drone is utilised. In my opinion, this technique could also contribute to the issue with relation to the playing of a flattened value for B (as played with the first finger on the A string) as the norm throughout this piece. The values recorded were not consistent with the performance of this note across the other sample pieces performed by Connaghan (with the exception of 'The Cameronian' dealt with above). I suggest that the over compensation of hand movement associated with the performance of the drone may be an issue with regard to this variance.

### **5.5.3 Use of sharpened hand position and finger placement in general performance practice**

As has been observed in Chapter 5, Jimmy Campbell suggests that hand position is of importance in assessing the particular discrepancies associated with the performance practice of an individual fiddle player. I have decided to offer examples where such practice may have been evident in my research, and offer some reasons as to why this is the case. However, it



must be noted that during the recording of Jimmy Campbell playing the fiddle, sharpening in slight increments for the purpose of illustration, that it has been observed that the basic tuning of the fiddle was also affected (sharpened as his hand position was moved up the fingerboard, away from the peg box toward the bridge). This makes a discussion of these discrepancies more difficult. However, again, this is the first time to my knowledge that this type of discrepancy has been recorded in a research project, and as such, play an important role in accounting for issues of pitch discrepancy in the fiddle music of Co. Donegal.

Examples were provided of Jimmy Campbell’s usual method of holding the fiddle and subsequently sharpened in increments. These increments were not determined, but appeared to be randomly assigned by Campbell. Campbell’s aim was to highlight that this had an effect on the overall sound an individual may take from the fiddle, also emphasising the importance that having an individual sound had in the context of Jimmy’s early musical community. Having a discrepant technique in terms of holding the fiddle wasn’t seen as being ‘wrong’, but just different, and individual.

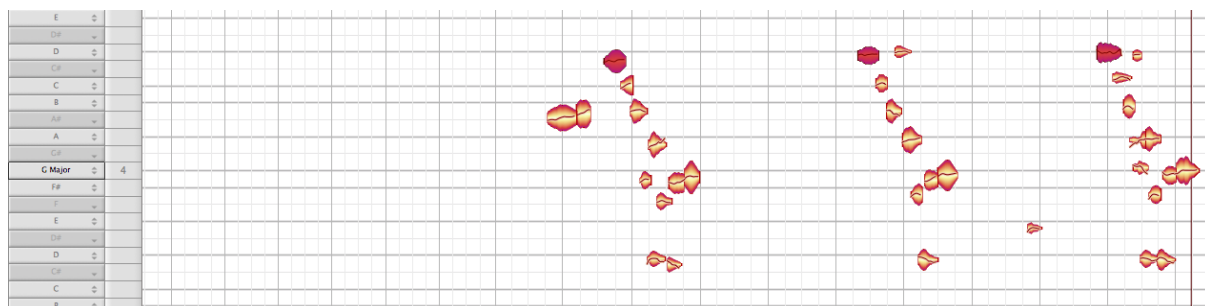


Fig. 5.41: Jimmy Campbell’s demonstration of variance in basic holding position.

Note the obvious sharpening of the highlighted notes played at the start of each repeated motif in the example above.<sup>75</sup> The table below outlines actual variance in note values (in cents) played on each occasion.

Jimmy Campbell – Sharpening hand positions	Position 1	Position 2	Position 3
D <sup>7</sup>	- 53	-19	-6
C	+5	+15	C# - 54

<sup>75</sup> It is suggested to listen to the audio recording of this process to aid full comprehension of the process engaged in by Jimmy Campbell.

B	-46	-48	-24
G	-54	D' +1 (Played instead)	+17
A	-48	-21	-14
F#	Recorded as F + 18	-39	-44
D,	-55	-25	-24
G	-38	-26	0

Table 5.1: Values for Jimmy Campbell's example of sharpened hand positions. On this occasion, note the sharpened values with regard to hand movement and sharpened finger related pitch discrepancy

It is immediately clear that a significant adjustment takes place during this process. Some interesting patterns emerge upon further investigation. Campbell clearly indicates that his primary hand position is that used in column 1 above. As indicated earlier in this thesis with regard to the tuning of the open strings, to my ear, each of these hand positions communicated a viable performance practice and didn't sound particularly 'out of tune'. However, of particular interest to me was the fact that as Campbell sharpened his hand position, that the values recorded for played finger discrepancies also sharpened, significantly more than the open string. The open A string sharpened by a value of -48 cents at its lowest value in column 1 (Campbell's usual hand position) to a value of -14 cent at its sharpest (in column 3 (Jimmy's highest hand position, nearest the bridge), an adjustment of 34 cents. In comparison, his value for D', played with the third finger on the A string, sharpened from a value of -53 cents as played in column 1 to -6 cents when played in column 3, an adjustment of 47 cents. If we subtract the adjustment of the natural sharpening of the string from the overall sharpening of the D' note, this should imply an overall sharpening of that note by 13 cents. However, this is not wholly accurate. Other factors are at play, and as suggested in Chapter 5, more research is necessary on this particular type of discrepancy. For example, from examining the figures outlined above it is clear that the increment of adjustment is not relatively uniform across the values for each note. It is not clear whether this may be as a result of other factors alluded to earlier such as bow pressure, or perhaps changed performance with regard to the fingers in the new hand position, directly related to issues of grip and control.

Evidence suggests that others in the sample may employ sharpened hand techniques to achieve aspects of their individual sound. O'Donnell's performance practice consists of the constant

sharpening of fingered notes. These seem to be a deliberate performance choice. If we examine both O'Donnell's performance of 'Miss Drummond of Perth' and 'The 21 Highland' patterns to support this quickly emerge. During Miss Drummond of Perth, the basic tuned value recorded for the E and A strings were + 9 and +4 respectively. However, even when these measurements are taken into account, we can observe further deviation from where the appropriate note value should have been recorded. The notated motif in question from the first part of the tune is as follows:

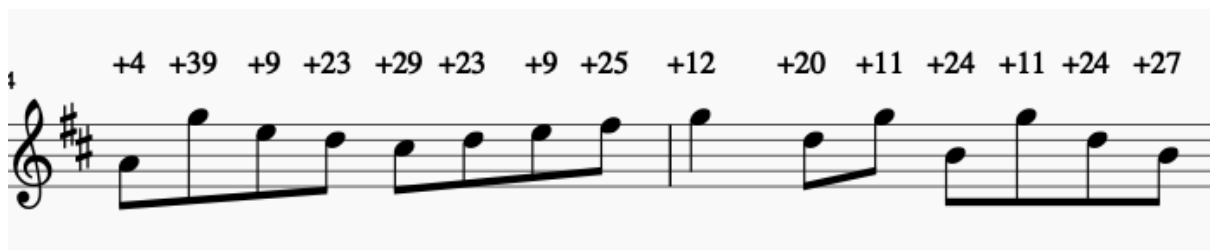


Fig. 5.42: First two bars of Miss Drummond of Perth as played by Iarfhlaith O'Donnell. Numbers above the notes indicate the values for each note played as observed in Melodyne.

From the values indicated in the figure above, it is clear that major discrepancies are apparent (as far as 30% sharp in one case), despite taking into account the sharpened value for the tuned open strings and variable issues such as bow pressure. It should again be noted that from an aural examination of the piece that the performance seems 'in tune'. O'Donnell performed 'The 21 Highland' on his brother Breffni's fiddle, however similar patterns are evident in terms of the fingering of the fiddle. A section of 'The 21 Highland' is notated below with subsequent values for the notes played.

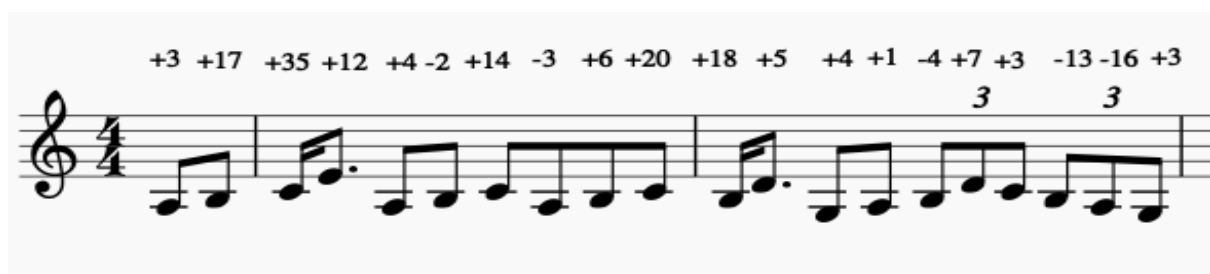


Fig 5.43: A section of 'The 21 Highland' as played by Iarfhlaith O'Donnell. Numbers above the notes indicate the values for each note played as observed in Melodyne.

Again, fingered discrepancies (in this instance with particular regard to the third finger (by 35% on one occasion)) are apparent.

Breffni O'Donnell relates that the sharpening of these notes is accompanied with an upbow to put extra emphasis on the accented downbeat. This combined rhythmical and intonational effect communicates information about the tune, especially with regard to the major accented beats and motifs audible in the tune. I suggest that this is a direct embodiment of the house dance tradition, where that communication was integral to the function of the dance. In the modern context, these 'techniques' seem to carry entirely different information. Identity is the main information carried by way of these nuances, in terms of 'belonging' or partaking in a particular sonic community. These techniques are referred to readily as identifiers of a particular style of an individual or an area (for example Breffni stating "James used to do it all the time" or Iarfhlaith relating that Jimmy Campbell had stated that "That's how they do it in Glen"<sup>76</sup> with regard to how taut or loose a bow should be).<sup>77</sup> Examples of this type of effect are outlined below with regard to Breffni's playing of 'Miss Drummond of Perth'. From the Melodyne example, it is clear that the highlighted notes are played sharper than the rest of the notes associated with the line for F#. The values for F# as played by Breffni in the first part of this piece are (values in cents): F# +13, +**24**, +9, +18,+12, +**29**, +13, +19, +18. The values in bold are the values in question which occur immediately before the rhythmical change to the second bar of the piece.

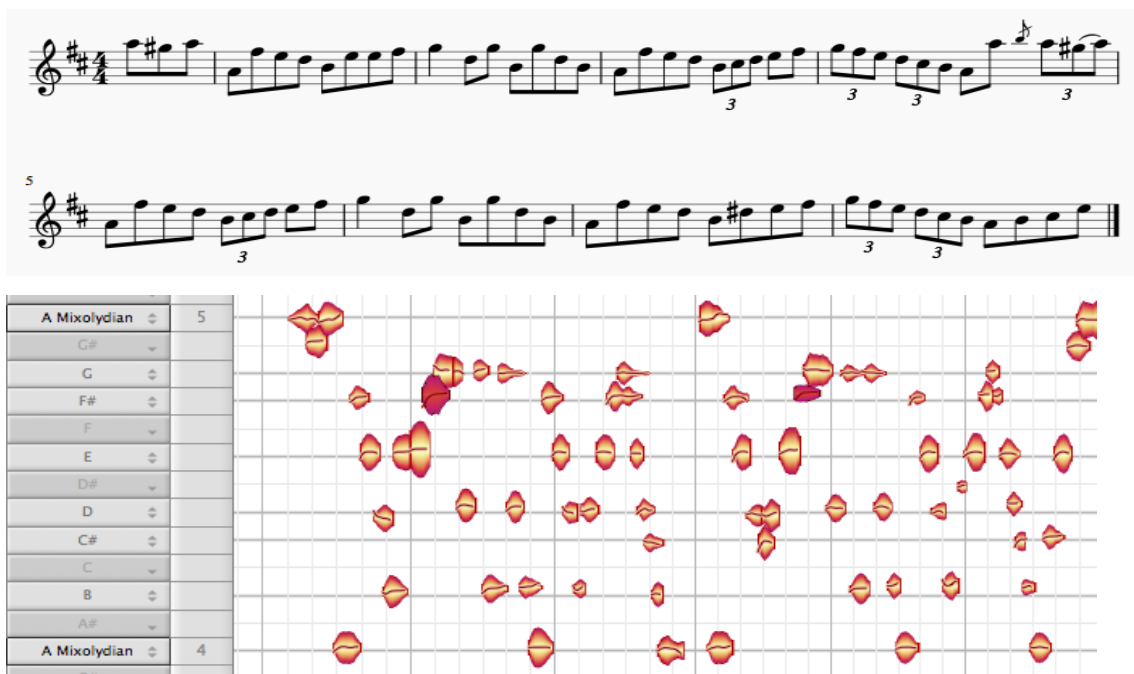


Fig. 5.44: First part of 'Miss Drummond of Perth' as played by Breffni O'Donnell. Note the highlighted F# notes with values of + 24 and +29 cents respectively.

<sup>76</sup> Referring to Glencolmcille. This abbreviation is common in Donegal.

The data outlined above indicates that there is a conscious deviation from normal performance practice with regard to the highlighted values for the F#. These fall as predicted by the performer at specific intervals in the tune and are played as predicted.

Ronan Galvin also is observed as playing with a sharpened hand position. This is notable, considering the fact that Iarfhlaith and Breffni were heavily influenced by him. He is a relation and taught them in their formative years. All three were students of James Byrne. In this regard, I found myself thinking again about Jimmy Campbell, and the fact that he relates that the use of discrepant hand positions in his area in his youth was an individual choice, based on what sounded right to the individual. I asked whether the practice observed here with relation to Iarfhlaith, Breffni and Ronan may be a modern development of this, where instead of exerting individualistic positions associated with idiosyncratic sounds, they are performing a further act of ‘tuning in’, in an attempt to embody the music of the categoric exemplar of their choice (in this case James Byrne). I suggest that while there is a slight case for this that a dedicated study would be the only way to definitively examine such issues.

## **5.6 Discrepancies associated with the individual’s perception and imitation of the pipes**

AOD : “Do ya think the fiddlers attempted a lot to copy what was going on with the pipes?”

V.C. : “Oh well of course they did...They used to tune the fiddles to the pipers liking ... if they were playing something in different keys like lough isle castle they ...used to take a lovely drone out of the fiddle...you’d swear there was a couple of pipers in it!”

(Appendix A: Vincent Campbell interview)

The influence of the pipes on Donegal fiddle music has been well documented (see Mac Aoidh, 1994; Caldwell 2013), and has been discussed in terms of the wider Irish question in Flynn (2010), as presented earlier in Chapter 5 in relation to structural /Diagnostic tones. These influences include the use of technical effects to imitate the sound of the pipes on the fiddle itself. These include the use of fourth finger drones, sounded with the string adjacent to the fingered string (e.g. a D, played with the 4<sup>th</sup> finger on the G, string, double stopped with the open D, string). It has been observed during the performances of some participants of this

sample that this influence may also be important in assessing the pitch discrepancies associated with certain tunes.

Vincent Campbell offered an example of the reel ‘Lough Isle castle’ during his conversation as part of this research. The performance of this piece was markedly different to any of the other recorded pieces with regard to textural discrepancy, in particular when examining intonation and fingering of the piece. Below is an example of the recorded piece laid out on a pitch grid format in Melodyne.

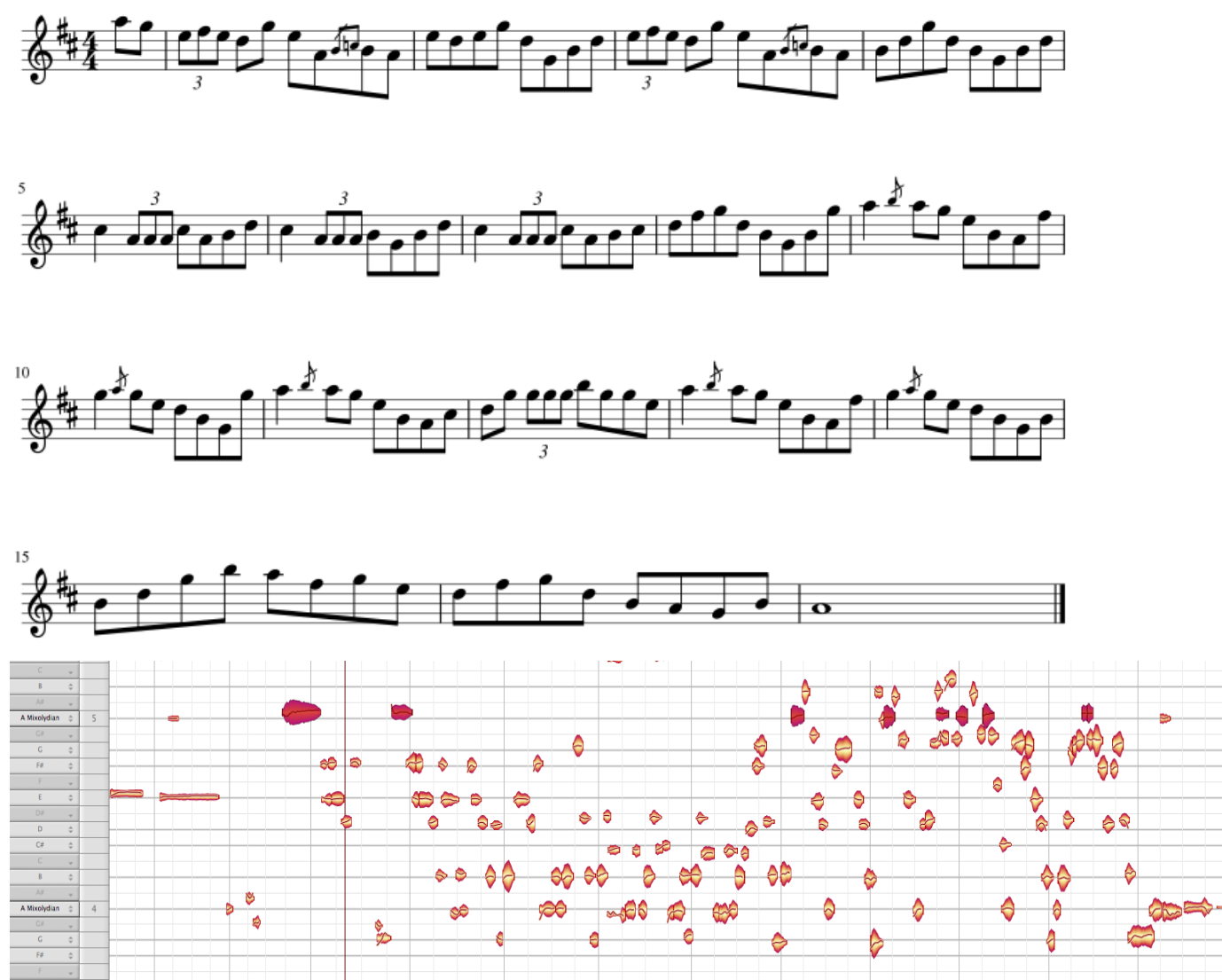


Fig 5.45: Highlighted A' notes in performance of ‘Lough Isle Castle’.

While the sound of this piece is undoubtedly discrepant to the other examples played by Vincent, some similar patterns occur. For example, as we can see in the highlighted section above, third finger execution is consistently sharp. Values for these notes (in cents) are: +40, +37, +17, +10, +29, +16, +19, +33, +32. As before, while a wide variance occurs in recorded

values, further analysis indicates that intonational inflection with regard to achieving the desired note is employed by the performer as a technique to infer meaning through the music. In this instance the textural difference apparent acts as a sonic identifier for the audience, communicating the fact that Campbell is no longer just a fiddle player, but has ‘trans-substantiated’ to become a version of a piper. These tonal discrepancies act as the essence of relating this change.

Danny Meehan provides the only example of scordatura recorded. This was not requested as a part of my research into tuning discrepancies, but was offered by Meehan. Meehan tuned his fiddle to the alternate tuning AEAE, playing ‘The Enniskillen Dragoons’ and ‘Sean sa Cheo’. It became immediately clear upon inputting these tunes into Melodyne how complex Meehan’s sense of tuning was, as values for A were tuned back to A 440 (+4 cents). As was the case with Vincent Campbell’s performance of ‘Lough Isle castle’, tuning discrepancies were key to performance in order to communicate the role of this performance, an imitation of piping.

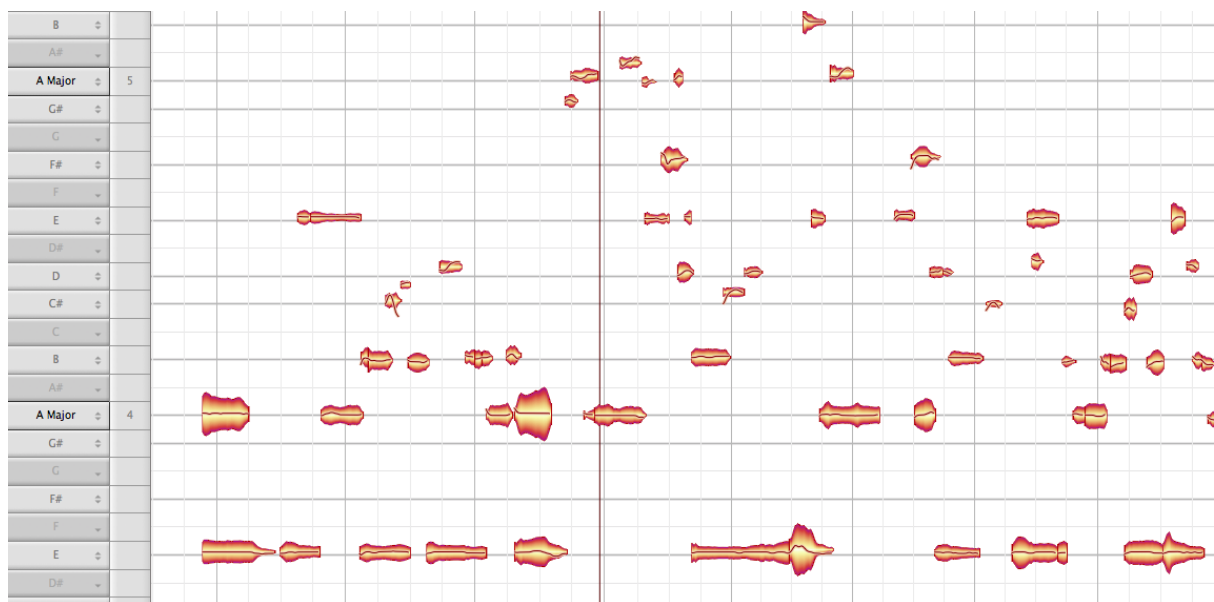


Fig. 5.46: Excerpt of Danny Meehan’s version of ‘The Enniskillen Dragoons’. Note the consistency of textural discrepancies in Meehan’s performance practice, for example in relation to A (5) and D notes, both played with the 3<sup>rd</sup> finger, and the E note, played with the first finger on the D string.

Both of these examples highlight that certain pitch discrepancy may be in some way connected to imitation of the pipes in the minds of the fiddlers. I suggest that this relates in a meaningful way to McKerrell’s concept of structural/ diagnostic tones, where the tension suggested is central to achieving an authentic sound of performance in terms of bagpiping. This also aligns in a significant way with Flynn’s (2010, p. 256) suggestion that the highland

pipes may be an influence on the sound of music from the north of Ireland. The use of particularly sharpened finger intonation with regard to the examples played by Meehan and Campbell above similarly communicate this form of tension. While research has discussed the influence of the pipes on the fiddle music of Co. Donegal, these are the first examples where it can be observed that when playing tunes in an imitation of the pipes, that pitch discrepancies deviant from usual practice occur.

## **5.7 Ornamentation**

Ornamentation is fundamental aspect of playing Irish traditional music. Each instrument employs its own selection of techniques to create sounds that have been accepted as ornaments, and these change depend on the capabilities of the instrument and the time value for which an ornament needs to last. Ornamentation can be achieved with both the right hand (generally the chosen hand for holding the bow) and the left hand (primarily the hand used to hold and finger the instrument). In general, the majority of Irish traditional fiddlers play right handed (using the right hand to hold the bow), even in cases where an individual may be left handed, although some teachers now practice a different pedagogical approach which allows a student to hold the fiddle unconventionally, with the left hand holding the bow and the right hand holding and fingering the fiddle itself.

Cranitch suggests that ornamentation is central to the individual's capacity for expression within the wider context of tradition, but that in many cases can be regionally dominant. For example, he advances the case that finger ornamentation was not of primary importance with regard to the Donegal fiddle tradition when compared to styles associated with other regional monikers (2006 : 42-46). Meanwhile, Doherty (1999c : 322) states that the roll is "One of the most common ornaments used in Irish traditional music", with out declaring an exception to certain geographical trends. My personal experience has been of witnessing most fiddle players that I have met in Donegal performing rolls, and I would consider them an integral part of the performance techniques employed by the fiddlers of the county. Equally, they are readily performed by many as part of this sample of participants.

More recent research however has furnished the discussion surrounding ornamentation in Irish music with more terms, as well as more robust definitions for the complexity of movements and techniques available within the traditional canon. These include Keegan's work on the 'Parameters of Style' (2010), elements of Dave Flynn's doctoral thesis



‘Traditional Irish Music: a path to new music’ (2010) and Martin Tourish’s doctoral thesis ‘In Process and Practice: The Development of an Archive of Explicit Stylistic Data for Irish Traditional Instrumental Music’(2011). In particular, Tourish’s work is an extremely detailed in attempt to account for all possible ornamentation with regard to the Irish tradition. This momentous task has furnished this research with the necessary tools through which to investigate ornamentation with regard to the fiddle music of Donegal.

### **5.7.1 Pitch discrepancy with regard to the use of rolls**

As has been discussed by others (Flynn, 2010; Keegan, 2010; Tourish, 2013), the terms associated with ornamentation can often be confusing, as they are fluid from instrument to instrument, geographically and generationally. Rolls are a type of ornament performed on a variety of instruments, including the fiddle, and are similar to the ‘turn’ as performed in western art tradition, although variants in which fingers/ notes are used to perform the ornament are observed in traditional Irish music<sup>78</sup>. These are based on instrument specific considerations or personal preference as to the sound of the ornament. Breathnach (1976) suggests that traditionally two rolls were extant, the long roll and the short roll. Tourish furnishes us with many more variants of these rolls, some of which are useful in describing accurately the sonic properties of the rolls in question, both melodically and rhythmically. Tourish (p. 424) suggests that

“The long roll is played on notes of both crotchet and dotted crotchet rhythmic values and consists of the principal note, an upper cut, the principal note, a lower cut and finally the principal note again”

However, his further definition of where the premier note in the roll is held for a longer time is particularly accurate to many of the rolls performed by fiddlers in this sample of participants. Tourish calls this variant of the long roll a ‘long turn’ (p.427). Tourish also uses the term ‘slide roll’ to account for the use of a slide directly followed by a roll, which has similarly been observed in this sample. However, the use of the term ‘short roll’ as discussed by other academic studies does not accurately convey the movements associated with certain ‘fast’ rolls that have been executed by some members of this sample. In particular, instead of playing an ornament that is a long roll without the first note of that roll to fit the appropriate time value, instead Damien McGeehan plays a full roll in the allotted time. This is a particularly rapid movement that is not easily transferable to other instruments from the fiddle. I suggest that this type of short roll be classified as a ‘fast’ roll. An example of this

---

<sup>78</sup> See <https://musicterms.artopium.com/t/Turn.htm> for definition of a ‘turn’ (accessed 23/06/20)

type of roll can be heard in Damien McGeehan’s playing of ‘The Connaughtman’s rambles’

Speed is a major issue in the execution of such ornaments. Fyk (2003) suggests that this is a major factor in accounting for discrepancies in such contexts. Her study found that intonational values were less predicable when performed at high speeds. I suggest that this is a core issue with regard to the performance of the fiddle music of Donegal also, and this is particularly highlighted with regard to the speed at which fingered ornaments are executed.

In his performance of ‘The Pigeon on the Gate’, Martin McGinley employs the regular use of long rolls as a means of variation, in particular during the performance of the second part of the tune. While executing these rolls a pattern emerges with regard to sharpened values of the primary note of the ornament (in this case B). The table below shows the recorded data values for the note B as played each time the roll is performed. It is clear that on each occasion that the roll is played that a sharpening of the note occurs. The exception to this trend is the last roll of the piece which is a short roll. Whether this is a conscious act as part of McGinley’s performance practice or whether this is a result of the type of extremely rapid finger movement involved in the execution of such an ornament (as Fyk suggests) is unclear. However, what is clear is that the action is consistent and therefore relevant.

This is in contrast to others in the sample who exhibit less variation in finger placement when executing the ornament.

Values for the use of the note B during B rolls in the second part of the ‘Pigeon on the Gate’

Round 1:	-28, -17	-24, -12	
Round 2:	-24, - 18	-27, -18	-25, - 5*
Round 3:	-20, - 10	+3,+7**	

\*The roll was executed a third time during the second part on Round two.

\*\* Note that the last roll of the piece was a fast roll.

It is of note that in the performance of the same piece that a D roll was also executed regularly, but with a dissimilar outcome.

Values for the use of the note D’ during D’ rolls in the second part of ‘The Pigeon on the

### Gate'

Round 1:	-8, -8	-23*, +1, -1
Round 2:	+1, +2	+6, +6
Round 3:	0, +7**	

\*Note played is an audible mistake. The note sliding to where the performer wants it is clearly audible.

\*\*The roll is only played once during the third round of the tune.

From the analysis of other data from this sample, of those who choose to perform rolls, this outcome seems to be individual to the performer. For example, when observing the playing of Melanie Houton and Damien McGeehan patterns emerge that are constant to that individual but not to the group in a meaningful way. For example, Houton uses 'long turns' on F# (played with the first finger on the E string) in her performance of 'Jig Gan ainm (A major)'. These are comparable to McGinley's use of long rolls in that they are executed in the same fashion using the same finger (first finger on E string in this case rather than A). Her values per roll were as follows:

F#: +3, -1      +4, -5      0, 0      +9, +9

Her use of short rolls are for the most part consistent in terms of successive accuracy.

B: +13, 0      +5, +5      +8, +8      +10, +4      +0, +0      +3, +3      +0, +0

Damien McGeehan also proficiently uses finger ornamentation as part of his regular performance. He also uses first finger full rolls and fast rolls that are directly comparable to both McGinley and Houton. B rolls (played again with the first finger on the A string) have values (in cents) of +17, +18 and +14, +17. 'Fast' rolls on B have values (in cents) of +10, +19 and +13, +22. He also uses long rolls on C natural using the second finger on the A string) in his playing of 'The Geese in the Bog'. These show no deviation in tonal accuracy within the movement of each individual roll (+16, +16 and +10, +10). Both McGeehan and Houton also use Tourish's 'slide roll'. At each occasion that these rolls are used, both McGeehan and Houton execute the rolls placing the finger exactly where it was previously. For example, values for McGeehan's slide rolls on F# as played in 'The Connaughtman's Rambles' are +1, +1; +9, +9; +4, +4; +6, +6; +7, +7; +8, +8; +11, +11; +0, +0. Houton uses this variant of roll only once but a similar result is recorded, where the value of the glissando roll

on B is +10, +10.

It is noted that while certain patterns are apparent within the rolls themselves, that large variance has been recorded in terms of the mean value of the notes i.e. that the position of playing the notes associated with the roll are not consistent, and therefore, as with the figures immediately above, rolls are not played at exactly the same pitch each time they are played. I suggest that the reasons for this are related to those discussed earlier, including the positioning of these rolls at certain junctures of the piece as well as issues of chromatic and Melodic tuning that may emanate from the demand of such rapid finger movements.

### **5.7.2 Vibrato**

Vibrato was also observed to a lesser extent as part of this sample of participants. Tourish suggests that vibrato exists with regard to Irish traditional music in two forms, ‘slow’ and ‘fast’ vibrato (2013, p. 461). ‘Slow’ vibrato, as used by classical violinists was not observed in this sample. ‘Fast’ vibrato was observed by some. However, Damien McGeehan and Ciaran Tourish were the only participants who exhibited an abundant use of vibrato as a means of accenting the main notes in the melody of the tune. In McGeehan’s case, these generally fell in rhythmically important places. While some of the others used vibrato (generally younger members of the sample such as Tara Connaghan, Denise Boyle, Ciarán Ó Maonaigh) McGeehan used it to a far greater degree, both in terms of frequency of use and in terms of the textural discrepancies which arose as a direct result from its use. For example, in McGeehan’s performance of John Watter’s Polka, such changes are immediately visible with particular regard to the pronounced use of vibrato on G’. On each occasion that this note is played discrepant values are recorded for the note (flattening on each occasion) despite no additional finger placement on the string. Values of the G’ as played as with vibrato were:

G’:            +24, -4            -7, -28            +20, +18            +15, +7

These notes/ values correspond directly with the illustration below.

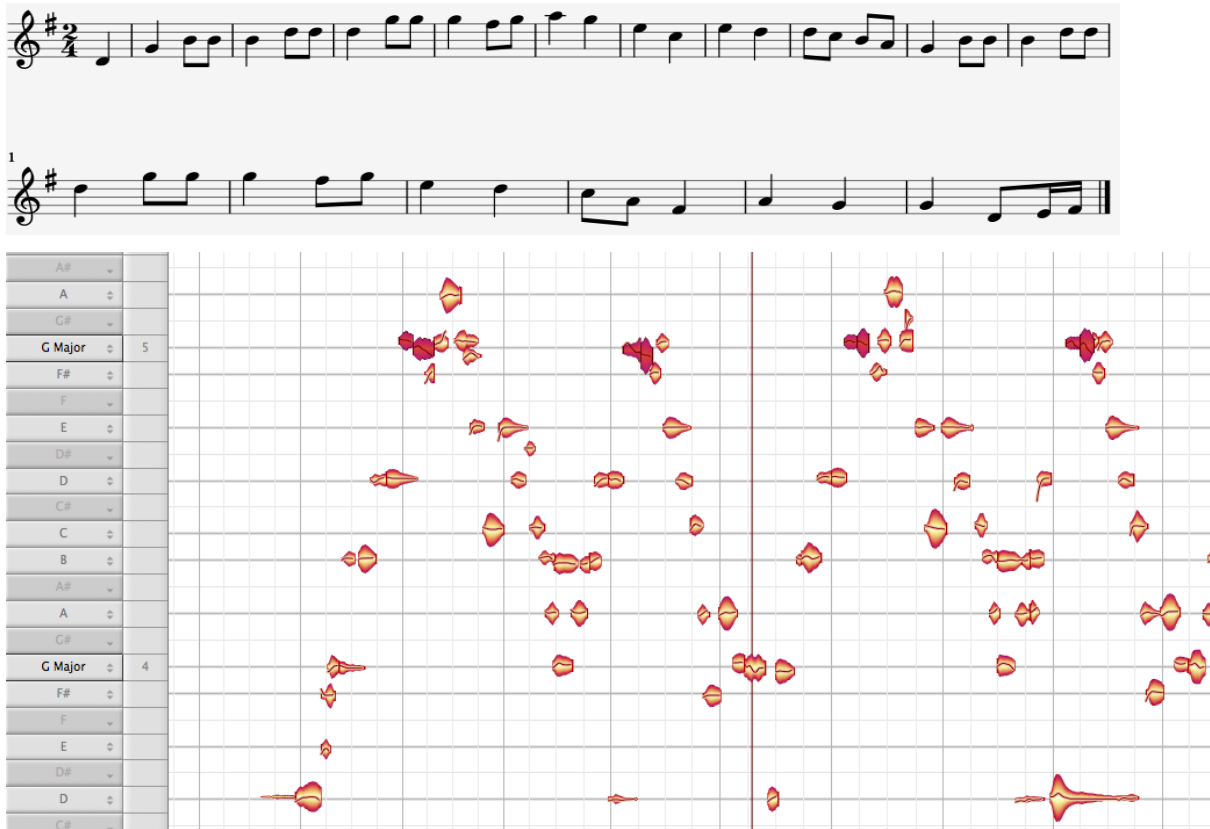


Fig. 5.47: Example of visible vibrato as used by McGeehan in the first part of ‘John Watter’s Polka’. The relevant notes have been highlighted to aid illustration.

This pattern is also apparent upon examination of the D’ played as the tonal centre of the second part of the piece, where vibrato causes a rapid fluctuation of the note value.

Values recorded were:

	<u>Round One</u>			<u>Round Two</u>		
D’:	+7, +13, +6	-3, +2	+18 +9	+14, +19, +7	+10, +5	+5

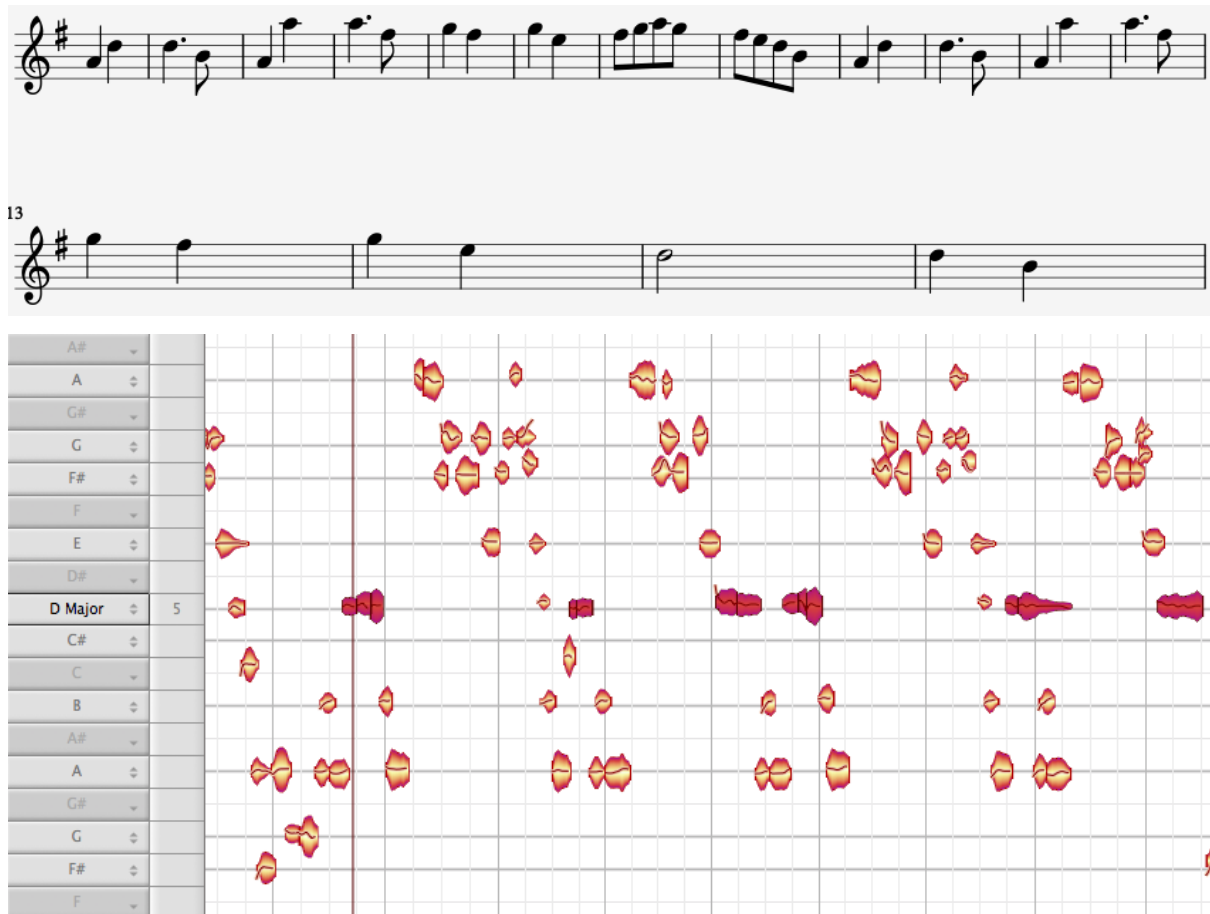


Fig.5.48: Example of vibrato used when playing the note D' (the tonal centre of the part). Notes using vibrato highlighted. Also noticeable to a lesser degree on the A' note.

It was also noted that while these values corresponded to the tonic centre of the tune that they were not consistent in terms of their performed values, as with discrepancies performed in roll ornaments. Upon examination of the other tonal centres of the tune, a pattern emerged where notes associated with the primary rhythmical points of the part appeared to be less discrepant in terms of pitch variance than notes played at other less important parts of the tune.

In contrast, Ciaran Tourish referenced the need for a wide vibrato when playing with other fixed pitch instruments and singers, especially in a professional context. While demonstrating the type of vibrato that he may use in such a situation, Tourish states jokingly “ Its in there somewhere!’. The point was well made however that this was one of the tools available to him to ‘tune in’ to other performers, and sounding ‘in tune’.

## 5.8 Potential issues in the use of Melodyne in assessing discrepancies visually – An example

While Melodyne is undoubtedly an extremely useful tool in assessing pitch discrepancies of any kind, one example with regard to the sample of participants highlighted the necessity to check recordings aurally as well as visually. Upon examination of the relevant Melodyne files, it is apparent that the data collected by the recordings of Ó Maonaigh's pieces is vastly superior than with many of the other recordings. This is due to the polyphonic nature of other notes that are performed sympathetically by Ó Maonaigh's fiddle. For example, in the analysis of his third finger technique, certain blobs (notes) appear to be on (or extremely close) to the line which represents the correct frequency for the note according to equal standard tuning. However, upon examination of these blobs/ notes it is clear that they are not notes intentionally played by Ó Maonaigh at that particular time. Notes played intentionally by the third finger appear much more discrepant. Below is a clear example of this analysis, with the highlighted blobs in question those which are intentionally played as part of the piece and those which are not highlighted those which exist sympathetically as part of the harmonic series.

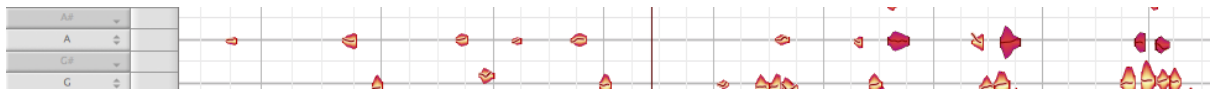


Fig.5.49: A visual example of the values of the note A' as played by Ó Maonaigh in the second and third parts of 'The Flood on the Holm'. The highlighted notes are those played by the third finger. Un-highlighted represent those that occur naturally as harmonics.

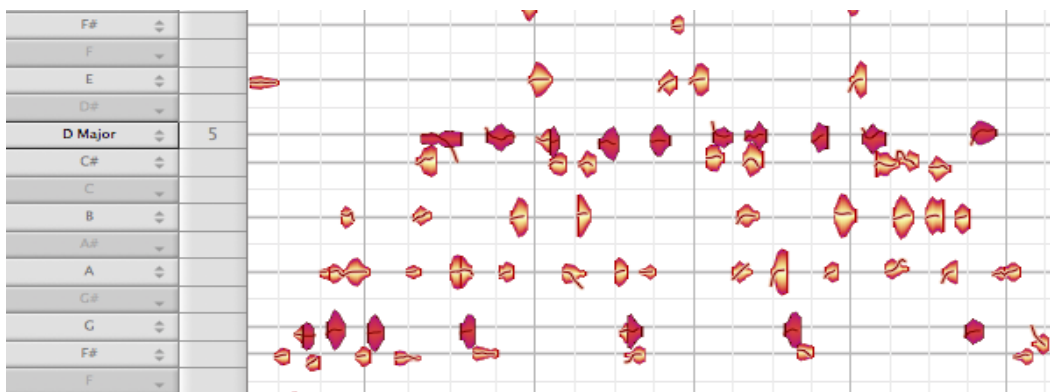


Fig 5.50: Further example of the discrepant performance of notes executed with the third finger, played in the second part of 'The Flood on the Holm' as performed by Ó Maonaigh. Note that the blobs for the values of both D and G are continuously flatter than the prescribed value. It is also interesting to compare these values to those recorded for the other notes recorded, where less unpredictability in terms of performed discrepancy is visible.

## 5.9 Conclusion

Variance in fingered pitch performance can occur via a wide range of processes, and these are chiefly based on the experience of the individual (especially in terms of early pedagogical and performance contexts and the influence of particular categoric exemplars). Individual perception plays an important role in understanding the differences in how people achieve different sounds in this way. Harmonic consciousness is a significant contributor to some performed differences in fingered pitch values, where perceptual pulls associated with tonal and chordal centres impact the performance of notes that directly precede them. These can be embodied (learned) from categoric exemplars, an example of which is the influence of James Byrne on the O'Donnell brother's use of conscious accidentals and sharpened notes (played on an upbow immediately before the tonal centre or chordal change of a tune). However, more research is necessary, with a much wider and historic sample outside the remit of this research so as to ascertain whether there is a specific harmonic consciousness that is unique to the sound community of Donegal fiddlers. Rather, this research highlights the evidence that supports this assertion, and provides a springboard from which to engage in more detailed research specifically dedicated to the topic of harmonic consciousness. However, in terms of the framework outlined for this research, it is clear that this is one of the processes through which individuals engage with their performance of 'sound', and therefore has significance in the sound community.

The data collected here also suggests that fiddlers in the Donegal fiddle tradition perform their fiddle music in a comparative way to those studied by Fyk (1994), and that those elements of 'expressive tuning' alluded to by Kanno (2003) are present in the performance of fiddle music in Donegal. This is a significant finding, as it firmly links and contextualises the action of playing the violin in a traditional context to the western art tradition. I suggest more research is necessary to confirm this link, and to assess other fiddle traditions in relation to the findings. However, this research is the first time that fingered pitch patterns have been identified in the performance of fiddle music in Co. Donegal that clearly indicate that individual performance is unique, but that the patterns adopted are not, and therefore central to the overall 'sound'. Melodic and harmonic tuning in particular are central to this.

Physiology is observed as a contributor to certain intonational issues, in particular with respect to the use of a single finger to play successive notes on adjacent strings at a high



speed of execution. Hand position is also offered as a potential reason for personal difference in issues of tuning and fingered pitch discrepancy. Corrective tuning is also related to this, and should be considered as responsible for some variance in values recorded.

## **Chapter 6**

### **Transmission and context**

#### **6.0 Introduction**

Central to the framework of interrogation suggested for this research are the processes and shared values through which the individual engages and relates to the sound community. Methods of transmission and the variance of performance and pedagogical contexts are of significance in understanding how certain tuning practices become embodied within the sound of a community. This chapter examines the methods and contexts through which individuals learned the music of the community. ‘Tuning in’ and the participatory nature of traditional fiddle music in Donegal is highlighted once more as a primary vehicle through which disparate individuals can unite to create a shared sound (community).

#### **6.1 Transmission**

One of the primary processes of change in Irish traditional music has been how and where the transmission of the tradition has occurred. Veblen (1994) outlines some of the differences that are usual in relation to formal and informal music education in Ireland, where traditional music education in many instances may take place in a local school setting, but that this is not a standard experience and is dependent on the teacher in question (p.25). She also forwards that many of the finest musicians in an area then may become teachers, and that this is commonly the case in Ireland today. I suggest that many experience a duality in terms of formal and informal music learning in Ireland today. This relates to Lucy Green’s (2002) work ‘How popular musicians learn’, where the case is made that both the informal and formal elements of music learning may prove to have real value in developing positive outcomes for musicians. Green also discusses the nature of informal v/s formal music tuition, suggesting that elements of these constructs may be cyclical (2002, pp. 185, 187), where musicians with informal pedagogical experiences now engage and add value in formal musical education environments. This is developing as a common outlook in Ireland at present, in particular since the establishment of Music Generation<sup>79</sup> in 2010, which champions performance music education by professional musicians as a means of inspiring young musicians in both formal and informal contexts.

---

<sup>79</sup> For more on Music Generation, see [musicgeneration.ie](http://musicgeneration.ie).

My research has underlined the common view that traditionally, transmission happened aurally, where the music was passed on by a family member or neighbour and the tradition was ‘picked up’ rather than taught in any formal fashion (e.g. Vincent Campbell, Jimmy Campbell, Danny Meehan, Dinny McLaughlin) (See also Taylor, 2013). The informants in this sample also seem to agree with Taylor’s observation regarding the differences in what is considered formal vs. informal tuition in Irish traditional music, where many in this sample imply that paid classes, in particular those that were attended in a group context with a professional teacher, were considered formal, whereas lessons that had no monetary transaction were considered informal. In contrast, we now have many Irish students studying Irish traditional music through to degree and post graduate programmes at various third level institutions around Ireland (See Veblen, 1994). Of the informants interviewed, 3 had attended such an institution (Tara Connaghan, Damien McGeehan, Ciarán Ó Maonaigh). All informants under the age of 50 had been to some sort of formal tuition by way of weekly paid lessons with a local teacher. In the majority of cases with the informants over this age, music was usually learned from either a family member (Mairéad Ní Mhaonaigh from Prionnsias Ó Maonaigh) or a neighbour (Dinny McLaughlin from Pat Mulhern)<sup>80</sup>. Questioning the affects such a difference between both educational experiences can be productive. Central to this change in processes of transmission has been the social function of traditional Irish music and by its extension, its popularity at any given time.

In order to address this question, contextualization with the wider Irish tradition is helpful. West county Clare is an area noted for its own particular fiddle sound and for its unique practitioners. Famous fiddle players such as Junior Crehan, Bobby Casey and Martin Hayes all hail from this area, but each poses their own distinctive sounds in terms of their tuning, intonation and inflection. Taylor (2013) gives an interesting account of the change in transmission processes in west Clare. It is documented, for example, that Junior Crehan, who started the fiddle at the age of sixteen, had no formal training of any kind. His early introduction to music was on concertina and through his mother he picked up some local tunes which he in turn attempted to learn on the fiddle. He was then instructed by a neighbour in the basics of the instrument and later sent to ‘Scully’ Casey who was one of the most highly regarded practitioners of the area. With regard to this instruction, Crehan recounts:

---

<sup>80</sup> For more on familial learning in the general Irish Traditional music context, see Cawley’s exploration of family influences in Irish traditional music (2013)

“He’d play the tune and I’d play with him and I’d take his style. There might be an odd note here and there (where) He’s say No!, he’d tell you the finger to put on.”

(Taylor 2013, p. 53)

From my research, a similar situation is seen to have been the case in Co. Donegal. Each of the older fiddlers recount ‘picking up’ the fiddle with very little emphasis on the technical considerations of the instrument.

“AOD: Were you taught where to put your fingers...?”

JC: No, you just copied the tune and watched and learned that way.”

(Appendix A: Jimmy Campbell interview)

This is in direct contrast to many of the younger informants, in particular other fiddlers from the area of south/ central Donegal who were taught by Seamus Sweeney (from Ballyshannon) by means of putting white lines on the fingerboard of the fiddle so as to account for the prescribed position of the first, second and third fingers. These younger fiddlers included Tara Connaghan, Denise Boyle, and Damien McGeehan. This change in transmission practice interested me greatly. It was also interesting that this experience of transmission associated with Seamus Sweeney and other teachers in the county involved association and performance with Comhaltas Ceoltoirí Éireann (CCÉ). This association immediately invokes issues of standardisation and raises questions as to whether this may have been the case in Co. Donegal. With regard to CCÉ, McCarthy suggests that while largely a positive force in teaching a majority of young musicians to play Irish music that;

“Transmission at the local level was set in the national (and even international) context. Not unlike secondary education, standards and repertoire were set and judged by an official body of experts at a distance from the context of transmission. Traditional music was...motivated by extrinsic rewards, such as medals and cups, it was aimed at the perfect stage performance in a competitive arena and it operated with a *caighdeán oifigiúil* (official standard) that determined content and criteria”

(McCarthy 1999, p. 136)

Taylor adds that;

“The combination of competitive playing with its requirement for standardisation, and concert platform or cabaret-style performance, has necessitated a range of performance

techniques that were not previously in the remit of the rural dance player... In previous times, the transmission of style and repertoire were local and interpersonal, and encouraged individual and local styles. However, growing levels of national and international competition and concert performance have promoted the universal... and necessitated standardised systems of teaching and assessment, which encourage conformity.”

(Taylor 2013, p. 60)

From a Comhaltas Ceoltoirí Éireann perspective, this analysis may prove unfair, as inclusiveness of all forms of Irish music has been written into its constitution (see comhaltas.ie) and has been further outlined in terms of some academic papers on their activities (Fleming, 2003; MacMathúna and Ó Chonaráin, 2013). However, in each of these papers achievement in terms of winning competition seems to be of paramount importance, and a recognition of musical prowess. This is another change in the social function of the music that cannot be ignored.

“It was particularly important that young people enjoy the music... By 1969, céilí bands from Dundalk Comhaltas had won the All-Ireland Fleadh titles in the under – 11, 11- 14, and 14 – 18 categories in addition to the local band Siamsa which had all mature musicians, and won the All- Ireland for the third year in a row.”

(Mac Mathúna and Ó Chonaráin 2013, p. 98)

It is implied that winning is equal to having fun. Thus, the function of the music became less about the dance music for which it was provided prior to the foundation of CCÉ in 1951 and became increasingly performed for a listening, competitive context. This also happened in various areas of Donegal. My research suggests that Comhaltas Ceoltoirí Éireann had/have more of a stronghold in certain areas of Donegal than others. These areas were/are Ballyshannon/ Bundoran, Mountcharles/ Frosses, East Donegal (Killygordon, Ballybofey, Letterkenny), Gort a' Choirce (Gortahork), Inishowen. Rather than various branches of CCÉ having success in providing music tuition, it is apparent from my interviews that individual teachers teaching for profit are the primary change in the transmission of fiddle music in Co. Donegal. Some of these teachers in turn use the competition system put in place by Comhaltas Ceoltoirí Éireann as a means of encouraging students to practice.

### **6.1.1 The affect of transmission processes on pitch and tuning discrepancy**

In dealing with the transmission of traditional fiddle music in Co. Donegal and how/ if that relates to tuning and fingered pitch discrepancies, I suggest that we must first examine the

experiences of pedagogical instruction as presented by the informants of this sample. I suggest that Turino's (2008, p. 26) term 'participatory music making' is a particularly important term in dealing with varied pedagogical contexts. He suggests that in the environment of learning art (music) that

“there are no artist-audience distinctions, only participants and potential participants performing different roles, the primary goal being to involve the maximum number of people in some performance role”

(2008, p. 26)

This quote highlights the inclusive nature of learning an art form, and relates in a meaningful way to Keil's assertion that socially valuable music, is out of time and out of tune. It also is suggestive of an act of tuning in on the part of the student in such a dynamic, where details on membership of a particular sound community are presented, through which a student can make a decision to attempt to tune in / or out of what is communicated by the teacher.

The main differences reported by participants in this sample with respect to their early musical development was formal vs. informal tuition. This also seems to be a generational issue, which may signify a clear change in pedagogical practices within the county over the past 50 years. For example, participants like Vincent and Jimmy Campbell, Danny Meehan and Dinny McLaughlin refer to family members and neighbours as being the main influences on their early development, and each suggest that they were left, for the most part, to their own devices in assessing if they were 'in tune'. Rhythm was the primary mechanical function required to fulfil the social role of a fiddle player due to the importance of the local house dance tradition. As McSuibhne (1995, pp. 721, 722) suggests, the three categories apparent, The house fiddler, the Local fiddler and the expert fiddler each still shared a need to fulfil a basic social requirement within their respective communities. This is evident when examining the experiences of fiddlers like Vincent and Jimmy Campbell, who both learned at a young age (9 and 7/8 respectively) from their father Peter, who himself was already established as a well known 'local' fiddler in the area (Mac Aoidh, 1994). In relation to Jimmy Campbell, Mac Aoidh offers that:

“Considering his earliest exposure to music it is not surprising that he possesses the old house dance repertoire of this area...his playing is the most supreme example of the old

house dance style I have ever heard. While maintaining a technical simplicity there is a swing in his fiddling which captures the essence of beauty in the music. The rhythm of the highland is virtually defined by Jimmy Campbell's playing of it."

(Mac Aoidh 1994, pp. 249, 250)

Vincent Campbell highlights that as far as his father was concerned tuning was something that came with practice, but that holding the fiddle in a particular way and learning a tune to play came first.

"He would learn you the easiest tune he could play...and you would get on to the tuning...and to hold the fiddle up fairly straight...he reckoned the music would come better and it would look better. He was very particular about that now."

(Appendix A: Vincent Campbell interview).

Similarly, Danny Meehan and Dinny McLaughlin relate that their early experiences were from the rambling houses of family and neighbours. McLaughlin's early experiences of music were largely that of the rambling houses in his immediate area in Inishowen. While he expressed an interest in playing the fiddle at an early age, he did not receive any significant guidance until the age of fourteen, from neighbour Pat Mulhern, himself a respected fiddle player in the local tradition. McLaughlin's father, James, was also a fiddle player but was not the primary pedagogical influence on his musical development. Meehan started the fiddle at the age of 11, taught primarily by his father Jimmy. The area of Drimarone is described by Danny as a rich cultural area, especially with regard to the fiddle. He frequently makes reference to highly skilled players from the area such as McDyer, McCahill,<sup>81</sup> Peter Quinn and John James Connaghan from the Forge in Doorin, a townland on the Doorin peninsula just outside Mountcharles.

These experiences are in contrast to the majority of others in the sample, (those <65) where formal classes outside of the family home was the usual point of transmission of the tradition. Exceptions to this were Ronan Galvin, Peter Campbell, Martin McGinley, Michéal Cherry, Mairéad Ní Mhaonaigh and Ciarán Ó Maonaigh whose primary experience of music was in the home due to the fact that a parent played the fiddle. However, in each case other than Galvin, while music was an integral part of the family experience, formal classes were the

---

<sup>81</sup> Pronounced Mc Caul.

normal learning environment. Galvin's mother Máire<sup>82</sup> and her brother Anthony 'Huidí' Byrne (who was a regular visitor to their house in Dublin) were both fiddle players from Glencolmcille, while his father from Dunkineely also played violin, and received lessons from a member of the RTÉ Concert Orchestra. No formal lessons were sought. In terms of the tuning and the fingering of the instrument, Galvin was largely left to his own devices.

RG. "...there were no formal classes at all...It was all from what I'd picked up at home mostly from, in the very early days from my uncle and little bits from my dad as well. I think I just followed the instinct at that stage. I think my dad may have given me very small bit of tuition on where to put the fingers, but I just followed what I felt was right at the time."

AOD: "There were no lines or anything?"

RG. "No, no."

(Appendix A: Ronan Galvin interview)

The use of markings as a means of indicating approximate finger positions on the fingerboard of the fiddle when teaching emerged as an interesting issue with regard to the various pedagogical experiences of the fiddlers in this sample of participants.

Through the interviews recorded, this practice is observed to be the usual vehicle for teaching at the present time. However, it similarly emerges that this was not always the case. For example, Dinny McLaughlin's pedagogical technique was to correct a student's fingering without using lines, instead training the students ear to distinguish between tones without any visual aid. However, this does not suggest that tuning was less important to McLaughlin in terms of the development of a student. According to McGrory, "Tuning was a big thing with Dinny, that you could play in tune." (Appendix A: Roisín McGrory interview). To this end, scales were employed with an emphasis on listening for discrepant tuning and fingering. She also recalls that at a certain stage of proficiency with the playing of the instrument McLaughlin taught how to tune the fiddle, taking reference tones from the piano in the room where the lessons took place (Appendix A: Roisín McGrory interview). In terms of being taught how to finger the fiddle, an emphasis was placed on recognising discrepant notes by ear. This is in contrast with teachers of a similar age profile, such as Prionsias Ó Maonaigh (Francie Mooney), who taught regular classes in the Gaoith Dobhair area. Francie was Mairead Ní Mhaonaigh's

---

<sup>82</sup> Pronounced 'Moya' in the local gaelic dialect in Glencolmcille.



father and grandfather to Ciarán Ó Maonaigh. Francie Mooney's technique consisted of starting each student with either chalk or cello tape marking the positions where the fingerboard should be fingered, although this only generally applied for a period of 6 weeks, at which point the student was left to discern for themselves as to whether they were achieving the appropriate tuning. Ó Maonaigh insists that tuning was not the primary concern of Francie with regard to teaching his students or in terms of his own performance practice.

“Francie would be a very rhythmical player. It was very much “play for the dancer”. His rhythm would have been very very strong. And I suppose that leaves myself and Mairead both very strong on the beat sort of styles...it would be very much the main thing in the tune.”

(Appendix A: Ciarán Ó Maonaigh interview)

5 members of this sample were taught by the same teacher, Seamus Sweeney, a professional music teacher from Ballyshannon who travelled much of south, south west and central Donegal in the 1990s and early 2000's. I was also taught by Sweeney. Sweeney's pedagogical practice was to attach white lines to the fiddle to represent exact fingering locations. 3 lines in total were applied to govern finger placement. In terms of fingering the A string, the position for B (first finger), the position for C# (second finger) and the position for D' (third finger) were marked. Naturals played with the second finger (for example C on the A string) were to be approximated by the student, although instruction was given to place the finger at the point equidistant from line one (B) and line two (C#).<sup>83</sup> No line was applied to account for the finger position of the little finger. This was also left to the ear of the student. Sweeney did not teach students how to tune the instruments themselves. Instead, he tuned the instruments at the start of each class. Breffni O'Donnell relates that he was not directly taught how to tune the strings by Sweeney, instead picking up how to do this some years later “when the sound gets into your head” (Appendix A: Breffni O'Donnell interview).

I suggest that this quote is important with regard to pedagogical instruction and early musical development. It emphasizes that fact that a student has to tune in to the sound that is being presented by a teacher, whether that is in an informal or formal context. It highlights the experiential nature of learning traditional fiddle music in co. Donegal and the fact that to attain

---

<sup>83</sup> While not explicitly related on this recording, this is something that I have talked about with Denise previously as a former student of Sweeney's myself. From informal conversations with some of Sweeney's other students (e.g. Tara Connaghan and Damien McGeehan, experiences of Sweeney's pedagogical methodology seem to have been consistent from student to student.

a 'sound' in your head, an individual must relate to sounds that they suggest are central to that authentic sound. In this way, the idea of 'Typicality' is highlighted to be particularly important in the development of certain 'sounds' in a community, and experiences experienced throughout musical development are significant in the creation of the particular mental representation an individual will pose in relation to a particular sound community.

Peter and Jimmy Campbell both suggested that the use of such methods inhibited a student in achieving the correct sound required for the performance of traditional fiddle music.

P.C.: "some people, as you know yourself, used to put Tipex on the fiddle. I never really agreed with that."

AOD: "Why was that?"

P.C.: "Because somebody might put it somewhere where it doesn't sound right to you, dy'a know what I mean?"

... where they've got the line, I might think that the line is up a little bit or down a little bit"

J.C.: "I could never understand that at all."

P.C.: "Every one's not the same, really."

(Appendix A: Jimmy and Peter Campbell interview)

Thomas Strain learned the fiddle from Damian Harrigan (brother of Roisín Mc Grory), who used varnish to highlight the appropriate finger positions on the finger board of the fiddle. He similarly relates how the sound of a teacher or outside influence can affect the development of your own sound.

TS: "I think I can remember Damian -- obviously he was playing at Glencolmille at that time and James Byrne would've been a great influence on his playing. I think back then Damian played slightly sharper than D -- just slightly sharper."

AOD: Is that something that you may have interpreted as well do you think?

TS: I would've done for a long time definitely...I do prefer the fiddle tuned a wee bit higher. Sometimes I would tune the fiddle to E flat but the only thing I don't like about that is that its sore on the fiddle, I think it puts too much pressure on the fingerboard of the fiddle. I don't like to play too much in E

flat. I actually prefer the higher tuning rather than the lower tuning. I think the notes sound clearer and sharper”

(Appendix A: Thomas Strain interview)

Maireád Ní Mhaonaigh eagerly points out that it was important for her to find musical independence from her father. While discussing this point she examines the notion of the ‘sound’ of ‘ Donegal’ fiddle music.

“I used to listen to programmes like, Mícheál Mac Giolla Easbuic, he had ‘Ón tSean am Anall’...It’s like something you knew before...It’s instinctively Donegal things.. the things they were doing (*John Doherty, Francie Dearg Ó Beirne*) that my father wouldn’t have been doing, the trebles...it was like it was in my memory.. It was Donegal...”

(Appendix A: Maireád Ní Mhaonaigh interview. Brackets by Author)

Both these quotes similarly highlight the importance of attaining a ‘sound’ in one’s head. However, Campbell’s quote in particular suggests more clearly that the sound in question is variant from individual to individual, and therefore that the use of lines is a negative practice.

### **6.1.2 Experience of participants in terms of their own instruction techniques**

7 of the participants are/were fiddle teachers in a regular formal class environment. Of these, 5 use lines or other markings to highlight the approximate finger positions of the notes on the finger board on the fiddle. These are Roisin Mc Grory, Melanie Houton, Thomas Strain, Damien McGeehan and Denise Boyle. I also teach regular formal classes in Thurles Co. Tipperary, but have adopted the same techniques as Seamus Sweeney in my classes. I have noted that McGeehan and Boyle similarly were taught by Sweeney and have adopted his method. Interestingly, Roisín McGrory was taught by Dinny McLaughlin, one of the two indicated that did not use the line system in regular formal classes (the other being Ronan Galvin). Instead she deviated from Dinny’s method, instead favouring using lines on the fiddle as a means of teaching correct intonational accuracy. Melanie Houton, a student of McGrory, similarly uses this method.

Many others in this sample are regular teachers at various events and summer schools in Donegal, and outside of the county too. However, in these situations, using markings to

suggest fingering is not usual practice. Similarly, tuning in many of these situations is left to the individual student.

McGrory also relates the challenges that face students of traditional music in terms of progress, in particular how quickly they are expected to achieve the standard of playing tunes and building a repertoire. This point raises the fact that socially, while tuning is important, repertoire building is a large part of the early musical experiences of the traditional musician. I suggest the social context for this pressure has changed from repertoire building to enable the student to play at house dances and events (i.e. to become Nic Suibhne's 'local fiddler') to a pressure from paying parents to ensure value for money. I have found this to be the case in terms of my own experience of running a successful music school in Thurles Co.

Tipperary, where parents now expect results. One example was of a parent of an 8 year old student who approached me to examine my 'five year plan', expecting detail on how many competitions the student would have won during that time and by what percentage would his repertoire increase. One example of how an emphasis on repertoire building exists in traditional Irish music is the Comhaltas Ceoltoirí Éireann SCT exams, where students can take exams from elementary level up to grade 8<sup>84</sup>. A part of the exam criteria for these exams is the building of a repertoire list. For example, according to the syllabus for grade 5 (intermediate grade), a student must provide a list of 30 memorised tunes from which an examiner can pick at random. The student must also perform two jigs (linked as a set), two reels (again linked as a set), a polka or slide, a hornpipe and a slow air.

## **6.2 Context**

Changed performance contexts are a central issue with regard to many of the discrepancies observed as part of this data. Such changes in context are based on generational difference and social change, as well as the commercialisation of traditional fiddle music, and changes in performance spaces. With regard to assessing how changes in performance contexts affect tuning and pitch discrepancies as apparent in the fiddle tradition of Donegal, I suggest that the context of the local house dance tradition is of particular importance. From an examination of the interviews recorded, it is apparent that performance for these types of

---

<sup>84</sup> See <http://sct.comhaltas.ie/index.php> for more info.

events were the primary performance outlet for those aged >65. However, these dances have also been the subject of a revival in the past number of years, under the auspices of Cairdeas na bhFidiléirí. Caldwell (2015) provides an interesting insight into this revival and the changing context of the house dance tradition in south west Donegal. He addresses the change in social audience, and the changed functionality of the local dance music, as well as implying the affects that such change can have on the music.

“This pursuit of 'for listening-only' forms of Irish Traditional Music only serves to facilitate the further de- contextualisation of forms of Irish dancing from their musical forms, a phenomenon identified in *A River of Sound* and one which has been in effect for more than a century. A generation of musicians is now emerging which has little or no experience of playing for dancers; even those who do play for dance find their major performance outlets are dance competitions which require an increasingly stylised and homogenous musical aesthetic, one which relies upon the application of mechanically-enforced, uniform *tempi*. Meanwhile, dance music is played at increasingly disparate *tempi* in sessions and concert halls, further serving to de-contextualise its practice from the actual experience of dancing itself.”

(Caldwell 2015, p. 2)

Like those interviewed in the sample, apparent is the emphasis on rhythm and tempo, which is natural considering its basic mechanical importance to the performance of dance. However, I suggest, like Caldwell, that those who are removed from the authentic experience of the house dance tradition have to tune in to its ‘sound’ when attempting to conform to that context, be that when playing with individuals such as the Campbells or as part of the revival context alluded to by Caldwell. This includes values of pitch discrepancy as well as the obvious rhythmic discrepancies apparent.

### **6.2.1 Experiences outlined by the participants**

Generational difference is noted with regard to changed performance contexts. Ó Maonaigh makes strong reference to his grandfather’s role in the local dance scene in Gaoth Dobhair, particularly during the 1930’s and 40’s, right up to the advent of sessions in Gaoth Dobhair in the 1970’s.

“... as far as I can make out, during the '40s he was playing for -- like he was the DJ, himself and Joe Jack, sitting up playing for a hall full of people. ... They were just hammering the beat out rather than ... trying to be complicated with the music.”

(Appendix A: Ciarán Ó Maonaigh interview)

This particular quote captures in a real way the context and concept of the function of the fiddler in the mid 20<sup>th</sup> century in Donegal. It also embodies the emphasis on one aspect of the music (rhythm) over the other (tuning/ intonation). Jimmy Campbell credits his experiences of growing up in the house dance era for much of his early development as a fiddle player. He started the fiddle aged 7/ 8 years, initially taught by his father. Mac Aoidh offers that:

“Considering his earliest exposure to music it is not surprising that he possesses the old house dance repertoire of this area...his playing is the most supreme example of the old house dance style I have ever heard. While maintaining a technical simplicity there is a swing in his fiddling which captures the essence of beauty in the music. The rhythm of the highland is virtually defined by Jimmy Campbell’s playing of it.”

(Mac Aoidh 1994, p. 249, 250)

Jimmy also related this importance of timing when playing for these dances in this way:

J.C. : “at that time if you didn’t have timing for dance music they wouldn’t listen to ya. Now...and that time too, it was for listening but if you didn’t have the timing they would jar ya!”

AOD : “...do you think it was more important for the fiddlers to have good timing than say than to have a good version of the tune or be able to play the tune well?”

J.C. : “Absolutely.”

(Appendix A: Jimmy Campbell interview)

“My aunts would be in... and once he’d (*his father*) start playing, they pulled you out, they couldn’t sit down. They called it good music going to loss!”

(Appendix A: Jimmy Campbell interview (brackets by author))

In terms of repertoire, Jimmy suggested that the highland was by far the most popular tune type due directly to its demand as a couple dance at the local house dance scene. Such was its popularity that it was the first type of tune his father taught to him (Appendix A: Jimmy Campbell interview). Each quote in this instance again highlights the importance of rhythmic regularity over tuning or pitch related accuracy. However, this research has similarly demonstrated that certain pitch related discrepancies can be directly related to rhythmic aspects of the dance. Furthermore, it has been observed that when playing certain tunes, such as the highland ‘Miss Drummond of Perth’ that these discrepancies may have become embodied as elements of the sound of the tradition associated with that context. As observed in Chapter 5, in the highland ‘Miss Drummond of Perth’, an embodied discrepancy occurred in a high number of the participants’ performances of the second phrase of the tune (the G’ note, played

with second finger on the E' string), which related directly to a corresponding change in the movement associated with the highland dance during that particular phrase. This relates heavily to Kaminsky's aforementioned suggestion of sonic metaphor directly related to movement in dance (2014).

As alluded to above, Nic Suibhne's research on the repertoire of the Donegal fiddle tradition associated with the house dance tradition highlights three categories of fiddle player apparent within that context, 'the house fiddler', 'the local fiddler' and 'the expert fiddler'. From the testimony given by Danny Meehan during the course of this interview, Nic Suibhne's account of the 3 distinct categories of fiddler seems to be accurate for that region of Co. Donegal in the mid 1900's. Meehan recalls the tradition of Ceilí dancing performed at the time. The change in terminology used to describe the dancing that took place in the area makes it more difficult to be definitive about whether Meehan is referring to house dances as they occurred in the Glen of Glenties (on the other side of the mountain to Drimarone)<sup>85</sup> or a separate tradition of céilí dancing in the area. What is certain is that these ceilí bands had a varied instrumentation, usually fiddle and accordion/ melodeon, as a core to the group and that dancing was still the primary social function of the fiddle players of the area and each strand of fiddler had their role (Appendix A: Danny Meehan interview). One area which I find of particular interest is Meehan's indication of a definite hierarchy apparent within the region. 'Quarantines' were held by the expert local fiddlers where only fiddle players deemed of a recognised standard were informed and invited. Meehan recalls how having a less capable fiddle player present at this event 'ruined everything', but that the fiddler in question (noted by Meehan for his lack of 'tuning') was sufficient to "fill in until the fiddlers got there" (to the dance) (Appendix A: Danny Meehan interview). This highlights two aspects of the tradition of the area. It confirms the functionality of the house player/ local player as Nic Suibhne suggests. It also suggests that the fact that the fiddle player in question was out of tune didn't necessarily matter to the dancers at these events as timing for the dance was the primary concern.

Meehan also alludes to the fact that many of the local fiddlers were highly proficient in terms of tuning the fiddle. At the start of my interview, Danny presented me with three non standard tunings for the fiddle strings that were practiced by these local fiddlers. These were A,D, AE',

---

<sup>85</sup> The Campbells and Danny Meehan make common reference to trips across these mountains for 'big nights' where dancing took place, although this is not mentioned in these interviews.

achieved by sharpening the G string by a full tone; G, E, A E' achieved by the sharpening of the D, string by a full tone and D,,D, A E which is achieved by the flattening of the G, string by 4 full tones. This achieves an octave gap between the bottom two strings. When playing the last of these mentioned tunings Meehan makes the point that both strings should be fingered in unison to achieve the desired sonic properties. Each of these tunings are used as a means of creating a drone and as such legato bowing is favoured in their performance so as not to break this drone (Appendix A: Danny Meehan interview). The tuning of A,DAE' is a common tuning in Scandanavian fiddle playing, in particular the fiddle tradition of Norway. It is also common on the Shetland Isles. Non standard tuning practices seem to have been less popular on the island of Ireland as a whole, but certainly evidence suggests that this was not the case in Co. Donegal. Examples of non standard fiddle tuning can be heard on recordings of some of Donegal's most well known fiddle players including John Doherty (playing the Enniskillen Dragoon's/ Nora Criona on the seminal album 'The Floating Bow' (Claddagh Records 1996)) and Con Cassidy (playing Miss McLeods reel on 'The Fiddle Music of Donegal – Con Cassidy' (CNF 2007)). While the tuning of ADAE was relatively common, to my knowledge, this is the first time that a recording has been made within the Irish tradition of this particular tuning, in particular with reference to it as a traditional practice among the tradition bearers of an area. In terms of this project, this shows a high awareness of tuning as a core element of performance among a grouping of the traditional fiddlers of this area during the early – mid part of the last century. It shows that they engaged in practices where they were exploring sounds associated with the instrument that were outside the primary context for the music (the dance tradition). It also highlights the dual nature of the audience for this music in this area. Just as there were expert players, there seems to have been an expert listener group (mostly made up of the fiddlers themselves) which stood alone from the general tradition associated with the dancing.

These experiences are in contrast to those relayed by younger members of this sample, in particular those who have played in various collectives, both traditional music based and with other genres. A good example of such varied experiences is Damien McGeehan. McGeehan is well known not only as a fiddle player but as a talented multi-instrumentalist, playing guitar, bass and drums in various bands from genres of music other than traditional Irish music. According to McGeehan, these years were formative in terms of the formation of his intonational execution.



“ A lot of the time, when you’re playing with other children...the tuning would be a bit out here and there. You’re probably playing with kids who have bad instruments...so tuning probably wasn’t a massive issue...but when you started into a band that was doing gigs like that, then you were playing with a keyboard,...aguitar, bass, everything that was tuned perfectly across the board.”

(Appendix A: Damien McGeehan interview)

Similarly, others such as Breffni O’Donnell and Melanie Houton indicate how their performance practice may change with regard to changed performance aesthetics. As evidenced with regard to the section on tuning, Houton suggests that her basic tuning practice changed to be uniform with regard to a session context, where as O’Donnell suggests that using a pedal tuner (through a fiddle pick up) is a desirable practice when tuning with other instruments in a band situation.

“the thing is with that, because you’re playing with guitar, piano, bass, if its not perfect when you’re playing with different instruments, its more important. It has to be more perfect. I’d use the tuner but I’d just use the A for traditional music.”

(Appendix A: Breffni O’Donnell interview)

This is also a practice observed through my experience with the band FIDIL, where professional performance contexts significantly changed our tuning habits, turning away from sonic individuality and discrepancy to a standardised tuning practice, which we felt was more consistent and ‘appropriate’ for a professional performance context.

What these examples highlight is the change in the social function of the music from a rhythmical based dance music to a tonally important listening one. It also highlights that technology is used by fiddlers in Co. Donegal who feel under pressure to conform to a tuning standard. These standards are implied by audience expectation and through experiences of fiddlers playing with other fixed pitch instruments in other genres. I suggest that the results discussed in Chapter 5 demonstrate the issues outlined above, where discrepancies directly associated with varied performance contexts are shown to be an act of tuning in on the part of the performer, so as to conform to the conceptualised representation that they deem appropriate to the immediate performance context. This suggestion is also related to the earlier commentary on the development of a harmonic consciousness in the Irish tradition as a relatively recent event (see Henebry, 1903 and Dillane, 2003), and that accompaniment of Irish traditional music in the Donegal fiddle sound community, for example on guitar, was

more recent than that, with many anecdotally citing Sean Con Johnny O'Beirne as the first regular guitar accompanist for Donegal fiddle music in south west Donegal during the 1960s and 70s. Furthermore, that it is an important consideration of this research that an individual's idiosyncratic sense of tuning and fingered intonation is fluid in this context, which serves to highlight an integral aspect of the regular performance (and the related context) of Irish music. The process of individuals adjusting their idiosyncratic perceptions of their artistry to that of a specific performance context is important, as it allows us to observe the social values that are directly placed on those contexts by the community members.

## Chapter 7

### Studying the 'step' of a Donegal fiddler: Aidan O'Donnell

#### 7.0 Introduction

To this point in this thesis, I have used an identified framework through which to examine the tuning and fingered pitch practices of a sample of participants representative of the Donegal fiddle sound community. This chapter presents an opportunity to examine my own tuning and fingered pitch practices with regard to the wider sound community, and to investigate how I (an individual) relate to the sound community (or communities).

As stated in chapter one, I am also an active participant of the sound community of Donegal. I have played the fiddle from the age of 12, and have played in all the contexts alluded to throughout this thesis, from playing in local sessions, contexts associated with the house dance revival and playing professionally (both in the local pub scene, and as a full time touring artist). I am now a board member of Cairdeas na bhFidilíirí.

As such, building on existing literature identified earlier, such as Melin (2012) and (Chang 2007), I feel that using my experience as a case study might be significant with regard to the research. Through this case study, I aim to give as much context as possible to aspects of my musical experience and development, giving a clear picture of my own basin of attraction and how that has shaped the sounds that I make today.

#### 7.1 Early musical development

I am from Dunkineely in south Donegal. It is situated on the N56, 11 miles from Donegal town and 6 miles from Killybegs. I do not come from an especially musical family. Neither of my parents play music but by paternal grandfather, Michael O'Donnell, (who was from and lived in Kilcar, 13 miles away) did play accordion, tin whistle and mouth organ and these were my first experiences of traditional Irish music. However, music was not in any way part of the consciousness of our family home. Similarly, traditional Irish music was not popular in Dunkineely. At the time when myself and my brother started attending music lessons in the neighbouring village of Bruckless (with Seamus Sweeney), in my memory only four

traditional musicians of note lived in the village,<sup>86</sup> and two of these (the O'Rourkes) did not play out, so were only heard in very rare circumstances. No regular session took place in the village, and it seemed that it was in no way part of the social consciousness of the area.

I have long been aware of my own performance practice in relation to tuning, intonation and inflection. My experience as a recording artist and professional performer has fostered a degree of musical reflexivity in this regard. As a teenager, my performance experience was largely that of a pub performer, playing both in informal sessions, (where often I was the only non fixed pitch instrument) and performing in various pub venues in south county Donegal. I also had a fascination with Donegal fiddle music at this time, and so attended the many events organised by Cairdeas na bhFidiléirí, as well as traveling regularly to meet and listen to James Byrne and The Campbells. My initial experience of the fiddle was from my first music teacher, Seamus Sweeney, whose pedagogical method was to fashion lines on the fingerboard of the fiddle outlining where the exact fingering of the fiddle was situated in order to achieve better tuning. Seamus tuned each fiddle at the start of each class, where I would bow the fiddle, and he would adjust the fine tuners of my fiddle while simultaneously bowing the strings of his own fiddle. He did not instruct us in how to tune the fiddle at any stage of my lessons with him (approx. 6 years). No lines were employed for the use of naturals played with the second finger or for the use of the 4<sup>th</sup> finger. Instead, these were introduced after a significant period of time, when a student's ear had more experience in differentiating whether a note was 'out of tune' or not, and so were left up to the student. All of Seamus' students were also encouraged at an early stage to enter the competitions held annually by Comhaltas Ceoltoirí Éireann, where tuning and intonation were two of the primary fields of adjudication. This was my primary outlet of public performance until discovering the local fiddle music scene. From the moment of that discovery, my identity as a member of that particular tradition became important. I was informed by those who played in the scene that this was 'Donegal' music, and therefore unlike the material that I was learning/playing for competition. Similarly, during this transition period when performing at the county fleadh competition (I was still a student of Seamus Sweeney at this time) I was told by an adjudicator to stop playing 'Donegal' music as it was not traditional. I thought this unusual. I had been told to stop playing 'Donegal' music at the Donegal fleadh! I was publicly

---

<sup>86</sup> Martin Wilson, (Accordion), Hamilton Long (fiddle), Hughie O'Rourke, (Fiddle -who was a 1<sup>st</sup> cousin of the famous Doherty fiddle family) and Hughie's son Hughie (who lilted).

told by the adjudicator that while I was a good fiddle player, that if I wanted to progress that I should stop playing Donegal fiddle music immediately. I also didn't win the competition as a result of this tune choice. This was also constant with Caomhin Mac Aoidh's experience of attitudes to Donegal fiddle music nationally.

“the rankings typically went like this: at pole position was the Sligo style because no one could ever play as good as or better than Michael Coleman... Following this were the Clare styles... with the East Galway style not far behind. Next in the queue was Sliabh Luachra . At the end was Donegal music. It was a regular feature of this scenario to disqualify this style as it was not Irish. It was aberrant Scottish music which was also played badly by its practitioners.”

(Mac Aoidh 1994, pp. 67, 68)

This experience served to harden my new choice of identity rather than to dissolve it, and so I became immersed in Donegal fiddle recordings such as 'The Brass fiddle', 'The Donegal fiddle' and attended all Donegal fiddle events I could in an effort to fully integrate into this community.

Alongside these pedagogical and identity developments, a session started in Dunkineely in Gallagher's pub (now McIntyre's Bar). This session was a mixture of folk songs and Irish traditional music. Martin Wilson (accordion) was the predominant player at these sessions. However, Martin was hugely influenced by Joe Burke<sup>87</sup> and therefore his repertoire was not similar to that of the Donegal fiddle tradition as I knew it. Instead, repertoire was that of the standard accordion cannon. Singing was also a major part of the session in Dunkineely, where folk singer and guitar player Denny Coleman performed the majority of songs. This was a major influence in terms of my development in tuning and finger pitch intonation, as Denny sang in a variety of keys but insisted that I play with each song, whether I was familiar with it or not. I subsequently performed with Denny on the local pub scene as a two piece band. I was acutely aware that my discrepancies that were acceptable when playing with Martin Wilson or with Denny in the session context were less acceptable when performing in the semi professional pub scene. To this end, I employed the use of practising scales to ensure accuracy. I did not use an electronic tuner, as I felt that when my fiddle was tuned by this method I didn't sound right to me.

---

<sup>87</sup> Famous accordion player. For more on Burke see <http://archives.library.nuigalway.ie/joeburke/biog.html>

My main student and professional experience began at the University of Limerick in 2002. I very quickly acknowledged that my own performance practice was discrepant from the practices of others. In terms of temporal discrepancy, I found that I was eternally 'out of time' with other musicians (in my opinion due to my *detaché* bowing technique, (Caldwell 2013, p. 66) which seemed to speed up my sense of rhythm), where this was not a problem in any way when I returned to Donegal. I was also slightly 'out of tune' compared to the other musicians I encountered and as a result felt somewhat marginalised. I had a different 'sound', a different 'style' and a different repertoire. I wondered at this early stage about the influences of standardisation. I also pondered my own performance practice and whether I was simply 'out of tune'. Why didn't more discrepancy exist in this University environment? Was this an extension of the competition culture which I had experienced a few years earlier?

I actively strove to eradicate these discrepancies when playing in this context, also engaging in a deliberate act of tuning in. I was also conscious of the identity assigned to me by others in Limerick. I was a Donegal fiddler, and this label carried currency, socially and academically. I felt that I was exotic to the sound palette of the course, and that the sound I was creating was in some way treated as 'authentic'. However, I realised that what I was learning academically about my own sound community was far removed from my immediate experience of that community, and that the influence of Sweeney and Wilson on my development were also integral elements of my sound, and the part of my experience that was eventually allowing me to tune in to the social context of the university sound community. Therefore, I consciously engaged in a duality of identity, where I drew on my experiences with Sweeney and Wilson to tune into the social context of playing music in Limerick (and elsewhere in Ireland), and drew on my experiences of the Donegal fiddle tradition when playing in that specific context. I suggest that in reality my own personal sound was fluid between these two identities, especially as these were still formative years in my musical development.

During my time in UL, Siobhán Peoples was my primary fiddle tutor. She is a daughter of Tommy Peoples, (from St. Johnston in east Donegal) and grew up in Co. Clare. She was well aware of the duality of identity I spoke of and related her own experiences of that to me. In her classes, she suggested to me that I try to do as much as possible with the fiddle technically, and to listen as much as possible to other styles, so that I could weave between styles, but equally encouraged the development of a Donegal voice.

Also while studying in UL, I was extremely lucky to have worked closely with Prof. Micheál Ó Suilleabháin. He was also eager that I maintain a Donegal sound as central to my identity. Ó Suilleabháin provided me with my first experiences of high end formal professional performance, where I was honoured to feature as a traditional soloist for some of his performances with string quartet and chamber orchestra. This experience again highlighted the issue of tuning, where I felt that my sound was always slightly at odds with the piano and strings of the quartet or orchestra. In this situation, I was extremely conscious to change my usual practice slightly to conform to the sound of the collective ensemble. Again, my tuning practices in this context did not involve using an electronic tuner, but taking an A from the piano, and tuning my strings in 5<sup>th</sup>s from that point. However, I always readjusted my fiddle slightly while the strings section and Prof. Ó Suilleabháin were playing before my entry point, as I felt that my tuning was always slightly sharper than the collective sound.

In 2004, while recording my first album, a duet fiddle/ flute album with fellow University of Limerick student Kieran Munnelly, (flute player and percussionist from Belmullet, Co. Mayo), all tuning between the fiddle and flute was realised by ear. This seemed logical as this was how tuning had always been achieved for both Kieran and myself in both formal and informal settings. What became apparent from the recording was that my 'D' string was constantly slightly flat of Kieran's bottom 'D' on the flute. While this was noted, again both Kieran and myself were of the opinion that this was not an issue, and in fact added 'character' to the sound, as this was something that was particular to my sound. Issues began to arise however when our accompanists, Sean óg Graham (guitar, bouzouki and accordion) and Ryan Molloy (piano) began to overdub their performances on our earlier recording of the tunes. The piano in the studio had been tuned (equal temperament) while the guitar and bouzouki were tuned to a Boss chromatic tuner (also equal temperament). This caused a clash in terms of tuning, and suddenly the recorded music had lost its 'character' and seemed simply 'out of tune'. To this end, some takes had to be re-recorded with everyone live in the same room. Tuning was still realised by ear by Kieran, and myself but in this instance a conscious effort was made to tune each individual string with the relative note on the piano/ guitar. In my opinion discrepancies, albeit slighter ones, were still evident (and can be heard on the finished product – 'In Safe Hands' (Munnelly, O'Donnell 2006)). However, this was a conscious choice for me at the time as I felt that the character alluded to earlier and my particular sound would be compromised if I sounded too 'in tune'.

## 7.2 FIDIL

I feel that my experiences with the band FIDIL are also worthy of inclusion in the conversation on this topic. As noted in Chapter 2, Fidil are a fiddle trio from Co. Donegal, and as related earlier, changes in our performance contexts readily changed our tuning and performance practices, in particular in relation to the implementation of onstage tuning solutions and tuning the fiddles in a live studio setting. The question was raised as to why our senses of tuning were different as individuals and why we felt pressure to conform to a standard tuning system in certain performance contexts?

Arising from these issues on stage, the recording of our subsequent albums differed in terms of our methodology. While recording our first band album '3', we still wanted to have a 'live' feel to the recording, and so recorded together in a live room. We learned that this in turn limited what could be achieved by means of post production, especially in terms of any temporal or pitch issues. Each individual tuned meticulously to a built-in tuner in the studio (again equal temperament) so as to consciously 'standardise' our tuning practices. While this did help in the eradication of most of the pitch discrepancies apparent, it did not eradicate them all. This was a fix to make sure that our basic tuning of the fiddle was 'correct' to a standard measurement across the trio. However, the tuner could not account for our individual performance practices in terms of intonation and inflection. As such, discrepancies remained which proved much more difficult to 'tune'. Issues arose in certain tracks where over – dubbing was taking place. Certain members of the group found it more difficult to over-dub in tune than to play in tune with the trio live. This was our first experience of how an 'auto tune' function could be used. Its availability and use became an extremely contentious issue for the band. Again, issues of aesthetic and ethical correctness came to the fore. All members agreed that generally this was *not* a desirable tool to use in this situation, and felt that as a band we could lose some integrity by its use. *However*, we felt a new type of pressure in this recording situation and felt that aesthetically, in a *professional performance context* that any professional *commercial* band *must* be 'in tune' to industry standard. We also agreed that the cost of hiring the engineer and studio was a factor, where as if a note could be slightly tuned in an easy fashion, this was a more logical and less costly method than re-recording a take, or 'dropping in' part of the recording. It should be noted that where most pitch discrepancies were apparent, 'drop ins' were used, especially if apparent on the main melody line. A software solution was only used in background lines which had been over dubbed.



While this album was extremely well received by critics and the general public alike, as a band we still felt that there were (minor) issues of pitch discrepancy evident. As a result, we adopted a new methodology for the recording of our next album 'The Old Wheel of Fortune' (2011). We decided to record this album in a studio with separate recording booths in order to achieve complete separation (i.e. no spillage between the microphones) between the fiddles. We each tuned our fiddles to our *Boss* chromatic tuning pedals, which we had purchased for our stage performances. We felt that these pedals had changed the act in a positive way. We each now tuned to a standardised measurement which was a consistent value. As a result, our individual senses of tuning also seemed more standardised which resulted in a more acceptable 'unified' sound. By this stage, we were also aware that dedicated temporal and pitch discrepancy editing software programmes such as 'Melodyne' existed. Any fixes achieved through Melodyne seemed to sound more 'natural' (there was no audible 'bending' of the note into tune by the DAW<sup>88</sup>) than any fix that was achieved using the auto tune function in the previous studio. This knowledge was part of the reason for adopting a separate booth system, as any fiddle in isolation could be edited easier (including tuning) and could also drop in over a good take by the others in the group. That being said, drop-ins were still preferred to tuning at every juncture, and again it was the slower more chordal pieces which seemed particularly problematic. From a personal perspective, the track 'The Flowers of Redhill' is of particular note. In this track, the main melody of the second tune in the set is played by me. Its tonal centre is 'A' (A mixolydian). In my opinion, my 'E' string is out of tune (even to this day). This was flagged at the time of recording. This was then tested by the engineer in Melodyne to ascertain if I was playing this note out of tune. It was clear from the Melodyne software that I was perfectly 'in tune' to industry standard, however to my ear this measurement was not correct. Interestingly, I was the only one who held this belief, and am the only one who considers this note to be out of tune on the recording. What issues does this raise a) about the process of recording b) about our attitudes to tuning in this situation and c) about our own individual senses of tuning? Did the others in the band honestly hear this example 'in tune' or were they relying on the visual assertion by a software programme that it simply *had* to be 'in tune'? I also pondered as to why I heard this particular 'E' note 'out of tune' in this tune only. The only difference that I could establish was the fact that it had a tonal centre of 'A', and therefore the 'E' should have been tuned in fifths rather than to the equal tempered tuner. In any case, democracy won the day and

---

<sup>88</sup> A common abbreviation used for Digital Audio Workstation; for example programmes such as Protools, Logic and Cubase. Melodyne is also a DAW.

the ‘out of tune’ ‘E’ was published.

### **7.3 Professional Career**

I am lucky to have had a relatively successful professional career in music. I was awarded the TG4 Gradam Ceoiltoir Óg na mBlíana (Young Musician of the Year) in 2010. I have toured nationally and internationally, and played in prestigious venues such as the National Concert Hall (Dublin) The Royal Scottish Concert Hall (Glasgow) and The Old Town School of Folk (Chicago) among others. I have been regularly featured on national and international TV and radio. I also have lectured on Irish traditional and world music, and been a regular fiddle tutor at both The Irish World Academy of Music and Dance and at the University of Ulster. What these experiences serve to contextualise is that while I suggest that I hear certain notes differently, indicating that I may have an individual sense of tuning, that based on this level of success that I have demonstrated that I am not deemed ‘out of tune’ by others. Rather, my certain set of discrepancies (which ever they are, dependant on the relevant context) have been met with a level of acceptance.

### **7.4 My own pedagogical methods**

I use exactly the same methods of instruction as Sweeney when teaching my regular classes in Thurles, Co Tipperary. I suggest that it ensures that students can progress to a certain standard quickly, and that the visual aid of lines is a significant factor in the improvement of finger intonation. I also agree with sentiments discussed by Roisín McGroary with relation to teaching Irish traditional music, where in the modern formal class context, pressure to attain results quickly is a factor. Paying parents expect results, and using lines can help develop those students who may not be as musically minded as some of the other students. However, my practice changes with changes in context. For example, when teaching larger workshops as part of a music summer school or other event (week or day long classes), lines are not employed, and depending on the standard of the class, neither is tuning. Students in this situation are expected to achieve tuning themselves, and similarly, are expected to hear and adjust pitch discrepancies. My experience is that the difference in these contexts is primarily for two reasons: 1) that it is impractical to put lines on each fiddlers instrument due to time constraints and the pressure associated with keeping the customer (students) happy with progress. 2) that at a certain level, this practice of teaching in this context is similarly embodied, where this form of transmission (picking it up by listening and watching) is more directly associated with older transmission contexts, and therefore is in some way seen as

more 'authentic' in achieving the correct sounds associated with the sound community. One further associated issue in my experience is also etiquette, where it is considered impolite by some to be told that their tuning and finger practices are out of tune. I have had this direct experience, where some adult students have had serious tuning and finger pitch issues, but unfortunately, did not feel that my capacity as instructor gave me a right to criticise their performance practice, rather my role was to teach repertoire only, leaving technical aspects to themselves.

### **7.5 My tuning process**

As part of this research, I conducted a tuning and performance interview with myself. I recorded my own tuning practice, using exactly the same conditions as with the others in the sample. I used a mixture of plucking and bowing the strings in this process, plucking to trial whether the A was relatively in tune to the supplied tuning fork, before subsequently bowing. I used the fine tuners of the fiddle only to adjust the strings. I tuned these using my bow hand only, therefore sounding a string, listening to it, and then stopping to adjust it with the same (right) hand used to hold the bow.

I tuned to the supplied tuning fork (A=440 Hz). Upon sounding the tuning fork, I initially lightly plucked the A string, stating that I thought that it sounded sharp. A value of A = + 25 cents is recorded by Melodyne. I then resounded the tuning fork, subsequently placing it on the bridge so as to hear the reference tone, plucking one more time. I indicate that I pluck the string hard on that occasion, implying that I feel that the value should be sharper. However, the value for that plucked string is A= +24 cents. The tuning fork is resounded once more before bowing the A string. I immediately retuned this string downward from a highest value of A = + 29 cents to A= + 13 cents. I subsequently tune the string down further to A = + 9 cents, where I declare that I am happy that it is comparable with the reference tone, and that if I am out at all, that I suggest that I am actually flat of the reference of A = 440 Hz.

I then tune the E string by playing open double stops between the A and E strings, immediately tuning the E string downward from a value of E = + 17 cents to a lowest value of E = - 8 cents, before sharpening the string to a value of E = + 6 cents. Attention is then turned to the D string, which is tuned using the same method, bowing open double stops between the A and the D strings. I immediately flatten the D string from a value of D = + 19 cents to a Value of D = 0 cents. I then consciously flatten the string to a value of D = - 16

cents so as to gradually sharpen the string and trial where the sound is correct. I stop at a value of  $D = +1$  cents.

I then retrial the E string, again playing open double stops between the E and A strings, and subsequently flattening the E string. This small section (tuning the E string for the second time) also successfully demonstrates the influence of the bow where the values for E when played with the A string ( $E = +3$  cents) significantly sharpen when the same string is immediately played singly, without any other external factor. I then start to play the E and A strings together again, where the value for E flattens again to  $E = +3$  cents. Of significant interest is the fact that I then sharpen the E string to a value of  $E = +9$  cents, the value referenced immediately before. I suggest that this may indicate the fluidity of the mental representation of an individual's sound, where by playing the note singly, I may have subconsciously placed more value on that version of the note, and therefore tuned to it.

I then tune the D and G strings together, immediately flattening the G string from a value of  $G = +26$  cents to a value of  $G = +3$  cents, and subsequently to  $G = +1$  cent. I then turn my attention again to the D string, where upon bowing the D and A string together I state on the recording that the D string sounds out of tune to my ear, without any other external factor. I suggest that while tuning the G string that the D string "seemed to move". The Melodyne file shows that this was indeed the case, where the D string moved from a value of  $D = -8$  cents when being played with the G string to a value of  $D = 0$  cents and  $D = +3$  cents when being played with the A. I retune the D string by sharpening it to  $D = +11$  cents. The G string is subsequently trialled again, sharpened to a value of  $G = +6$  cents. I then trial the D and G strings by playing a fingered chord of D, using the A played with the first finger on the G string with the open D string.

I then return to the E and A string, again, playing open double stops to trial them. It is immediately clear that I am unhappy with the sound of the E and retune it to a value of  $E = +11$  cents. Similarly, I revisit the D and A strings, where further adjustment is made from  $D = +12$  cents to a value of  $D = +7$  cents.

Following this, I engage in a period of fingering random motifs, fingered chords and patterns in order to trial the tuning achieved. I then indicate that out of tune notes were present, and that my usual practice would be to use an A chord across the fiddle to tune the strings.

Therefore, I play A on the G string (played with the first finger), with E on the D string (also played with the first finger, while also then trialling the E (played with the first finger on the D string) with the open A, and lastly, the open E and A strings together. I immediately indicate that the G “sounds sharp to me” and slightly flatten it from A (played with the first finger on the G string) = +13 cents to a value of A = + 7 cents. I indicate verbally that this is much better. However, the values from Melodyne indicate that while the initial notes were tuned slightly flatter, that when I started playing them again with full bow force, that the notes in question subsequently sharpened to A = + 13 cents again. I can be heard adjusting my fingering of this note in this instance, flattening the pitch of the note to A = + 8 cents, closer to the earlier value that was indicated to be correct. This is a good example of Fyk’s corrective tuning where a note is played, digested and corrected in a short space of time.

I then trial an open G chord across the fiddle, playing the open D and G Strings, and then the B (played with the first finger in the A string) with the G’ note (played with the second finger on the E string). I immediately indicate that while the A chord is in tune to my ear, that the G chord is not. However, following trialling both the A chord and the G chord again, I indicate that I am happy with the tuning of the fiddle. I subsequently sharpen the E string once more, from a value of E = + 12 cents to a value of E = + 13 cents.

The values recorded post tuning process for the strings as bowed singly were :

E: + 14 cents

A: +10 cents

D: +11 cents

G: + 14 cents

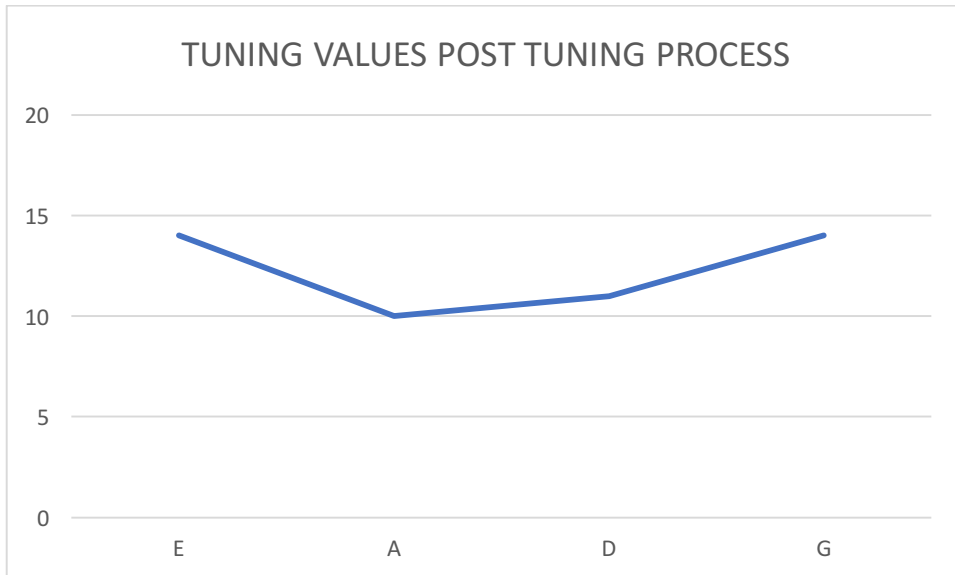


Fig. 7.1: Value for the strings of my fiddle post tuning process.

### 7.5.1 Patterns emergent from my tuning process

The results from this tuning process are constant with Siegel and Siegel's research where individuals who performed much aurally were extremely sensitive to whether a note was out of tune or not, but that they were less likely to be able to discern whether it was in fact sharp or flat. I exhibit a keen ear for tuning, where it has been observed that I immediately tuned the A string from its sharpened value ( as per where the fiddle was pitched as it came out of the case) to lower values closer to the 440 Hz sounded by the reference tuning fork.

However, I was not able to discern whether the string was still sharp or flat. Similarly, in tuning the other strings, a similar process is observed where despite initially tuning down strings to a standard closer to equal temperament, I naturally tuned each of these slightly sharper.

The bow was also observed to have been a factor in the performance of some tuning discrepancies. Again, when bowing in open double stops in comparison to singly bowed open strings, a discrepancy was observed, where double stopped strings were recorded as being flatter than the singly bowed equivalent.

It was also observed that like others in the sample, I have my own individual sense of tuning, and that it is undoubtedly sharper than an equal tempered standard. This is evidenced by the fact that I continually slightly sharpened my strings. Also, when compared against others

from my electoral area, no pattern emerges that suggests that I tune in any way to a particular local sound.

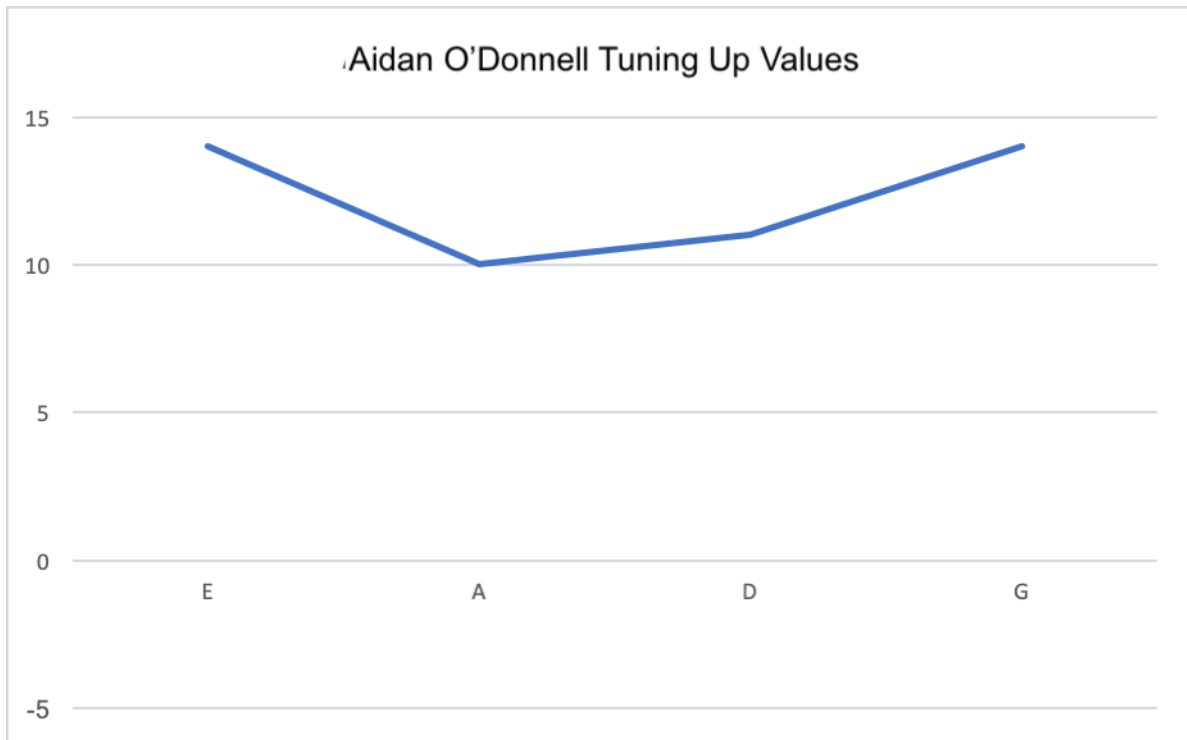


Fig. 7.2: Recorded values for the strings of my fiddle post tuning process.

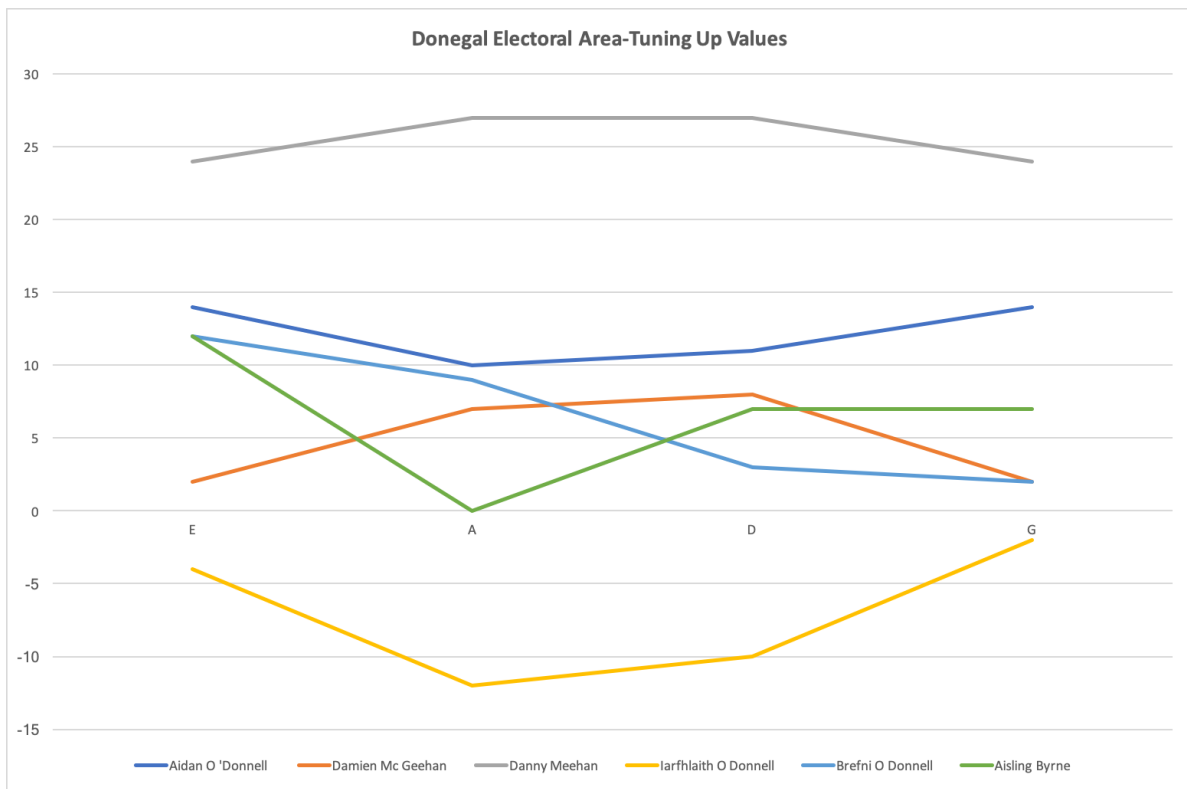


Fig 7.3 : Values recorded for the tuning up process with regard to those in the Donegal electoral area, including myself.

To highlight this, as with others in the sample, I readjusted my initial tuning values to account for any change in idiosyncratic perception of A, and subsequently did this for all others in my electoral area. The results showed no discernible pattern that suggests that existence of a ‘sound’ associated with the area.

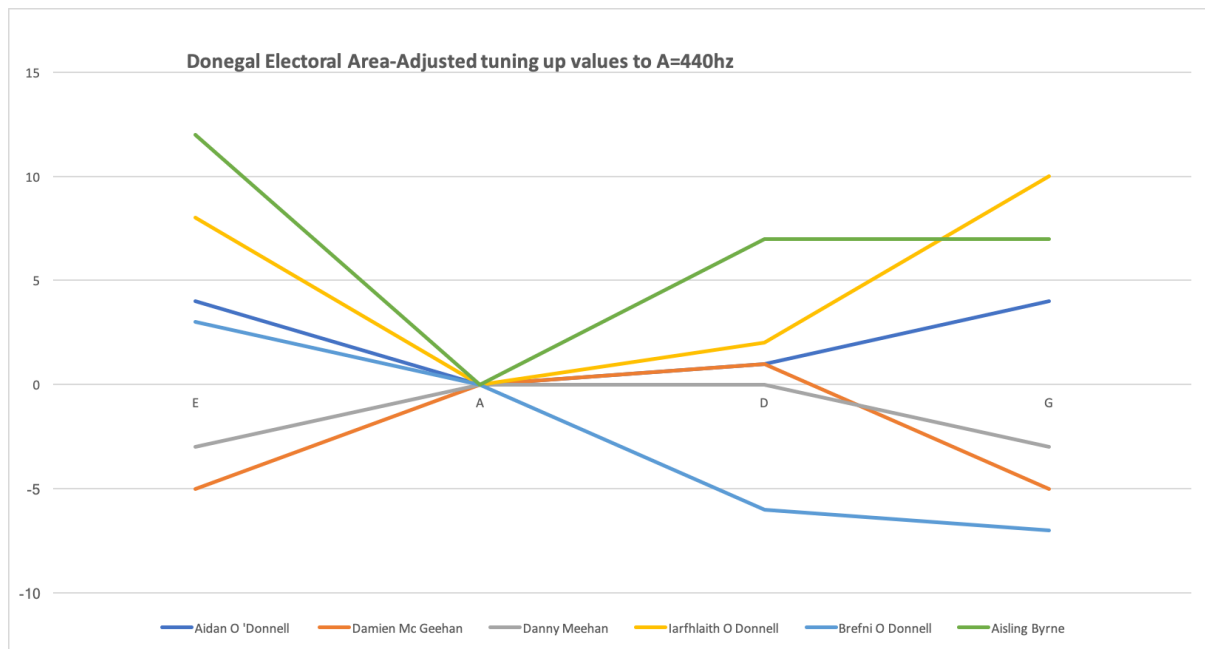


Fig 7.4: Tuning values for the Donegal electoral area, including myself, adjusted to A = 440HZ

It is also noted that during my performance practice that I stopped after three pieces and suggested that the strings now sounded out of tune to me. I suggested that the G string now did not sound right to me, so I sharpened it from G= +15 cents to G= + 20 cents,. However, I quickly then declare that the new value is too high and immediately flatten it back to G = +11 cents and G= +13 cents. I suggest that the last adjustment of 2 cent is bow related, as external adjustments using the fine tuner has ceased at this point. I therefore retune the fiddle closely back to what the original tuning of the string was. I also indicate what the tuning of the strings were after performance, and it is observed that the values are constant.



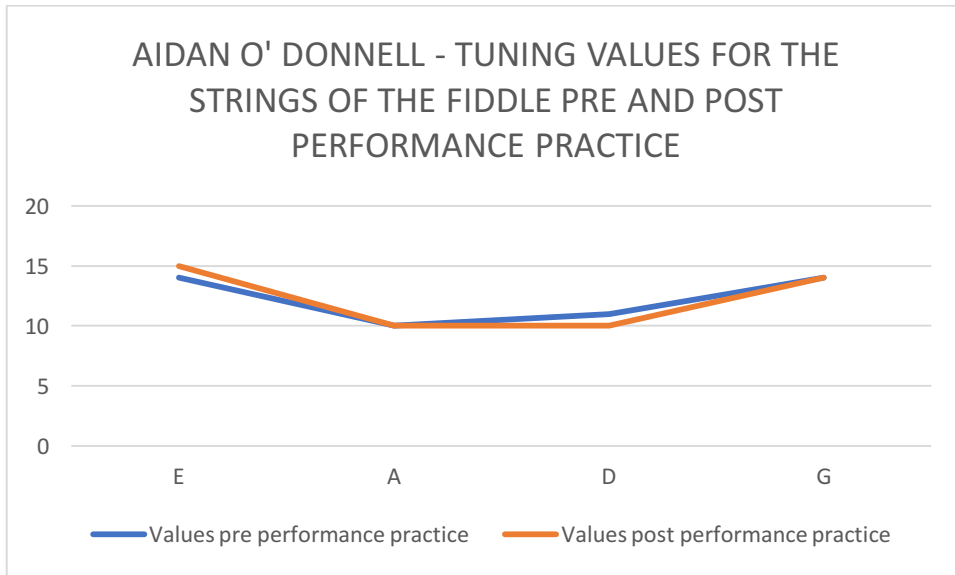


Fig 7.5: Tuning values pre and post performance practice. Where different, values are within 1 cent of each other.

## 7.6 Patterns emergent from analysis of my finger related pitch discrepancies

My general performance of my finger placement was observed as being sharp of the equal tempered equivalent, even when taking my sharpened tuned string values into account. At a primary observation it may seem that the fact that my finger intonation is sharp is the only point of note, as discrepancies seem random in nature. However, upon further investigation using the suggested tools of analysis certain patterns emerged.

Melodic Tuning was observed as present in my performance. However I noticed that while melodic tuning is present it was not like with others in the sample. My certain set of discrepancies seemed more regular, however, it was observed with regard to certain notes, in particular the use of the third finger to play the note of D' on the A strings and the note C (also second finger on the A string). A good example of this type of fingered pitch discrepancy can be observed in 'The Gravel Walks to Grannie' and 'The girl the broke my Heart'. However, my performance practice is not constant with observations made with regard to others in the sample. Others in the sample were recorded to have performed Melodic tuning as per Fyk's observation with regard to classical violinists (sharpening of notes when played as part of an ascending scale , flattening as part of a descending scale) or in direct contrast to that (e.g. fiddlers like Denise Boyle, who performed these discrepancies but recorded continually flatter values for notes played as part of an ascending scale (motif) compared with those performed as part of a descending scale (motif). Evidence from my

recording suggests that I do both. Evidence for this is extracted from the Melodyne files for illustration below.

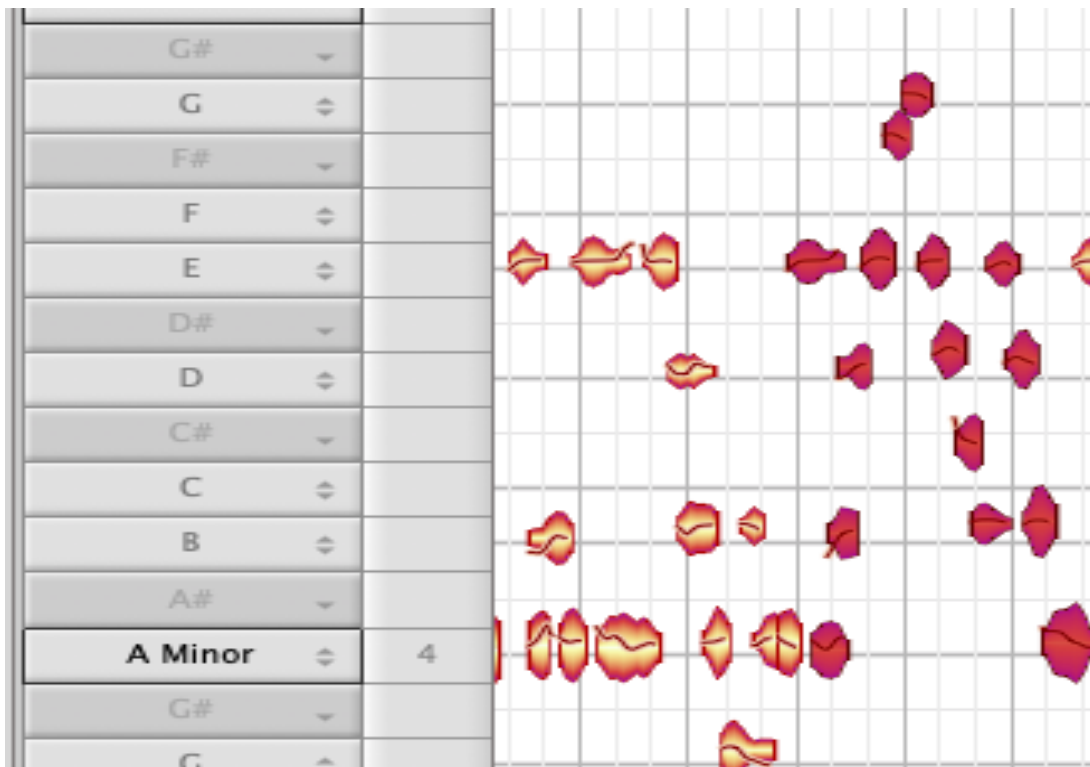


Fig 7.6: Example of inverted Melodic tuning in the Gravel Walks to Grannie. The highlighted section shows the ascending motif played, followed directly by a descending motif, where the notes are significantly sharpened when played as part of the descending motif.

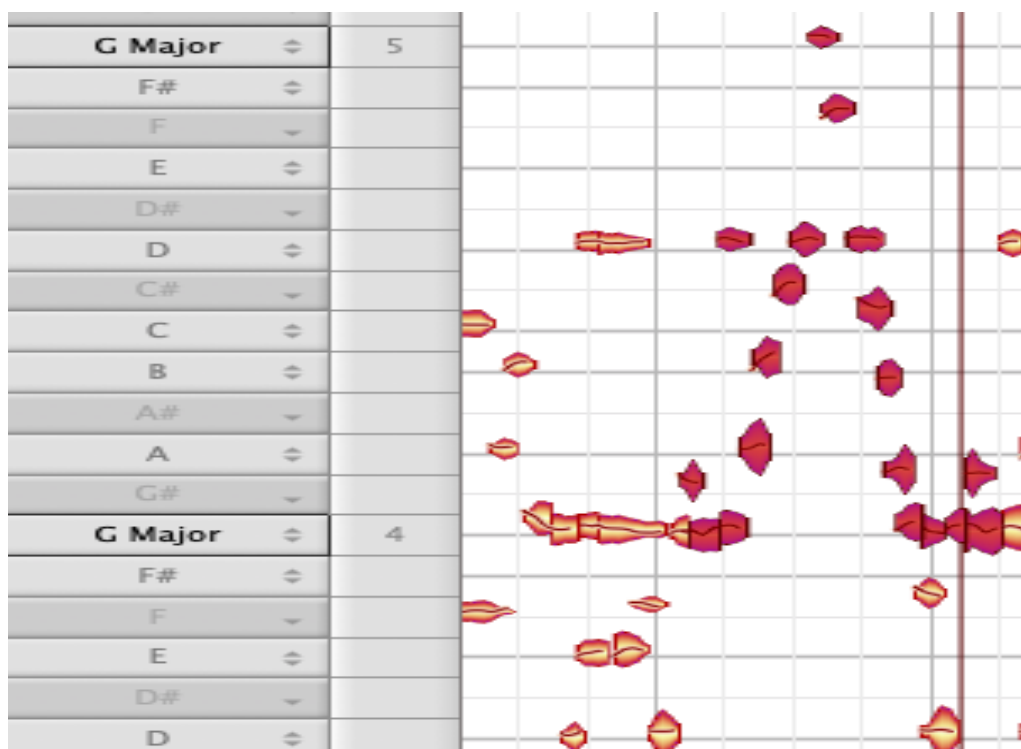


Fig 7.7: Example of Melodic Tuning in 'The Girl that broke my Heart'. Note on this occasion that the notes in question are sharper on the ascending scale and flattened as part of the descending scale.

This suggests that I am unique to this sample in this regard. However, I suggest that more detailed research is necessary on this aspect of the research. As indicated previously, this is a first time that such findings on fingered pitch discrepancy have been observed in Irish traditional fiddle music.

A form of melodic tuning was also observed with regard to my execution of the full roll, in particular the rolls performed on G (played with the third finger on the D string) in ‘The Girl that broke my Heart’. With respect to those particular rolls, it was observed that I always significantly flatten the middle G note of the roll before sharpening it again for last G, indicating a form of ‘micro’ melodic tuning.



Fig 7.8: Example of discrepancy with regard to the execution of a G roll. Note that the second note of the roll, which is played while descending to an F# note is flattened and immediately sharpened when ascending again.

Examples of colouristic tuning were also present, where when notes an octave apart were played (in unison or in quick succession) the lower register of the note changed. Example of this is the use of high C played with the fourth finger on the E string and the C played with the second finger on the A string. The C on the A strings flatten from  $C = +38$  cents to  $C = +19$  cents and subsequently sharpen to  $C = +34$  cents directly after the high note (on the E string) is played. The note is then significantly sharpened as part of the following ascending scale (melodic tuning) to a value of  $C = +53$  cents.

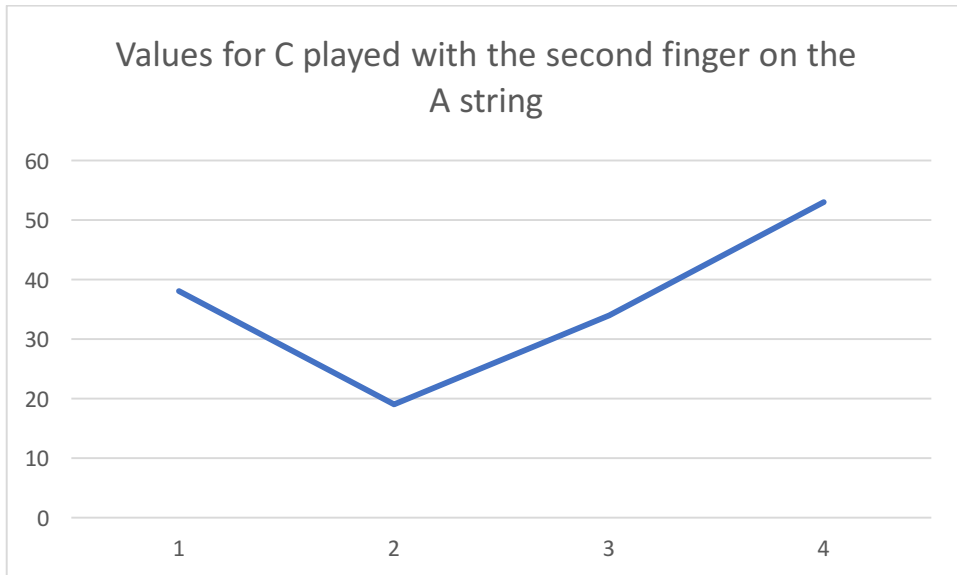


Fig. 7.9: Values for C played with the second finger on the A string, Note the dramatic flattening of the values for point 2, which corresponds to the act of colouristic tuning referred to above. Of further note is the value of +53 cents at point 4, which is also discrepant from normal practice. This is an example of Melodic tuning as it is performed as part of an ascending motif.

In terms of aspects of physiology, no discrepancies are apparent with regard to my performance practice. I played both ‘The Pigeon on the Gate’ and ‘The Cameronian’ reels as had been performed by others in the sample. While others had difficulty in playing successive notes on adjacent strings using the same finger digit, my performance practice does not show signs of such discrepancy. However, corrective tuning is observed as part of my performance, but seems to be directly related to mistakes rather than to any physiological issue as was observed with others. Two examples of this are provided below, one in the playing of ‘The Cameronian’ reel, where a mistake on an F (played with the second finger on the D string) is flattened and subsequently sharpened to normal performance values, and in the air ‘Rocking the Cradle’ where corrective tuning is employed in the last second part of the tune. I make an audible mistake on the high A (played with the third finger on the E string), correcting it from A = -3 cents to +26 cents, closer to usual practice.



Fig. 7.10: Example of corrective tuning in ‘The Cameronian’ where the F natural played with the second finger on the D string is flattened and then sharpened to usual values.

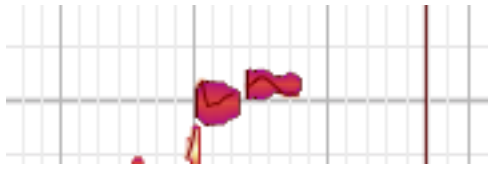


Fig 7.11: Example of the A' (played with the third finger on the E string) being sharpened from -3 to +26 cents.

One example of harmonic tuning is also observed where fingered practice changes in relation to chords. In the performance of 'Rocking the Cradle', C# (played with the second finger in the A string) is sounded with an E note (played with the first finger in the D, string) at the start of the second round of the tune. Values for the C change from usual practice of C = +27 cents to C = +2 cents for the chord. The E in question is also significantly flatter than what is usual for the rest of the tune, where it has values generally between E = +17 cents and E = +27, but flattens to E = +4 for that chord.

My performance of 'Miss Drummond of Perth' provided evidence of the sharpening of the G' (played with the second finger on the E string) with respect to the 2nd bar motif discussed earlier in the chapter with regard to motivic structures. As was the case with others in the sample, conscious discrepancies are performed as part of the particular motif in question that were not typical of the general performance of that note. This happened each time the motif was played with values ranging from G' = +9 cents to G' = +45 cents. This suggests a level of embodiment of this discrepancy in the performance of this discrepancy, where the initial discrepancy may have been involved with a specific context, but is now performed independent of the context and has been soaked up into cultural memory.

This tune also provides clear evidence of structural tones, where in the second part of the tune, when returning to a tonic chord, a significantly sharpened G' is observed, where Melodyne gives a value of G# = -28 cents. This is a conscious deviation, and is directly related to the relationship between the played note and the impending chord change.



finding, and that more research is a necessity in cultivating results such as these that may prove to let academics empirically observe idiosyncratic perceptions associated with the transmission of aural culture.

## **7.7 Conclusion**

My experiences as related here highlight in a significant way that identity assigned to an individual and the perception of identity as the individual relates to themselves may not be the same. My experiences show a complexity of social contexts, where I exist firmly as an independent person (musician) who at a basic level of musical function, wants to express myself and my identity in that individual space. But similarly, as with others in this sample, the social aspect of music performances is a significant consideration, where at each stage of my musical career, I have noticed where my ‘sound’ may not have been compatible with that of a particular grouping. I set about changing that sound so as to conform to the social group. I ‘tuned in’.

Also of interest is my relationship with the Donegal label, where as a teenager and young adult, I was feverishly passionate about achieving those aspects of fiddle playing that made me a ‘Donegal’ fiddle player. However, in reality, the majority of my musical experiences have been of music from outside the county, and I am conscious that this is also an integral part of my experience. Therefore, the act of tuning in also has currency in accounting for how I weave between sounds, without compromising my relationship with my multiple musical realities.

As with others in the sample, I exhibit the performance of embodied tuning issues, related to former contexts associated with the dance music, as well as potential influence from categoric exemplars such as the Campbells and James Byrne. My practice is consistent with practices observed as part of the wider sample in terms of melodic, harmonic, colouristic and corrective tuning, and also in terms of intonational inflection associated with structural tones.

## CHAPTER 8

### Conclusion

#### 8.0 Introduction

I came to this research as an experienced member of the Donegal fiddle sound community. I have played the fiddle for 23 years, having been taught by Seamus Sweeney from Ballyshannon. Across my playing career, I have increasingly focused on the style and repertoire of Co. Donegal, particularly that of south west and central Donegal due to my familial connections to those areas and the influence of tutors I encountered at the various Cairdeas na bhFidilíirí events as a teenager. This is evidenced in my recordings with Kieran Munnely (In Safe Hands, 2006), with Ciarán Ó Maonaigh (Fidil 2008) with the band Fidil ('3', 2009; The Old Wheel of Fortune, 2011; Decade, 2019). I was curious about the different sounds fiddlers had within Donegal. To my mind there was a duality at play. On the one hand individuality was important; yet at the same time those individuals were connected by an overarching 'Donegal style'. Within the Irish fiddle tradition a small number of localised or regional styles have long been distinguished. The Donegal style is recognised for having a unique repertoire and stylistic characteristics that often are considered more Scottish than Irish (Vallely 2011, Mac Aoidh 1994). One way in which Donegal fiddle playing is considered different from other Irish fiddle styles is around bowing. However, I was noticing that the sounds I was encountering were more complex than the label as a singular entity to account for the music, and that perceptions of tuning was another dimension that contributed to the individual, and possibly, collective soundscape. This was particularly highlighted at music gatherings where a single fiddle is passed from player to player. At these 'pass the fiddle' events, I noticed that each person adjusted the tuning of the fiddle to their own individual taste, and that each fiddler seemed to give a different level of importance to that practice. Listening carefully to the nuances of each individual performer in these settings, and reflecting on my own performances at the same time, it was clear to me that across the fiddle community in the county there was considerable variation in terms of intonational inflection. This amplified the duality that each individual seemed to have their own sound, but yet *were* part of the sound community by sharing repertoire and broad characteristics that were specific to the region and distinct from other Irish fiddle styles. For this research project, therefore, I set out to explore this further. Is there a Donegal sound? And what is the role of the individual within it? I wanted to investigate evidence of geographic variance across the county through the lens of tuning and intonational inflection – were there clusters of style



across the county? I also wanted to look at the fiddle music community from a demographic perspective and investigate the possibility of tuning and intonation practices varying across generations. Finally, I wanted to take a deep dive into the processes at play in the creation of the sound community of Donegal fiddlers.

## **8.1 Findings**

### **8.1.1 ‘Style’ vs. ‘Sound Community’**

This research clearly presents that there has been an established narrative for several years in relation to the existence of a specific ‘Donegal style’. However, previous research has highlighted the complexity of labelling fiddle playing in Donegal, including Feldman and O’Doherty (1980), Mac Aoidh (1994; 2013) and Doherty (2010). The current research contributes to the conversation around the challenges inherent in adopting a regional approach to labelling traditional music in Ireland. I posit the suggestion that two previously unconsidered factors - the proximity of Derry city, as a major port, and centre of commerce, and the network of ‘big houses’ around the county - may have been influential in the development of certain aspects of the fiddle tradition in Donegal. As evidenced in chapter one, and as implied by some of the informants of the sample, Derry has always been a cultural link to Donegal (being officially part of the county up to 1600), and was a link through which Donegal accessed developments of the outside world, and therefore was a hub of cultural exchange and development. Equally, the ‘big houses’ (the houses of the largely protestant land owning classes post plantation of Ulster (1609)) provided a wholly different set of influences for those who had access to them, by way of their more abundant wealth and access to emerging media. This was in direct contrast to the west of the county (as highlighted in pp. 16, 17, 18), which was an area of severe poverty, where much poorer infrastructure and less access to said emerging media (such as transcriptions of music (or the skills to read them) and later, recordings) was apparent.

As part of this research project I carried out field research, interviewing 20 fiddlers from Donegal, as a representative of the community in terms of gender, region, age, profile and a desirable performance standard, as accepted by the community<sup>89</sup>. The interview data reveals

---

<sup>89</sup> To adjudicate on this, a participant had to fall in to one or more categories where by their performance practice was celebrated by the sound community itself. These included being commercially recorded, performing on national media, or performing at events associated with high profile events and festivals in the community. These are detailed in Chapter 3.

many insights into the perceptions of the players and what the term Donegal style means to them. Specifically it reveals that for the fiddle players themselves, they value individuality as an important aspect of a sonic identity, but that reference was *also* readily made to a Donegal style, *and* other local styles within the county (for example Glencolmcille style). As with most extant literature, bowing was highlighted by many as the primary factor in accounting for the difference between sounds, both individual and communal.

My research therefore amplifies already existing concerns that the term ‘Donegal Style’ does not actually capture the complexity of stylistic nuances/ individuality apparent within the county. I suggest adopting the term ‘Donegal fiddle sound community’ as an alternative to the ‘Donegal style’ label. The term ‘sound community’ was coined by Lave and Wenger’s in the context of communities of practice (1991). In my view, this term more appropriately reflects the complexity of the social and sonic fabric of that community. The term suggests that, rather than being a singular entity (i.e. a Donegal style), multiple nuances are at play and, significantly, can all be accommodated in the community of sound while still allowing the whole to function as a cohesive entity/unit. Using the contextual evidence collected and analysed as part of this research, I suggest that, within Co. Donegal, sound communities can (and do) exist both independently and as part of the larger narrative. I suggest that this may also be true of other sound communities both on the island of Ireland and therefore forward that the term is significant in relation to the existing narrative surrounding regional style. The fiddlers interviewed for this research identified as members of the Donegal fiddle sound community, and simultaneously as members of smaller sound communities. This was evident through discussion of various performance and social contexts<sup>90</sup>, the embodiment of certain aspects of tradition, and in a small number of cases (as evidenced in Chapter 5), local stylistic variation.

### **8.1.2 The creation of a framework, and the use of technology: Linking individuals and the sound community through the visual representation of processes and values.**

In chapter 2, I developed a framework as a tool for studying the relationship between the sound community(ies) and the individuals who create it. This framework (used in

---

<sup>90</sup> These include performance at informal and formal performance events, such as a ‘Pass the fiddle’ event, a session or a concert.

conjunction with technology like Melodyne and similar software) is the tool through which I could fully view and understand *how* and *why* disparate individuals come together to create a cohesive sound community (ies). The framework has enabled me, as the researcher, to observe the key processes that take place as part of specific cultural transactions. Through the lens of tuning and intonational inflection, I have observed, for the first time in relation to the Donegal fiddle tradition, and to my knowledge, in relation to Irish traditional fiddle music, that individuals use participatory discrepancies as a way to communicate membership of a certain community in a given context. Participatory discrepancies are those elements of difference in a musical performance that musicians use in creating feeling, which allows them to ebb and flow with each other. This research has shown that fiddlers employ participatory discrepancies as a means of ‘tuning in’ to specific contexts, and to each other. This is a significant finding. This firmly links the performance of certain participatory discrepancies and acts of ‘tuning in’ to a fluidity of musical/ sonic identity. Therefore, this framework is a visual representation of how an individual contributes to the community of sound. This framework is one of the primary contributions this research makes for use in future studies. I feel that it is a significant contribution to Irish musicological studies (and more) as it highlights the prism through which we all adapt and adjust to our life experiences so as to remain connected to community. The processes and values through which we pass are essentially a visualisation of those elements of culture that make us human.<sup>91</sup> The make up of community is a basic intrinsic human need. This framework is a visual representation of how we make those communities happen in a variety of contexts.

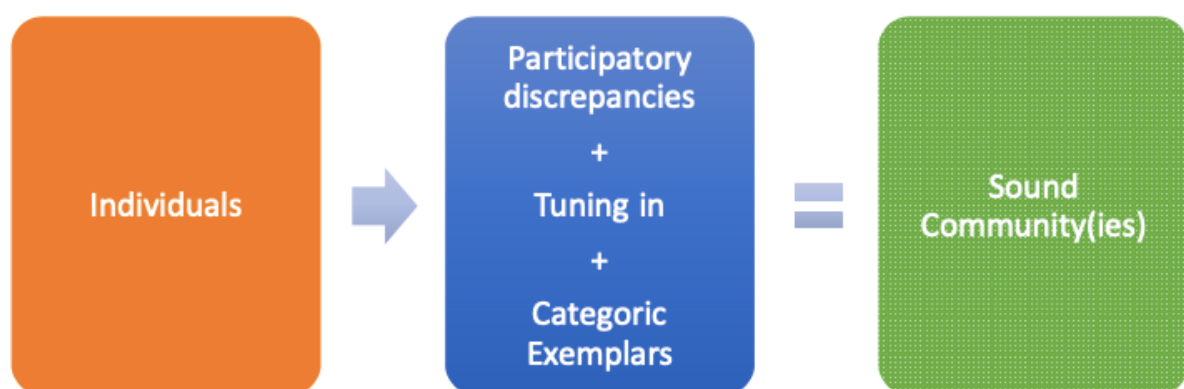


Fig 8.0: Established framework revisited

<sup>91</sup> I write this conclusion as Covid 19 sweeps across the world. Using this framework, a researcher could identify those processes that we have all engaged in to create our new adaptations of community during this historic time. The point is made that while situations and contexts may change, this framework need not.

I identified and used the software programme Melodyne for this research in order to prove, scientifically, that tuning and intonational inflection existed in the Donegal fiddle sound community, and to identify any trends that were apparent. In conjunction with the framework outlined above, it has enabled me, in real time, to observe *how* apparent participatory discrepancies are performed, *when* an act of tuning is taking place, and the fluid nature of an individual's sonic identity in relation to that of the community (or an existing narrative). We can observe when the performance of these processes then act as a form of musical invitation and acceptance to form a shared sound community(ies). This is particularly significant. Until now, analysis of Irish traditional music performance has mostly happened after the fact; i.e. researchers have studied live performances, transcriptions or musical recordings to frame their understanding of the studied music. That approach, while undoubtedly having a specific value, by default implies a study of the 'footprint' a performance/ performer leaves.

The use of Melodyne (or similar software) as a means of digital description and analysis of music has been central to this work. By using Melodyne I have presented a different way to capture and analyse how an individual reacts to and performs social convention, the embodiment of tradition and other factors (discussed in chapter 4 and 5 of this thesis) *in real time* and therefore, study the process (the 'step') along with the footprint. In my opinion, the use of Melodyne for studying traditional music presents new opportunities and possibilities for future research in Irish traditional musicology. Using this software, (as opposed to traditional analysis using transcriptions) has facilitated the discovery of significant findings in relation to the studied sound community. While this study focuses on issues of tuning and intonational inflection, these digital descriptors present more than one data set at a given time, and therefore, the opportunity to assess multiple aspects of the sound (music) created by people in a specific moment in time. Along with other technological advances, it also presents the opportunity to observe the behavioural aspects of sound creation, and therefore, adds a highly important layer to the conversation of music creation and the general field of musicology. While traditional qualitative analysis can ask a musician about the process, and traditional quantitative analysis can study the result, this new method (in particular when used in conjunction with the framework suggested here) offers the opportunity to analyse the process itself, in real time. These software solutions have not been used in the discussion of Irish traditional music in this way before.

### **8.1.3 Idiosyncratic perception vs. the sound of a community**

This thesis has highlighted the importance (and the complexity) of the role of the individual in relation to the Donegal fiddle sound community. These individuals act as exception and rule, where *idiosyncratic perception* and performance of tuning and finger pitch discrepancies are central to personal and communal identity. An example of this demonstrated in the research is the ‘Pass The fiddle’ experiment, where it became clear that each individual who tuned a fiddle had a ‘sound’ personal to them. For this experiment, I simulated the social music event, where a fiddle is usually passed around individuals to perform a solo piece. Rather than a fiddle being considered ‘in tune’ or ‘out of tune’, it became apparent that *idiosyncratic perception* of what was ‘right’ was of paramount importance. This is further supported by the data cultivated through both individual interviews with the fiddle players and the use of the analytical software. These perceptions can centre on individual expectations based on ‘typicality’ or may be focused on the embodiment of a particular sound associated with a set performance context, or that of a specific ‘categoric exemplar’ (discussed below).

However, being a member of a larger community of practice has also emerged as an intrinsic need for those observed as part of this sample, and therefore, aspects of personal sonic identity are willingly and (sub)consciously sacrificed in order to engage in a cultural (sonic) transaction that allows for membership of the larger sound community. Individuals may alter their personal tuning and fingered pitch practices in order to achieve this. Keil’s assertion that “For music to be socially valuable, it must be out of time and out of tune” (1987: 275) is particularly significant in respect of this. It has been observed that, with particular respect to issues of tuning and fingered pitch discrepancy, it is precisely this social aspect of musical production that links disparate individuals into a cohesive, yet fluid sound community, where multiple individual identities can come together, regardless of the differences of their individual sounds to create a shared musical experience. I suggest that the processes of tuning observed indicates that the aforementioned idiosyncratic perceptions are nuanced so that fiddlers can be flexible in participatory contexts, in order to create a collective, communal sound. This collective sound is formed by individual voices. However, each of these voices are tempered to create a sound unique to any specific context in time (e.g. a session, ensemble performance etc.). Therefore, individual tuning processes may change in relation to group performance contexts; the level and extent of the change in tuning is directly related to the immediate life experience of the fiddler (and the specific context). Factors such as social

hierarchy, and the instrumental make up of any specific musical context may play a role in how fiddlers nuance their individual sounds.

With respect to this sample, the fiddle players aged 65+ demonstrate not only an individual approach to their sense of tuning and sound, but also a way through which they can still possess a similar ‘sound’ to those of a younger generation. This is particularly evident in examples through Chapter 4, (in particular that of Tara Connaghan and Jimmy Campbell), where when adjustment is made to allow for each fiddler to have the same value for ‘A’, a similar pattern was observed in terms of the graphic representation of the tuning achieved. It was also recorded, through interviews with members of the sample, that hierarchal and respect cultures are at play in relation to tuning practices of those over 65, where their particular idiosyncratic perceptions of tuning are celebrated. Rather than offering those individuals a means to tune to a standard, instead, inclusion in the act of performance takes precedence over aural aesthetic. This is a specific example of the act of ‘tuning in’.

This research also highlights how the invitation to tune as a communal group acts as an invitation for an individual with a different ‘sound’ to join the sound community in that context. Communicating that someone is ‘out of tune’ has been highlighted as a taboo in the tradition, a point further contextualised by the fact that some members of the Donegal fiddle sound community elected to refrain from involvement in this research project in case offense would/ could be taken from the discussion of tuning and intonational practices in the community, in particular in relation to older members of the tradition who, to those people, were seen as having individualistic tuning practices.

#### **8.1.4 ‘Categoric exemplars’**

I suggest that ‘categoric exemplar’ may be an appropriate new term in the discussion of players that influence others in a sound community (due to those individuals being celebrated as positive examples/ standard bearers of the associated sound). In particular, the term ‘categoric exemplar’ offers a move away from the use of terms such as ‘prototype’ (as discussed in Chapter 2 through the lens of Keegan (2012, 2013) in relation to Irish traditional music) as a means of describing musical examples of a category. While ‘prototype’ suggests the first instance of, or a ‘one off’ in relation to a category, a category may have many exemplars, as has been observed in relation to the sound community of Donegal. This is an important distinction, reflective of the complexity of the studied sound community. It also

allows for a wider narrative in respect of a studied tradition. It can be argued that the term ‘prototype’ when used in the categorisation of music, is a loaded term, that implies a judgement; specifically the judgement that the ‘prototype’ *must* be (or at least is assumed to be) a positive example of that sound community and therefore the associated practice. This may not be the case, and furthermore, as has been evidenced by this research, sound communities are in themselves fluid. Therefore, the experience of an individual plays a highly important role in establishing their own sonic reality and typicality. Categorical exemplars are directly associated with that experience.

This research has shown that certain categorical exemplars may exert an important influence in specific geographic areas (that those areas may have muso-geographic metaphors associated with them; e.g. the ‘Glencolmcille’ style). However, this research reveals that tuning or fingered pitch discrepancies are not directly associated with geographic division within Co. Donegal. Within the geographical divisions followed for the purposes of this thesis (based on the 2011 electoral divisions within the county), there is no consistent evidence across the county of local clusters of sound and practice (see Fig 8.1 below). However, this research has identified some isolated instances where this is the case. Specifically, these local clusters are Glenties town, Gaoth Dobhair and Glencolmcille. Therefore this research suggests that while for the most part, the sound community of Donegal fiddlers is based on a body of individual practice, there is some evidence to support that some smaller areas of the county may have a particular ‘sound’ associated with them. This may be due to the presence of strong categorical exemplars (e.g. James Byrne in Glencolmcille), families (such as the Ó Maonaighs and Campbells) or the embodiment of traditions specific to those areas, in some cases closely associated with geographic metaphors associated with an area and its sound, (much like the categorisation of ‘Donegal’ in a revival context as a valid category to encapsulate the entirety of the fiddle tradition in the county), and therefore adding a particular value to that sound for some who wished to play in that ‘style’. In any case, this is the first time that geographic variations of any kind have been documented in relation to tuning and fingered pitch difference in the fiddle tradition of Donegal. I suggest that further research would be beneficial in order to assess whether these localised clusters have developed in a contemporary context or whether there is a historical basis for their existence. I suggest historical recordings of those directly associated with a specific area may be contrasted with contemporary performance so as to assess whether this may be the case. Further research may also assess whether the existence of

such specific localised communities of practice are unique to the Donegal fiddle sound community in relation to the wider Irish tradition.

### **8.1.5 Tuning**

In terms of the basic tuning of the instrument, from a reference point of A=440 (given by way of tuning fork in the interview process), the data cultivated in this research underlines the importance of idiosyncratic perception for the fiddlers of the Donegal fiddle sound community. The graph presented in Chapter 4 (presented again below) highlights this level of unique tuning patterns and sounds. However, this is not a random occurrence. This research has shown that fiddlers are very aware of their individual sounds and of that of the collective. This has been highlighted as an important element of their sonic identity. Nevertheless, certain patterns and trends have also emerged, therefore highlighting ways the individuals can also be members of a larger collective sound in the community. These centred on the conscious sharpening of tuning values, both in terms of the overall pitch of the fiddle, and of the 'E' string. This was highlighted as a conscious element of a 'Donegal' sound for some members of this sample, and can be observed in the practice of many of the informants. Similarly, those who suggested a preference for tuning the fiddle sharper did tune the fiddle sharper than the reference of A = 440 Hz. In terms of geographic variance, no specific overall trend was recorded across the divisions made for this research, although smaller clusters were observed, as discussed above, in the areas of Glenties, Gaoth Dobhair, and Glencolmcille.



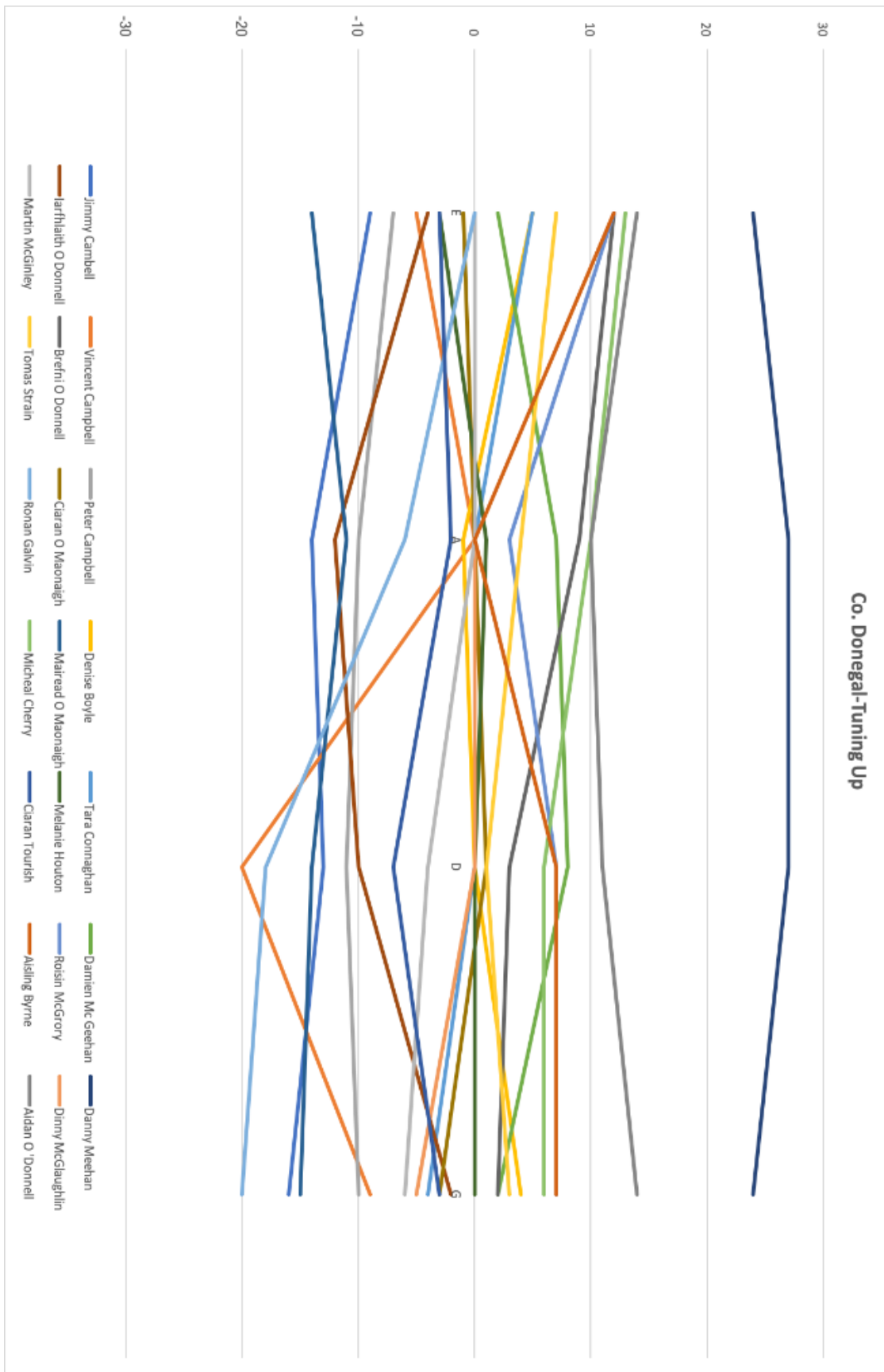


Fig 8.1: The recorded tuning pattern for each member of the sample, with my own values also included.

This research shows that those aged 65+ were more likely to have significantly discrepant perceptions of the value of 'A' (i.e. where 'A' was referenced from a tuning fork A=440, those 65+ were likely to have values that were not consistent with the reference tone). This highlights that tuning to a standard value of A (or the experience of doing so) is less typical for those aged 65+. This may be because of the experience of the context of the house dance tradition where many of these fiddlers learned their music. Equally, the lack of concrete reference points for tuning, such as fixed pitch instruments, and the standard of the instruments played (in some documented cases, on metal fiddles such as brass or tin) may be a factor in this. However, the data reveals that each of the fiddles tuned sharper or flatter than A440 were actually in tune with themselves (evidenced across Chapter 4 by way of graphic presentation, whereby comparable standard intervals between the strings were observed). The instruments were 'in tune', but also were subject to the idiosyncratic perception of the individual.

The tuning process also highlighted two factors that are worthy of further research, and not in the immediate scope of this PhD. This data has highlighted, for the first time in relation to Irish traditional fiddle music, that bowing has an impact on pitch discrepancies performed by fiddlers in Co. Donegal. These are most easily observed during the tuning up period of each interview. Values of open strings may change in relation to issues of bow tension, pressure, grip and bow direction (velocity). This is a significant observation, and would be extremely useful as a starting point for any other study in this specific field. It was also highlighted during one of the 'pass the fiddle' experiments conducted that the fiddle itself may play a role in the 'sound' of an individual. I have already pointed to Sethares (2005) work on 'Tuning, Timbre, Spectrum, Scale' as an extremely useful introduction to the issues that may be at play in that regard. However, the scope of the associated questions are beyond the accepted limits of this PhD, but would be an important consideration in assessing the contemporary trends of 'sound' in Irish traditional music.

Supplementary to the findings outlined in relation to the tuning of the instrument, this thesis presents evidence for the existence of tuning and finger pitch discrepancies between the fiddlers in the sound community of Donegal. The research represents the first time that such evidence has been presented in relation to that sound community. Using Melodyne as a digital descriptor and analytical tool, I have been able to highlight the existence of specific mechanical issues directly associated with fingered pitch variance. Melodic, harmonic, and corrective tuning (Fyk 1995) have all been identified as actions through which fingered pitch

discrepancies occur. Expanding on Fyk's seminal work, this research also highlights that some fiddlers in the sample perform 'melodic tuning' in an inverted fashion. This is an interesting finding. Further research on this would be a valuable pursuit so as to ascertain whether this is a common feature of Irish traditional fiddlers generally (or in a global context), or whether this is unique to a grouping of fiddlers from Co. Donegal.

Harmonic consciousness as well as structural/ diagnostic tones and motivic variance (McKerrell 2005) were also highlighted as important aspects of assessing the performance practice of fiddlers from the sound community. In particular, the observation of intonational discrepancies directly associated with motifs is significant, as this research suggests that those examples of motivic variance may be directly related to embodied performance contexts, in this case, the house dance tradition. The recording of these aspects of traditional fiddle playing is the first time that they have been recorded in Irish traditional music. This is a significant finding as it may have implications for other fiddle sound communities both inside and outside of Ireland.

'Expressive intonation' is also highlighted as an important paradigm through which to understand how these mechanical aspects of discrepancy relate to their function; to relate an individual sonic identity to one of the larger sound community. By engaging in these mechanical actions, fiddlers 'express' their willingness to conform to the narrative of a larger sound community (or not) and therefore reveal their social sonic allegiances, and their unique identities.

Physiology was also highlighted as a potential factor in some discrepancies. Issues such as the use of the little finger of the left hand, the physiology of certain musicians hands vs. the physical make up of an instrument, as well as how and where the fiddle was gripped by the player were flagged as potential issues. Each of these areas are worthy of further research with a specific sample across the island.

### **8.1.7 Future Work**

This research has highlighted key areas for further research (some of which are discussed as part of the narrative above), which serve as springboards from which to enrich our knowledge of this specific studied sound community and the Irish traditional sound community as a whole. This thesis serves as the primary instance of the existence of tuning and fingered pitch discrepancies in relation to the Donegal fiddle tradition, and to my knowledge, the Irish

fiddle tradition generally. This is the primary instance that expressive and mechanical factors have been identified and forwarded as central to those discrepancies. It is the first time that participatory discrepancies have been identified as the vehicle through which disparate individuals ‘tune in’ to a sound community (either generally or in a specific context). It is the first time that elements of bowing have been highlighted as a factor in variances of tuning values. These are all areas that can now be built upon for further research, particularly to contextualise the findings offered here in the wider global fiddle community. However, each of these findings were made possible by the use of the framework offered, where the processes and values with which individuals engage to make music in a communal context has been given a visual, tangible representation. In terms of future studies, I suggest that the use of this framework is a significant tool in re-examining the narrative of ‘styles’ and other categories in music. Instead, as has been evidenced throughout this thesis, and again in these findings, the individual is of primary importance to the make up of the communal sound, and this framework places that individual at the genesis of the process. This framework also highlights the fluid nature of community membership, and therefore the opportunity to observe moving aspects of social structure in real time. In particular, it has shown how sound, highlighted by those in the sample as an integral aspect of their musical identity, can be constantly renegotiated so as to fit the communal narrative in a particular context. This is an area worthy of further research as it potentially allows us to understand *why* we act, tune and play in certain ways in varied contexts. It has implications in various disciplines, from anthropology to cognitive science.

This PhD marks a significant shift in the conversations around tuning and intonational inflection in fiddle playing, sound communities (regionalism), and the role of the individual in the creation of those communities in Irish traditional music. It has also presented a new method and framework through which a new, and *live* view of our tradition can be presented. This work presents a clear, contemporary view of the Donegal fiddle sound community, highlighting the complexity at play in the community, how that community is made, while also valuing the role (and importance) of individual identity; all achieved through the lens of tuning and intonational inflection as a factor of change. At the core of this sound community is the music; I feel this research has shown how important that music really is to that community, and those who create it.

## Bibliography

- Aiello, R. and Sloboda, J.A. (1994) *Musical perceptions*. Oxford University Press New York, NY.
- Alén, O. (1995) Rhythm as Duration of Sounds in Tumba Francesa. *Ethnomusicology*, 39 (1, Special Issue: Participatory Discrepancies), pp. 55-71.
- Anderson, P. (2010) Musical fingerprints of the North-East Scotland fiddle style. *Crossing Over*,
- Antill, P.D. and Dennis, P. (2007) *Stalingrad 1942*. Oxford, UK ; New York, NY, USA: Osprey Pub.
- Appadurai, A. (1990) Disjuncture and difference in the global cultural economy. *Theory, culture & society*, 7 (2-3), pp. 295-310.
- Askenfelt, A. (1995) Observations on the violin bow and the interaction with the string. *STL-QPSR*, 36 (2-3), pp. 23-42.
- Aubert, L. (2007) *The music of the other: new challenges for ethnomusicology in the global age*. Aldershot: Ashgate.
- Barbieri, P. and Mangsen, S. (1991) Violin intonation: a historical survey. *Early music*, 19 (1), pp. 69-88.
- Barbour, J.M. (1952) Violin Intonation in the 18th Century. *Journal of the American Musicological Society*, 5 (3), pp. 224-234.
- Barz, G. Timothy Cooley, eds. 1997. *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology*.
- Barz, G.F. and Cooley, T.J. (2008) *Shadows in the field: new perspectives for fieldwork in ethnomusicology*.
- Borup, H. (2008) A history of string intonation. *American String Teacher*, 58 (2), pp. 32-35.
- Boyden, D.D. (1951) Preluere, Geminiani, and just intonation. *Journal of the American Musicological Society*, 4 (3), pp. 202-219.
- Bradley, J. (2013) Donegal: The Scottish Connection. In: MacLaughlin, J. and Beattie, S., eds. *An Historical, Environmental and Cultural Atlas of County Donegal*. 1st ed. Cork University Press, p. 349.
- Breathnach, B.F.M. (1971) *Dances of Ireland*. Cork and Dublin: The Mercier Press Limited.
- Breathnach, B.F. M. (1997) *Folk Music and Dances of Ireland 1977*. Cork and Dublin: The Mercier Press Limited

- Breathnach, B. and Small, J. (1976) *Ceol rince na hÉireann: II*. Oifig an tSoláthair.
- Brennan, H. (2001) *The story of Irish dance*. Roberts Rinehart.
- Bryson (1790) *A Curious Selection of Favourite Tunes with Variations; to which are added upwards of fifty Irish Airs for the Flute or Violin with a Bass for the Harpsichord or Violoncello*. 1st ed. Scotland:
- Butterfield, M. (2010) Participatory Discrepancies and the Perception of Beats in Jazz. *Music Perception: An Interdisciplinary Journal*, 27 (3), pp. 157-176.
- Caldwell, C. Dancing in Southwest Donegal: Historical and Contemporary Perspectives.
- Caldwell, C. (2013) *'Did you hear about the poor aul travelling fiddler?' - The Life and Music of John Doherty*. Queen's University, Belfast.
- Caldwell, C. (2013) *'Did you hear about the poor auld travelling fiddler?': The Life and music of John Doherty*. Thesis, (PhD). Queen's University Belfast.
- Carolan, N., ed. (2010) *A collection of the most celebrated Irish tunes: Facsimile edition*. Facsimile edition ed. Dublin: Irish Traditional Music Archive.
- Carolan, N., (1999) Irish music to 1600AD—traditions and innovations. In: *Crosbhealach an Cheoil the Crossroads Conference Tradition and Innovation in Traditional Irish Music*. pp 52-55.
- Casado, S. (2017) Studying friction while playing the violin: exploring the stick–slip phenomenon. *Beilstein journal of nanotechnology*, 8 (1), pp. 159-166.
- Cawley, J. (2013) Musical Development in Irish Traditional Music: An Exploration of Family Influences. *Ethnomusicology Ireland*, 2 (3), pp. 95-111.
- Cawley, J. (2013) The musical enculturation of Irish traditional musicians: An ethnographic study of learning processes.
- Chang, H. (2016) *Autoethnography as method* (Vol. 1). Routledge.
- Clayton, M. (2012) What is entrainment? Definition and applications in musical research.
- Clayton, M., Sager, R. and Will, U., (2005) In time with the music: the concept of entrainment and its significance for ethnomusicology. In: *European meetings in ethnomusicology*. Romanian Society for Ethnomusicology, pp. 1-82.
- Clynes, M. (1987) What can a Musician learn about music performance from newly discovered microstructure principles (PM and PAS)? *Action and Perception in Rhythm and Music*, pp. 201 -233.
- Colprit, E.J. (2000) Observation and analysis of Suzuki string teaching. *Journal of Research in Music Education*, 48 (3), pp. 206-221.

Connor S (2008) Sense of touch can help to relieve pain. *The Independent*, 11 September 2008, 19.

Cook, P. (2017) 2001: Principles for Designing Computer Music Controllers. *In: Anon.A NIME Reader*. Springer, pp. 1-13.

Cook, P. (1986) *The fiddle music of the Shetland Isles*. Cambridge: Cambridge University Press.

Cooke (1793) *A Selection of Twenty-one Favourite Original Irish Airs arranged for Pianoforte, Violin or Flute*. 1st ed. Scotland:

Cooley, T.J. (2003) Theorizing fieldwork impact: Malinowski, peasant-love and friendship. *British Journal of Ethnomusicology*, 12 (1), pp. 1-17.

Cooper, P. (2010) *Complete Irish Fiddle Player*. Mel Bay Publications.

Corcoran, S. (1997) Concepts of regionalism in Irish Traditional music. *In: Smith, T. and Ó Suilleabháin, M., eds. Blas: The Local Accent in Irish traditional music*. 1st ed. Irish World Music Centre; Folk Music Society of Ireland, 25.

Cornelissen, J.P., 2005. Beyond compare: Metaphor in organization theory. *Academy of Management Review*, 30(4), pp.751-764.

Cowdery, J.R., Harwood, D.L., Kippen, J., Kisliuk, M., Locke, D., Meadows, E.S., Meyer, L.B., Monson, I., Shepherd, J., Small, C. and Waterman, C.A. (1995) [The Theory of Participatory Discrepancies: A Progress Report; Searching for Swing: Participatory Discrepancies in the Jazz Rhythm Section; Rhythm as Duration of Sounds in "Tumba Francesa"]: Responses. *Ethnomusicology*, 39 (1, Special Issue: Participatory Discrepancies), pp. 73-96.

Cranitch, M., (2013) Learning and Teaching "Outside the Tradition". *In: Proceedings of Crosbhealach an Cheoil 2003–The Crossroads Conference*.

Cranitch, M. (2008) The rhythmic dimension in fiddle-playing as the music moves to newer performing and learning contexts. *Driving the Bow*,

Cranitch, M. (2006) *Pádraig O'Keefe and The Sliabh Luachra Fiddle Tradition*. Thesis, (PhD). University of Limerick.

Cranitch, M. (2001) *The Irish fiddle book: the art of traditional fiddle-playing*. Ossian Publications.

Crozier, W. (1997) *Music and social influence*.

Curtain, J. (2005) Bridge Tuning: Methods and Equipment. *VSA*, 1 (1), 137.

Dickson, D. (1995) Derry's Backyard: The Barony of Inishowen 1650 - 1800. *In: Nolan, W., Ronayne, L. and Dunleavy, M., eds. Donegal : History and Society*. 1st ed. Dublin: Geography Publications, 405.

Dillane, A. (2000) The ivory bridge: piano accompaniment on 78rpm recorded sources of Irish traditional dance music America c. 1910-1945.

Doherty, E. (1996) The Paradox of the periphery: evolution of the Cape Breton fiddle tradition c.1928-1995.

Doherty, L. (2015) Donegal Reels (Chapter 4) and Donegal Jigs (Chapter 5) and CD tracks 14-23. In: Anon. *Traditional Fiddle: An Introduction to styles from England, Ireland, Scotland, Wales*. pp. 11-21.

Doherty, L. (2010) Driving the Bow: Fiddle and Dance Studies from around the North Atlantic, 2. *Folk Music Journal*, 9 (5), pp. 821-823.

Doherty, L. 2010, 'Inishowen Uncovered: Further Strands of the Donegal Fiddle Tradition'. in I Russell & A Kearney Guigné (eds), *Crossing Over: Fiddle and Dance Studies from Around the North Atlantic 3*. vol. 3, Aberdeen, pp. 184-189.

Doherty, L. (2005) *Dinny McLaughlin: From Barefoot Days (A Life of Music, Song and Dance in Inishowen)*.

Dorrity, M. Regional Styles of Irish music, with particular emphasis on the fiddle music of Donegal.

Dowling, M. (2016) *Traditional Music and Irish Society: Historical Perspectives*. Routledge.

Dowling, M. (2004) Rambling in the field of modern identity: some speculations on Irish traditional music. *Radharc*, 5. pp. 107-134.

Dowling, M. (1996) Communities, place, and the traditions of Irish dance music. *Crosbhealach an Cheoil Tradition and Change in Irish Traditional Music, Dublin: Whinstone Music*, pp. 64-71.

Drevdahl, J.E. and Cattell, R.B. (1958) Personality and creativity in artists and writers. *Journal of clinical psychology*,

Evans, A., McLaughlin, D. and Campbell, V. (1997) John Doherty of Donegal: His art and craft (Fiddle music). *ULSTER FOLKLIFE*, 43. pp. 1-17.

Feintuch, B. (2004) The conditions for Cape Breton fiddle music: the social and economic setting of a regional soundscape. *Ethnomusicology*, 48 (1), pp.73-104.

Feld, S. and Keil, C. (1994.) *Music Grooves*. Chicago: University of Chicago Press.

Feld, S. (1988) Aesthetics as Iconicity of Style, or 'Lift-up-over Sounding': Getting into the Kaluli Groove. *Yearbook for Traditional Music*, 20 pp. 74-113.

Feldman, A. (2002) Music of the Border: The Northern Fiddler Project, Media Provenance and the Nationalization of Irish Music. *Radharc*, 3. pp. 97-122.



- Feldman, A. and O'Doherty, E. (1980) *The Northern Fiddler; Music and Musician of Donegal and Tyrone*. 2nd ed. Belfast: Blackstaff press.
- Fleming, R.C. (2004) Resisting cultural standardization: Comhaltas Ceoltóirí Éireann and the revitalization of traditional music in Ireland. *Journal of Folklore Research*, 41 (2), pp. 227-257.
- Flood, G. (1905) *A History of Irish Music*. 1st ed. Dublin.
- Flynn, D. (2010) Traditional Irish Music: a path to new music.
- Foley, C.E. (2013) Step dancing in Ireland.
- Foy, B. (2008) *Field Guide to the Irish Music Session*. 1st ed. Seattle: Frogchart Press.
- Fyk, J., (1997) Intonational Protention in the Performance of Melodic Octaves on the Violin. In: *Conference: Music, Gestalt, and Computing - Studies in Cognitive and Systematic Musicology*. January 1996, Springer Berlin Heidelberg. 421-430. Available from: [https://www.researchgate.net/publication/221477594\\_Intonational\\_Protention\\_in\\_the\\_Performance\\_of\\_Melodic\\_Octaves\\_on\\_the\\_Violin](https://www.researchgate.net/publication/221477594_Intonational_Protention_in_the_Performance_of_Melodic_Octaves_on_the_Violin) [Accessed 06/02/19].
- Fyk, J. (1995) *Melodic intonation, psychoacoustics and the violin*. 1st ed. Poland: Organon.
- Galamian, I. and Thomas, S. (2013) *Principles of violin playing and teaching*. Courier Corporation.
- GALVIN, R. (2012) *Companion to Irish Traditional Music*,
- Gholson, S.A. (1998) Proximal positioning: A strategy of practice in violin pedagogy. *Journal of Research in Music Education*, 46 (4), pp. 535-545.
- Gholson, S.A. (1998) *Violin Pedagogy*.
- Goertzen, C. (2017) *George P. Knauff's Virginia Reels and the History of American Fiddling*. Univ. Press of Mississippi.
- Green, J. and Thorogood, N. (2009) In-depth interviews. *Qualitative methods for health research*, 2, pp. 93-122.
- Green, L., 2002. *How popular musicians learn: A way ahead for music education*. Ashgate Publishing, Ltd..
- Green, L., 2008. *Music, informal learning and the school: A new classroom pedagogy*. Ashgate Publishing, Ltd..
- Hammersley, M. and Atkinson, P. (1995) *Ethnography: Practices and principles*. New York: Routledge. Retrieved December, 2 2008.
- Hammersley, M. and Atkinson, P. (1995) Insider accounts: Listening and asking questions. *Ethnography: Principles in practice*, 2, pp. 124-156.

- Hannigan, J. (2002) Culture, Globalization, and Social Cohesion: Towards a De-territorialized, Global Fluids Model. *Canadian Journal of Communication*, 27 (2),
- Hargreaves, D.J. and North, A.C. (1997) *The social psychology of music*. Oxford University Press.
- Harrell, M.C. and Bradley, M.A. (2009) *Data collection methods. Semi-structured interviews and focus groups*,
- Heald, S.L., Van Hedger, S.C. and Nusbaum, H.C. (2014) Auditory category knowledge in experts and novices. *Frontiers in neuroscience*, 8 260.
- Henebry, R. (1908) Irish Music. *The Irish Year Book*, 233.
- Henebry, R. and O'Donoghue, T. (1928) *A handbook of Irish music*. Cork University Press, Educational Company of Ireland.
- Hennessy, J. (2008) *Fiddle Grooves: Identity, Representation, and the Sound of Cape Breton Fiddle Music in Popular Culture*,
- Henry, E.O. (1989) Institutions for the promotion of indigenous music: the case for Ireland's Comhaltas Ceoltóirí Éireann. *Ethnomusicology*, pp. 67-95.
- Honeyman, W.C. (1892) *The Secrets of Violin playing*. 1st ed. Edinburgh: Kohler & Son.
- Hood, M. (1960) The challenge of "bi-musicality". *Ethnomusicology*, 4 (2), pp. 55-59.
- Hudson, J.M. and Bruckmann, A. (2004) "Go Away": Participant Objections to Being Studied and the Ethics of Chatroom Research. *The Information Society*, (20), 127.
- Jette, D.U., Bacon, K., Batty, C., Carlson, M., Ferland, A., Hemingway, R.D., Hill, J.C., Ogilvie, L. and Volk, D. (2003) Evidence-based practice: beliefs, attitudes, knowledge, and behaviors of physical therapists. *Physical Therapy*, 83 (9), pp. 786-805.
- Kaminsky, D. (2014) Total rhythm in three dimensions: Towards a motional theory of melodic dance rhythm in Swedish polska music. *Dance Research*, 32 (1), pp. 43-64.
- Kanno, M. (2003) Thoughts on how to play in tune: pitch and intonation. *Contemporary Music Review*, 22 (1-2), pp. 35-52.
- Kearney, D. (2012) Beyond location: the relevance of regional identities in Irish traditional music. *Sonus*, 33 (1), pp. 1-20.
- Kearney, D. (2013) Regions, regionality and regionalization in Irish traditional music: the role of Comhaltas Ceoltóirí Éireann. *Ethnomusicology Ireland*, (2/3), pp. 72-94.
- Kearney, D. (2012) Radio and regions in Irish traditional music.
- Kearney, D. (2009) 'I can't believe the news today': Music and the politics of change. *Chimera*, 24, pp. 122-140.

- Kearney, D. (2007) Crossing the River: Exploring the Geography of Irish traditional music. *Journal of the Society for Musicology in Ireland*, 127-139.
- Kearney, D. (2009) Towards a regional understanding of Irish traditional music.
- Kearns, T. and Taylor, B. (2003) *A Touchstone for the Tradition: The Willie Clancy Summer School*. Brandon Books.
- Keegan, N. (2014) The art of juncture—transformations of Irish traditional music.
- Keegan, N. (2011) The linguistic turn at the turn of the tune: the language of ‘contemporary ensemble’ in Irish traditional music. *Ethnomusicol.Ireland*, 1, pp. 37-48.
- Keegan, N. (2006) *Language and Power in Traditional Irish Music*. Irish Traditional Music Society, UCC.
- Keegan, N. (1997) The Verbal Context of Style in Traditional Irish Music. In: Smith, T. and Ó Suilleabháin, M., eds. *Blas: The Local Accent in Irish Traditional music*. 1st ed. Irish World Music Centre; Folk Music Society of Ireland, 116.
- Keegan, N. (1992) *The words of traditional flute style*. Thesis, (MA). University College Cork.
- Keegan, N. (2012) *The Art of Juncture - Transformations of Irish Traditional Music*. Thesis, (Ph.D). University of Limerick.
- Keil, C. (2004) Groovology and the magic of other people’s music. *Artigo, Music Grooves*. Disponível em <  
<http://www.musicgrooves.org/articles/GroovologyAndMagic.pdf>> (acesso em 20 de janeiro de 2008),
- Keil, C. (1998) Applied sociomusicology and performance studies. *Ethnomusicology*, 303-312.
- Keil, C. (1987) Participatory discrepancies and the power of music. *Cultural Anthropology*, 2 (3), 275-283.
- Keil, C.M. (1966) Motion and feeling through music.
- Keil, C. (1998) Applied Sociomusicology and Performance Studies. *Ethnomusicology*, 42 (2), pp. 303-312.
- Keil, C. (1995) The Theory of Participatory Discrepancies: A Progress Report. *Ethnomusicology*, 39 (1, Special Issue: Participatory Discrepancies), pp. 1-19.
- Keil, C. and Prögler, J.A. (1995) [The Theory of Participatory Discrepancies: A Progress Report; Searching for Swing: Participatory Discrepancies in the Jazz Rhythm Section; Rhythm as Duration of Sounds in "Tumba Francesa"]: Rejoinders. *Ethnomusicology*, 39 (1, Special Issue: Participatory Discrepancies), pp. 97-104.

- Keller, P.E. (2014) Ensemble performance: Interpersonal alignment of musical expression. *Expressiveness in music performance: Empirical approaches across styles and cultures*, 260-282.
- Kemp, A.E. (1997) Individual differences in musical behaviour. *The social psychology of music*, pp.25-45.
- Kinoshita, H. and Obata, S. (2009) Left hand finger force in violin playing: Tempo, loudness, and finger differences. *The Journal of the Acoustical Society of America*, 126 (1), pp. 388-395.
- Kisliuk, M. (2008) (Un) doing Fieldwork: Sharing Songs, Sharing Lives.” In *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology*, ed. Gregory Barz and Timothy J. Cooley. New York: Oxford University Press. Kindle Edition.
- Lakoff, G. (1987) *Women, Fire, and Dangerous Things: What Categories Reveal About the Mind..* Chicago: University of Chicago Press.
- Lange, B.R. (2001) Hypermedia and Ethnomusicology. *Ethnomusicology*, 45 (1), pp. 132-149.
- Laoire, L.Ó. (2005) *On a Rock in the Middle of the Ocean: Songs and Singers in Tory Island, Ireland.* Scarecrow Press.
- Laoire, L.Ó. (2003) Fieldwork in common places: An ethnographer's experiences in Tory Island: In memoriam Dr. Seán Ó hEochaidh (1913–2002). *British Journal of Ethnomusicology*, 12 (1), pp. 113-136.
- LeVine, W.R. and Irvine, J.K. (1984) In vivo EMG biofeedback in violin and viola pedagogy. *Biofeedback and self-regulation*, 9 (2), pp. 161-168.
- LeVine, W., (1988) Biofeedback in violin and viola pedagogy. In: *The Biology of Music Making: Proceedings of the 1984 Denver Conference.* St. Louis, MMB Music, pp. 196-200.
- Levitin, D.J. (2006) *This is your brain on music: The science of a human obsession.* Penguin.
- Longhurst, R. (2003) Semi-structured interviews and focus groups. *Key methods in geography*, 3, pp. 143-156.
- Lull, J. (1995) *Media, Communication, Culture: A Global Approach.* Cambridge: Polity.
- Lyth, D. (1996) *Bowing Styles in Irish Fiddle Playing Vol. 2. Comhaltas Ceoltir Éireann, Dublin,*
- Lyth, D. (1981) *Bowing styles in Irish fiddle playing Vol. 1.* 1st ed. Dublin: CCÉ.
- Mac Aoidh, C. (1984) Aspects of Donegal and Kerry Fiddle Music'. *Ceol*, 21, pp. 20-28.

- Mac Aoidh, C. (2013) The Blood red tear and the hidden note. *In: Vallely, F., Doherty, L., Smith, T., et al, eds. Crosbhealach an Cheoil : The Crossroads conference 2003, Education and traditional music.* 1st ed. Dublin: Whinstone, 64.
- Mac Aoidh, C. (2013) The Traditional Music of Donegal. *In: MacLaughlin, J. and Beattie, S., eds. An Historical, Environmental and Cultural Atlas of County Donegal.* 1st ed. Cork University Press, 450.
- Mac Aoidh, C., (1999) The Critical Role of Education in the Development of Traditional Music in the Republic of Ireland. *In: Crosbhealach an Cheoil the Crossroads Conference 1996: Tradition and Change in Irish Traditional Music.* pp. 107-111.
- Mac Aoidh, C. (1997) Donegal : A Voice in the Wilderness. *In: Smith, T. and Ó Suilleabháin, M., eds. Blas: The Local Accent in Irish traditinoal music.* 1st ed. Irish World Music Centre; Folk Music Society of Ireland, 67.
- Mac Aoidh, C. (1984) Aspects of Kerry and Donegal Fiddling. *Ceol*, VII (1), 20.
- Mac Aoidh, C. and Schroevers, J. (2011) *From Dunkheld to Dunkineely.* 1st ed. Béal Átha Seanaigh: CEO Teo.
- Mac Mathúna, S. and Ní Chonaráin, S. (2013) The Comhaltas Ceoltóirí Éireann Experience. *In: Vallely, F., Doherty, L., Smith, T., et al, eds. Crosbhealach an Cheoil : The Crossroads conference 2003, Education and traditional music.* 1st ed. Cork University Press, 102.
- MacAoidh, C. (1994) Between the jigs and the reels: The Donegal fiddle tradition. *Leitrim, Ireland: Drumlin Publications,*
- MacAoidh, C. (1994) The Metal Fiddle Tradition of Donegal. *Ceol na hÉireann: Irish Music,* (2),
- MacLaughlin, J. and Beattie, S., eds. (2013) *An Historical, Environmental and Cultural Atlas of County Donegal.* 1st ed. Cork: Cork University Press.
- MacLeod, R.B. (2008) Influences of dynamic level and pitch register on the vibrato rates and widths of violin and viola players. *Journal of Research in Music Education,* 56 (1), 43-54.
- Martyn, H. and Paul, A. (1995) *Ethnography: Principles in practice. Biddles Ltd. Guildford and King's Lynn. London,*
- Mazzola, G., (Author) (2012) Thinking music with precision, depth, and passion. *Journal of mathematics and music: Mathematical and computational approaches to music theory, analysis, composition and performance,* 6 (2), 83.
- McCann, A. (2013) The challenges of radical pedagogy. *In: Vallely, F., Doherty, L., Smith, T., et al, eds. Crosbhealach an Cheoil : The Crossroads conference 2003, Education and traditional music.* 1st ed. Dublin: Whinstone, 288.
- McCann, A. (2001) All That Is Not Given Is Lost: Irish Traditional Music, Copyright, and Common Property. *Ethnomusicology,* 45 (1), pp. 89-106.

- McCarthy, M. (1999) *Passing it on: The transmission of music in Irish culture*. Stylus Publishing, LLC.
- McCullough, L.E. (1977) Style in traditional Irish music. *Ethnomusicology*, 21 (1), pp. 85-97.
- McKerrell, S. (2011) Sound performing: sound aesthetics among competitive pipers. *International review of the aesthetics and sociology of music*, pp. 165-187.
- McKerrell, S.A. (2005) *Scottish competition bagpipe performance : sound, mode and aesthetics*. Thesis, (Doctoral). University of St Andrews.
- McLaughlin, D. (1992) *Donegal and Shetland Fiddle Music*. Irish Traditional Music Society, University College Cork.
- Melin, M.H. (2012) Exploring the percussive routes and shared commonalities in Cape Breton step dancing.
- Melin, M.H., (2010) Observations of communication between dancer and musician in the Cape Breton community. *In: Dance Research Forum Ireland*,
- Meyer, L.B. (2008) *Emotion and meaning in music*. University of Chicago Press.
- Molloy, R. (2013) *The Traditional-Contemporary Dichotomy in Irish Art Music: A New Compositional Approach*. Thesis, (Ph.D). Queen's University, Belfast.
- Moore, A. (2002.) Authenticity as authentication. *Popular Music*, 21 (2), pp. 209 - 23.
- Morton, F. (2005) Performing ethnography: Irish traditional music sessions and new methodological spaces. *Social & cultural geography*, 6 (5), pp. 661-676.
- Napier, J. (2006) A 'Failed' Unison or Conscious Differentiation: The Notion of 'Heterophony' in North Indian Vocal Performance. *International Review of the Aesthetics and Sociology of Music*, 37 (1), pp. 85-108.
- Neal, J., Neal, W. and Carolan, N. (1724) *A Collection of the most celebrated Irish tunes: proper for the violin, German flute, or hautboy: Dublin 1724*. Folk Music Society of Ireland.
- Neff, E. (2008) The fiddle in a tune: John Doherty and the Donegal fiddle tradition. *Driving the Bow Fiddle and Dance Studies from around the North Atlantic 2*,
- Nettl, B. (2007) *The Study of Ethnomusicology; Thirty one issues and concepts*'. Chicago:
- Ní Chonghaile, D., (2011) Broadcasting Bailiúchán Bhairbre: Recordings and Radio, Ethnomusicology and Impact. *In: Ethnomusicology Forum*. Taylor & Francis, pp. 263-269.
- Nic Suibhne, D. (1993) Repertoire in the Donegal Fiddle Tradition.
- Nolan, W., Ronayne, L. and Dunleavy, M., eds. (1995) *Donegal: History and Society*. 1st ed. Dublin: Geography Publications.

- Nolan, W., Ronayne, L. and Dunlevy, M. (1995) *Donegal: History & Society: Interdisciplinary Essays on the History of an Irish County*. Geography Publications.
- O'Connor, N. (2001) *Bringing it all back home : The influence of Irish music*. 2nd ed. Dublin: Merlin.
- Ó Laoire, L. (2013) Donegal: Makers, Songs and Singers. In: MacLaughlin, J. and Beattie, S., eds. *An Historical, Environmental and Cultural Atlas of County Donegal*. 1st ed. Cork University Press, 440.
- Ó Súilleabháin, M. (1990) The Creative Process in Irish Traditional Dance Music. *Irish music Studies 1: Musicology in Ireland*, 1 (1), pp. 117-130.
- Ó Súilleabháin, M. (1981) Irish Music Defined. *The Crane Bag*, 5 (2), pp. 83-87.
- O'Donnell, A. Studying the 'step' of a Donegal fiddler: Examining methodologies for the ethnographical study of issues of tuning, intonation and inflection with specific regard to the fiddle music of Co. Donegal.
- O'Dowd, A. (1995) Seasonal migration to the Lagan and Scotland. *Donegal: history and society: interdisciplinary essays on the history of an Irish county*, pp. 625-648.
- O'Neill, A. (2019) *Memoirs of Arthur O'Neill*. Belfast: Queen's University. Available from: <http://digital-library.qub.ac.uk/digital/collection/p15979coll9/id/1673/rec/12> [Accessed 07/08/19].
- O'Neill, A. (1912) Memoirs of Arthur O'Neill. In: Fox, C.M., ed. *Annals of the Irish Harpers*. 1st ed. Dutton, 142.
- Peoples, T. (2015) *Ó am go hAm*. 1st ed. Donegal: T.P. Publishing.
- Pike, K.L. (1954) Language in Relation to a Unified Theory of the Structure of Human Behavior I-III. *Glendale*, 60 21967.
- Pollock, T. In Their Own Voices—Immigrant Musickers in a Changing City. *Journal of Urban Culture Research*, 54.
- Porcello, T. (2005) Music mediated as live in Austin: sound, technology, and recording practice. *Wired for sound: Engineering and technologies in sonic cultures*, pp. 103-117.
- Porcello, T. (2005) Music mediated as live in Austin: sound, technology, and recording practice. *Wired for sound: Engineering and technologies in sonic cultures*, pp. 103-117.
- Prögler, J.A. (1995) Searching for Swing: Participatory Discrepancies in the Jazz Rhythm Section. *Ethnomusicology*, 39 (1, Special Issue: Participatory Discrepancies), pp. 21-54.
- Rasamimanana, N.H., Fléty, E. and Bevilacqua, F., (2005) Gesture analysis of violin bow strokes. In: *International Gesture Workshop*. Springer, pp. 145-155.

- Riada, Ó. (1962) Seán (1962; 1982) Thomas Kinsella and Tomás Ó Canainn (eds.), *Our Musical Heritage*, Fundúireacht an Riadaigh I gcomhar le The Dolmen Press, Mountrath, Portlaoise, Ireland.
- Rice, T. (1996) Toward a mediation of field methods and field experience in ethnomusicology. *Shadows in the field: New perspectives for fieldwork in ethnomusicology*, pp.101-120.
- Rice, T., 2003. Time, place, and metaphor in musical experience and ethnography. *Ethnomusicology*, 47(2), pp.151-179.
- Ricoeur, P. (1981) *Hermeneutics and the human sciences: Essays on language, action and interpretation*. Cambridge university press.
- Robertson, R. (1995) Glocalization: Time-space and homogeneity-heterogeneity. *Global modernities*, 2 (1), pp. 25-44.
- Robinson, M. (2013) *An Interview with Mairéad Ní Mhaonaigh*. Fiddler magazine. Available from: [www.standingstones.com/jbyrne.html](http://www.standingstones.com/jbyrne.html) [Accessed 24/05/2013 12:07].
- Robinson, M. (1999) The Fiddle Music of Donegal. *Fiddler Magazine*,
- Rosch, E. (1973) Natural categories. *Cognitive Psychology* 4 (3): pp.328–50., 4(3) pp. 328-350.
- Russell, I. and Goertzen, C., eds. (2012) *Routes and Roots ; fiddle and dance music from around the north atlantic 4*. 1st ed. Aberdeen: Elphinstone Institute Occasional Press.
- Schultz, A. (1951) Making Music Together: A Study in Social Relationships. *Social Research*, 18, pp. 76-97.
- Schwenkreis, P., El Tom, S., Ragert, P., Pleger, B., Tegenthoff, M. and Dinse, H.R. (2007) Assessment of sensorimotor cortical representation asymmetries and motor skills in violin players. *European Journal of Neuroscience*, 26 (11), pp. 3291-3302.
- Sethares, W.A., 2005. *Tuning, timbre, spectrum, scale*. Springer Science & Business Media.
- Shan, G., Visentin, P. and Schultz, A. (2004) Multidimensional signal analysis as a means of better understanding factors associated with repetitive use in violin performance. *Medical Problems of Performing Artists*, 19 (3), pp. 129-139.
- Shan, G., Visentin, P., Wooldridge, L., Wang, C. and Connolly, D. (2007) A frequency-based characterization of spiccato bowing in violin performance. *Perceptual and motor skills*, 105 (3\_suppl), pp. 1027-1051.
- Siegel, J.A. and Siegel, W. (1977) Categorical perception of tonal intervals: musicians can't tell sharp from flat. *Perception & psychophysics*, 21 (5), pp. 399-407.
- Simpson, J. and Weiner, E., eds. (2008) *The Oxford English Dictionary*. 11th ed. Oxford: Oxford University Press.



- Sloboda, J.A. (1994) Music performance: Expression and the development of excellence.
- Sloboda, J.A. (1986) *The Musical Mind : The cognitive Psychology of music*. 1st ed. Oxford: Oxford University Press.
- Spencer, S. (2010) Wheels of the world: how recordings of Irish traditional music bridged the gap between homeland and diaspora. *Journal of the Society for American Music*, 4 (4), pp.437-449.
- Sperber, D. (1996) Explaining culture: A naturalistic approach. *Cambridge, MA: Cambridge*,
- Suibhne, D.N. (1993) *Repertoire in the Donegal fiddle tradition*,
- Suibhne, D.N. The Donegal Fiddle Tradition: An Ethnographic Perspective. *Donegal: History and Society: Interdisciplinary Essays on the History of an Irish County*,
- Súilleabháin, Ó. Mícheál, (1999) Crossroads or twin track? Innovation and tradition in Irish traditional music. *In: Crosbhealach an Cheoil the Crossroads Conference Tradition and Innovation in Traditional Irish Music*. pp.175-199.
- Súilleabháin, Ó. Mícheál, " The creative process in Irish traditional dance music. *Irish Music Studies*, pp.117-130.
- Súilleabháin, Ó. and Mícheál, I. (1987) *Tradition in the music of Tommie Potts*,
- Taylor, B. (2013) From Flag to Floor to concert platform - passing on the tradition. *In: Vallely, F., Doherty, L., Smith, T., et al, eds. Crosbhealach an Cheoil The Crossroads Conference 2003; Education and Traditional Music*. 1st ed. Dublin: Whinstone, 51.
- Thacker, V. (2012) Experiencing the Moment in Song: An Analysis of the Irish Traditional Singing Session. *Ethnomusicology Review*, 17
- Thompson, M. and Biddle, I., eds. (2013) *Sound, Music, Affect : Theorising Sonic Experience*. 1st ed. London: Bloomsbury.
- Tourish, M. (2013) In Process and Practice: The Development of an Archive of Explicit Stylistic Data for Irish Traditional Instrumental Music.
- Turino, T. (2008) *Music as social life: The politics of participation*. University of Chicago Press.
- Vallely, F., ed. (2011) *The Companion to Irish traditional music*. 2nd ed. Cork: Cork University Press.
- Vallely, F. (1999) *Crosbhealach an cheoil*. Whinstone Music.
- Vallely, F., Doherty, L., Smith, T., McGettrick, P., Vallely, E., Wilkinson, D. and Moloney, C., eds. (2013) *Crosbhealach an Cheoil : The Crossroads conference 2003, Education and traditional music*. 1st ed. Dublin: Whinstone.

Van Hedger, S.C., Heald, S.L., Huang, A., Rutstein, B. and Nusbaum, H.C. (2017) Telling in-tune from out-of-tune: widespread evidence for implicit absolute intonation. *Psychonomic bulletin & review*, 24 (2), pp. 481-488.

Van Hedger, S.C., Heald, S.L. and Nusbaum, H.C. (2016) What the [bleep]? Enhanced absolute pitch memory for a 1000 Hz sine tone. *Cognition*, 154, pp. 139-150.

Veblen, K. (1994) 'The Teacher's Role in Transmission of Irish Traditional Music', *International Journal of Music Education*, os-24(1), pp. 21-30.  
doi: [10.1177/025576149402400103](https://doi.org/10.1177/025576149402400103).

Visentin, P., Shan, G. and Wasiak, E.B. (2008) Informing music teaching and learning using movement analysis technology. *International Journal of Music Education*, 26 (1), pp. 73-87.

Ward, C. (2013) Scordatura in the Irish Traditional Fiddle Music of Longford and South Leitrim. *The Musicology Review*, 8, pp. 109-129.

Warren, L. and Spearing, C. (1960) Mammalian sialidase (neuraminidase). *Biochemical and biophysical research communications*, 3 (5), pp. 489-492.

Weston, P.W. (1900) *Atlas and Encyclopedia of Ireland*. 1st ed. New York: Murphy & McCarthy.

Whitcomb, B. (2017) Intonation on a String Instrument: Three Systems of Tuning and Temperament. *American String Teacher*, 67 (2), pp. 20-23.

Zagorski-Thomas, S., (2007) The study of groove. In: *Ethnomusicology Forum*. Taylor & Francis, pp. 327-335.

## **Discography**

Altan (1989) *Horse with a Heart*. Green Linnet.

Altan (1990) *The Red Crow*. Green Linnet.

Altan (1992) *Harvest Storm*. Green Linnet.

Altan (1993) *Island Angel*. Green Linnet.

Altan (1996) *Blackwater*. Virgin records.

Altan (1997) *Runaway Sunday*. Virgin Records.

Altan (2000) *Another Sky*. Virgin Records.

Altan (2002) *The Blue Idol*. Virgin Records.

Altan (2005) *Local Ground*. Narada Records.

- Altan (2010) *25<sup>th</sup> Anniversary Celebration*. Independent Records.
- Altan (2012) *Gleann Nimhe – The Poison Glen*. Compass Records.
- Altan (2015) *The Widening Gyre*. Compass Records.
- Altan (2018) *The Gap of Dreams*. Compass Records.
- Byrne, J. (1990) *The Road to Glenlough*. Claddagh Records.
- Campbell, V. (2010) *The Purple Heather*. Cairdeas na bhFidiléirí.
- Cassidy, C. (2007) *Traditional fiddle music from Donegal*. Cairdeas na bhFidiléirí.
- Connaghan, T. and McGinley, D. (2011) *The Far side of the Glen*. Own label.
- Doherty, J. (1996) *The Floating Bow*. 1st ed. Dublin: Claddagh Records.
- Doherty, M.S. *The Donegal Fiddle*, various artists. *RTÉ Music RTE*, 196
- Doherty, M. (2017) *Garvan Hill*. Cairdeas na bhFidiléirí.
- FIDIL (2011) *The Old Wheel of Fortune*. Donegal: Own Label.
- FIDIL (2009) 3. Donegal: Own Label.
- Kennedy, F. and Ní Mhaonaigh, M. (1983) *Ceol Aduaidh*. Green Linnet.
- Kennedy, F. and Ní Mhaonaigh, M. (1987) *Altan*. Green Linnet.
- Mac Giolla Bhríde, D. and Labhraidh, G. (2010) *Guailibh a'chéile*. Glasgow: Own Label.
- Meehan, D. (2011) *Drimalost and Beyond*. Cairdeas na Fidiléirí.
- O'Donnell, A. and Munnely, K. (2006) *In Safe Hands*. Limerick: Own Label.
- O'Donnell, A. and Ó Maonaigh, C. (2008) *Fidil*. Donegal: Own Label.
- The Henry Girls (2014) *Louder than Words*. Own Label.
- Various Artists (1987) *The Brass Fiddle*. 1st ed. Dublin: Claddagh Records.
- Various Artists. (1996) *The fiddle music of Donegal vol. 1*. Cairdeas na Fidiléirí.
- Various Artists. (1998) *The fiddle music of Donegal vol. 2*. Cairdeas na Fidiléirí.
- Various Artists. (1999) *The fiddle music of Donegal vol. 3*. Cairdeas na Fidiléirí.

## Videography

*The Fiddler on the Road* (1972) Visual. Directed by Crockhart, A. Belfast: UTV.

*Cainniuti Cheoil* (2002) Visual. Directed by O'Connor, N. Dingle: TG4.

*John Doherty - Ar Lerg na Gaoithe* (2016) Visual. Directed by Mac Giolla Bhríde, E. Gaoth Dobhair: TG4.

*The Magic Fiddle* (1991) Visual. Directed by Hammond, D. UK: FLYING FOX STUDIOS.

*Musical Traditions* (2002) Visual. Directed by Kirk Smith, I. Belfast: BBC Northern Ireland.

*The Rhythms of the World* (1990) Visual. Directed by BBC. London: BBC.

\