# Motor Structure as a Heuristic for the Development of Bodhrán Expressivity

# Introduction

I began learning the bodhrán at about the age of twelve, over the summer holidays in 1990. I was bought a bodhrán and stick, along with Mícheál Ó Súilleabháin's tutor book (Ó Súilleabháin 1984); at that time bodhrán wasn't taught formally, and so I learned myself. I played at home with family, and later we went to sessions and played with others. In 1993 I was placed first on bodhrán at Fleadh Cheoil na hÉireann. Now, almost thirty years later, I still play regularly in solitary practice, with family and friends in pub and house sessions, and occasionally on stage. I teach bodhrán and guitar, and over the years I have played guitar and sung in rock, metal and folk bands in the Irish underground scene, as well as professionally in wedding bands. I returned to third-level education in 2016, studying bodhrán under Colm Murphy (of De Danann) at UCC. More recently I have studied bodhrán with Jim Higgins at the Irish World Academy of Music and Dance.

This arts practice research project attempts to evaluate the exploration of motor structure (Baily and Driver 1992, p.63) as a means of developing musical expression in my bodhrán playing. In this written component of the research, I will contextualise my own playing within current bodhrán performance practices, with reference to relevant academic literature and online video resources. I will describe the methods of my research, the data generated by the various research modes, and discuss findings related to the research question that emerged from analysis of that data. Hyperlinks to footage exemplifying certain bodhrán performance practices are used throughout the text (and collected in Appendices A and B), and the reader is encouraged to engage with these.

# **Bodhrán Performance Practices**

Little is known about bodhrán performance practices prior to the instrument's popularisation in the 1960s (Cunningham 1999, p.21). Furthermore, Cunningham's research found that "there remains a significant lack of published and unpublished academic work that deals specifically with the performance styles of bodhrán playing" (Cunningham 1999, p.21), and over twenty years later, Harte similarly finds that "despite a number of introductory pedagogical texts, the bodhrán has not been fully explored in an ethnographic sense" (Harte 2020, p.2). Harte highlights a shift from hand playing styles to the now more common use of a stick as a beater (Harte 2020, p.23), but his text provides only high-level descriptions of common playing practices on the instrument, with no detailed analysis of the embodied rhythmic structures of bodhrán playing.

Cunningham references five stick-playing styles identified by professional player Tommy Hayes: 'Kerry Style', 'West Limerick Style', 'Waterford Style', 'Tambour Technique', and 'a style peculiar to Tommy Hayes' (Cunningham 1999, p.22). Beyond identifying these playing styles and describing the basic hand postures that differentiate them, detailed description of their usage is given only in the case of 'Kerry Style' (Cunnigham's thesis centers on detailed analysis of the playing of John Joe Kelly, whose hand posture conforms to this style). Here and in his later work, Cunningham acknowledges that

Bodhrán performance cannot easily be categorised into different regional styles; it is more easily defined by referring to the manner of performance peculiar to an individual, or to a group of players.

(Cunningham 2011, p.72)

As suggested above by Cunningham, using regional styles to characterise bodhrán playing technique is problematic; players from the same geographical region often use different techniques, and same techniques are shared across geographical regions. Here in Table 1, I offer a translation of the five stick-playing styles mentioned, to concretely reference well-known players who exemplify them.

Hayes' Categorisation (via	Categorisation by Exemplar	Examples of Technique
Cunningham)		
Kerry Style	Peadar Mercier (and the	https://youtu.be/5VN-
	majority of players)	sWGKO3s?t=30
West Limerick Style	Seamus Donoghue (rare)	https://youtu.be/pOLIJUq9Lg0
		<u>?t=65</u>
Waterford Style	Mel Mercier (rare, but very	https://youtu.be/qzN5zivcwYE
	similar to Peadar Mercier style,	<u>?t=27</u>
	but with use of a loop to attach	
	stick to the middle finger)	
Tambour Technique	Sean Ó Riada (rare)	https://celtic-music.ru/wp-
		content/uploads/2012/06/Sean-
		O-Riada-croped.jpg
a style peculiar to Tommy	Tommy Hayes (rare)	https://www.youtube.com/watc
Hayes		h?v=Xtfl_2jvfD8&t=95s

Table 1: Categorisation of bodhrán performance styles

As described by Cunningham (1999, pp.21-23) the different playing styles identified in Table 1 are differentiated by the particular way a player grips the stick: what I term the 'grip posture'. My research explores the particular movements of the stick in striking the bodhrán skin afforded (Gibson 1977) by different grip postures, to evaluate a grip posture's potential for unique musical expression.

My research approach is supported by the concept of "motor structure" as developed by Baily and Driver:

The way of playing a particular genre of music is characterised by certain patterns of movement that are specific to that style. These motor patterns, which in a sense "lie behind" the music, may be said to constitute the motor structure of that style. The motor structure consists of certain overlearned patterns of movement which are established by learning structurally related pieces that embody these patterns. (Baily 1977:329). **Fundamental to the motor structure of a style are certain basic postures and hand positions.** A given spatial layout may suggest quite different lines of musical development, each

spatially logical in its own way. Basic postures and hand positions may set the parameters of what will develop as a motor grammar.

#### (Baily and Driver, 1992, p.63, my emphasis)

This research has resonances with other arts practice research which directly consider the importance of movement in the context of creative practice, such as Diane Daly's investigation into the effect of Dalcroze Eurhythmics on her classical violin practice (Daly 2022), and Brendán de Gallaí's work in the closely related field of Irish step dancing which explored "potential expressive possibilities in Irish step dancing and address these possibilities through ... choreographic work" (de Gallai 2013, p.6).

### **Research Method**

This project uses an arts practice research methodology to investigate the effect of using motor structure as a "heuristic" (Kinney, 1979) for developing the expressive possibilities of the bodhrán. Arts practice research (sometimes termed practice-as-research) is an academic research discipline that "positions artistic practices at the centre of the research endeavour" (Phelan and Nunan 2018, p.2). Arts practice research acknowledges that "epistemic" (Phelan and Nunan 2018, p.10) creative practice is itself knowledge-producing, and that this knowledge can be communicated as research through a variety of modalities, including through the arts practice itself, any appropriate documentation of that arts practice, and in writing, as described in Robin Nelson's multi-modal approach to practice-as-research (Nelson 2013, p.26). My research question can perhaps only be answered through this type of arts practice research; in exploring and evaluating the expressive possibilities afforded by unusual motor structures of my bodhrán playing, I must rely on my creative faculties and musical judgement in the "doing-thinking" of performance (Nelson 2013, p.61). Communication of this embodied, embedded, enacted and extended knowledge (van der Schyff et al. 2018, p.5) is well-served by Geertzian thick description that uses autoethnographic journaling, video documentation and academic writing.

As is evident in online video streaming and social media platforms (see Appendix B: Unorthodox Bodhrán Motor Structures), a variety of different motor structures (not limited to the five styles referenced above) are used by bodhrán players to construct the distinctive motor grammars of their playing style. As I have shown, this variety of motor structure is not described in detail in the sparse academic literature, perhaps unsurprisingly given that the very large majority of players seem to rely exclusively on the particular motor structures popularised by Peadar Mercier, and developed in turn by Johnny "Ringo" McDonagh, John Joe Kelly and the current younger generation of bodhrán players (see Appendix A: Orthodox Bodhrán Motor Structures).

Despite the theoretical possibility for unique expression afforded by the motor structures of a given grip posture, there is some truth to Cunningham's assertion that:

In all bodhrán styles the player's rhythmic repertoire comprises 'down strokes', 'up strokes', 'doubling' or 'trebling' and combinations of each.

#### (Cunningham 2011, p.72)

That is, no matter which grip posture is used, the rhythmic patterns generated by each are equivalent in some abstract sense. This brings us to the crux of my research question: exactly what expressive possibilities can be developed by exploring the motor structures of different grip postures afforded by a bodhrán stick? Up until recently, my own playing could be described as sitting squarely in the Peadar Mercier lineage, also incorporating a particular adjustment of this grip posture taught to me by Colm Murphy. In attempting to answer my research question I incorporated the more obscure Sean Ó Riada grip posture into my playing, to see what (if any) unique musical expression it affords.

### Motor Structure and Expressivity in Bodhrán Playing

To research the development of musical expressivity afforded by embodying unusual motor structures in my bodhrán playing, I dedicated a daily session of practice to focus on a particular grip posture, which I term <u>'the Ó Riada grip'</u> (Brian Sheehan 2022, Clip 14). Eamonn De Buitléar (associated with Ó Riada's seminal ensemble Ceoltóirí Chualann, Bradley 2011, p.121) can be seen performing this motor structure: <u>https://youtu.be/2VjkR9GNqwo?t=19</u> (Pedro Fernández García, 2008). Exploration of this grip posture quickly extended to include another closely related posture which I term <u>'Tommy-meets-Colm'</u> (Brian Sheehan 2022, Clip 3). These sessions (usually about an hour in length) included unaccompanied playing, playing to recorded music sources, targeted video documentation of my playing, and journal writing. Journal entries gave a broad account of the activities of a session, as well as my reflections on those activities. Between February 21st and March 18th, eighteen bodhrán practice sessions generated two data sets: eighteen one-to-two-page journal entries, and approximately thirty-four short video clips totalling just under two hours of footage (Brian Sheehan 2022, <u>available</u> on YouTube unedited and indexed by clip number).

I performed a thematic analysis (See Appendix C) of my journal entries by selecting recurrent, related words ('codes'), grouping these codes into clusters, and finally, identifying themes that emerged from these code clusters when taken in the overall context of the research process. Themes that emerged from this analysis were: 'development of nomenclature'; 'rhythmic nuance'; and 'switching between grip postures'. These three themes are discussed below, with reference to relevant video clips of my practice.

### Development of Nomenclature

An unforeseen insight that emerged from this research was the value of developing succinct yet information-rich ways of verbally describing the embodied motor structures of bodhrán performance practice, which is as yet underdeveloped in the academic literature.

Rather than tying myself in knots trying to verbally describe complex three-dimensional musculoskeletal movements of the bodhrán-playing body, a convenient strategy emerged almost immediately in my journal writing. In my first journal entry (21/02/22), I used the term 'Colm Murphy grip' to denote the way (Conor O' Sullivan 2020) Colm taught me to hold a bodhrán stick. This way of identifying bodhrán techniques with reference to their well-known exemplars has been a feature of my conversations with bodhrán-playing friends, and with my tutor at the Irish World Music Academy, Jim Higgins. During lessons with Jim, we would frequently refer to "the way" a particular well-known player might execute a technique; techniques were exemplified with reference to Johnny "Ringo" McDonagh, Tommy Hayes or Dónal Lunny for example. For someone familiar with bodhrán playing, evoking these names indexes a wealth of information about diverse aspects of these individuals' playing styles. For someone not so familiar with bodhrán playing, these names can be used to <u>access secondary sources</u> (as is encouraged throughout this text), such as online video archives, to develop an audio-visual understanding the performance parameters in question. In this way, the language construct of a musician's name indexes and is contextualised by first- and second-hand audio-visual knowledge of that player's embodied techniques.

In my journal entries, I developed a shorthand for identifying grip postures based on this idea, and so many entries contain references to 'Colm Murphy grip' (or just 'Colm'), <u>'Ó Riada grip'</u>, 'Tommy grip' (after Tommy Hayes), 'Ringo' (after Johnny "Ringo" McDonagh). This idea is further extended in my second (22/02/22) and third (23/02/22) entries, where I begin to use the term <u>'Tommy-meets-Colm'</u> to denote a certain grip posture that can be seen as a hybrid of the Tommy and Colm grips, and is also quite similar to the Ó Riada grip.

### **Rhythmic Nuance**

The abstract concept of a quaver rhythm at a given tempo can be embodied in practice using, for example, either the Colm grip or the Ó Riada grip. However, that is not to say that both articulations are equivalent. An important finding of this research project is that the different motor structures I explored express the same abstract rhythm in different, albeit nuanced, musically useful ways. Consideration of this question arose frequently in journal entries, such as here:

I keep questioning whether this method is actually creating anything new. This method being, the exploration of different grips and consequent stick movements and drum orientations.

[...]

Sometimes the difference is slight, but maybe something comparable to playing near the bridge or nearer the fingerboard on a fiddle. (sur pont Vs sur tasto?)

(Journal Entry 15, 15/03/22)

To convince myself that there is a valid musical reason for using the motor structures of the Ó Riada grip, I <u>directly contrasted</u> (Brian Sheehan 2020, Clip 26) this posture with the Colm grip in performance, eventually concluding that they do in fact express the same abstract pattern differently:

I recorded an example of this [a slide pattern that switches between Ó Riada and Colm grips], and the equivalent articulation of this pattern in Colm alone for comparison. They are **same but different**. Playing it all in Colm grip sound [sic] flatter, more even, more consistent.

[...] Ó Riada adds a "wavering" unevenness to the phrase.

(Journal entry 16, 16/03/22)

### Switching between Grip Postures

Overlapping with the above question of evaluating the unique rhythmic nuances afforded by the motor structures of the Ó Riada grip, the theme of 'switching between grip postures' was very evident in my journal entries. Given that the difference of articulation between the motor structures of the Colm grip and those of the Ó Riada grip (or the related Tommy-meets-Colm grip) tend toward slight rather than being extremely pronounced, it was found that these differences could be shown most effectively (and so, be used in the service of musical expression) when they are juxtaposed directly in performance as above. In this way, musical expressivity is not only found within one motor structure or the other, but also emerges in the discrepancies between them. In practice, this switching of postures can happen from bar to bar, or even within the bar. Early in the research I noted that "The feeling of exploring these grip transitions and the different textures created by each are very satisfying" (Journal entry 4, 24/02/22)

<u>It was found</u> (Brian Sheehan 2022, Clip 6) that the switching of grip postures maps naturally onto the binary call-and-response phrase structure characteristic of Irish traditional dance music, where "melodic structures in this repertoire are largely constructed from bar-length motives to create 2-bar sub-phrases, 4-bar phrases, and 8- bar parts" (Doherty 2022, p.22). It also echoes the weight-shifting dynamic created by the bilaterally symmetrical steps of Irish traditional dancers:

I ended up trying to switch between Colm and Tommy-meets-Colm (TmC?) every bar. I like how this agrees with the natural phrasing of the tunes and echos the weight shift of dance steps from left foot to right foot.

(Journal entry 5, 25/02/22)

### Conclusion

In this written component of my arts practice research project, I used the concept of motor structure (Baily and Driver, 1992, p.63) to compare bodhrán performance practices which use a stick. By analysing existing performance practices in this way, I explained the motivation of this research to explore the 'Ó Riada' grip posture as a possible means of developing expressivity in my playing. I followed Nelson's multi-modal approach to arts practice research (Nelson 2013) to produce and analyse two datasets: video clips, and journal entries which documented my daily practice.

My research found that a useful, succinct nomenclature for bodhrán stick "grip postures" can be developed by using the names of well-known exemplars to reference their corresponding grip postures. It found that musically-useful differences in articulation were evident when the same abstract rhythm was articulated with different grip postures; in particular, a difference in articulation was shown between the "Colm Murphy" grip posture and the "Ó Riada" grip posture in my own performance practice. Finally, it found that this difference in articulation can be further exploited for musical ends when grip postures are directly juxtaposed in performance; I taught myself to "switch between grip postures" to achieve a textural effect that can be used very effectively to express the nested symmetrical phrase structure of Irish traditional dance music in a unique, novel way.

It is perhaps this last finding that is the most significant contribution to the embodied knowledge of bodhrán playing. Although I found examples in the literature, and in common practice, of musicians using a variety of grip postures to construct their playing style, each player tends to use only one grip posture in their playing. This arts practice research shows that it is possible to switch between grip postures in the moment of performance, allowing a new palette of textures to emerge from a bodhrán player's intelligent (Nelson 2013, p.40) use of movement in performance practice.

### Bibliography

- Baily, J., Driver, P. (1992) 'Spatio-Motor Thinking in Playing Folk Blues Guitar', World of Music, 34(3), 57–71, available: <u>https://www.jstor.org/stable/43563264</u>.
- Baily, J. (1995) 'Music and the Body' *The World of Music*, 37(2), 11–30, available: <u>http://www.jstor.org/stable/43561442</u>.
- Bradley, H. (2011) 'Ceoltóiri'Chualann' in Vallely, F., ed., *The Companion to Irish Traditional Music*, Cork University Press: Cork, p.121.
- Brian Sheehan (2022) 'Arts Practice Documentation Spring 2022', [Video], available: <u>https://www.youtube.com/watch?v=g6sw4ozuuiI</u>.
- Cawley, J. (2021) *Becoming an Irish Traditional Musician: learning and embodying musical culture*, Abingdon, Oxon: Routledge, available: <u>https://ebookcentral-proquest-</u> <u>com.proxy.lib.ul.ie/lib/univlime-ebooks/detail.action?docID=6271108.</u>
- Conor O' Sullivan (2020) 'Conor O'Sullivan & Colm Murphy (Reels)', [Video], available: <u>https://www.youtube.com/watch?v=9iUNZ5YJVXA</u>.
- Cunningham, E. (1999) *John Joe Kelly: sticking with the roots,* unpublished thesis (MA), University College Cork.
- Cunningham, E. (2011) 'bodhrán' in Vallely, F., ed., *The Companion to Irish Traditional Music*, Cork University Press: Cork, pp.68-74.
- Daly, D. K. (2021) 'Unearthing the Artist: An Autoethnographic Investigation', *The Qualitative Report*, 26(8), 2467-2478, available: <u>https://doi.org/10.46743/2160-3715/2021.4796</u>.

- Daly, D. K. (2022) 'Creativity, autonomy and Dalcroze Eurhythmics: An arts practice exploration', *International Journal of Music Education*, 40(1), 105–117, available: https://doi.org/10.1177/02557614211028600.
- David Kuckhermann (2008) 'frame drum Video Podcast Episode 14 Tommy Hayes', [Video], available: <u>https://www.youtube.com/watch?v=Xtfl\_2jvfD8</u>.
- de Gallaí, B. (2013) *Imeall-Siúl: a Choreographic Exploration of Expressive Possibilities in Irish Step Dancing*, unpublished thesis (PhD), University of Limerick, available: <u>http://hdl.handle.net/10344/3615</u>.
- De Souza, J. (2017) *Music at Hand: Instruments, Bodies, and Cognition*, Oxford University Press: New York, NY.
- Doherty, S. (2022) 'Melodic Structures in the Double Jigs of O'Neill's *The Dance Music of Ireland:* 1001 Gems (1907)', Journal of the Society for Musicology in Ireland, 17, pp.19-45, available: https://doi.org/10.35561/JSMI17222.
- Gibson, J. J. (1977) 'The Theory of Affordances', in Shaw, R. and Bransford J., eds., *Perceiving, Acting, and Knowing: Toward an Ecological Psychology,* Hillsdale, NJ: Erlbaum, pp. 67-82.
- Greeno, J.G. (1994) 'Gibson's Affordances', Psychological review, 101(2), 336–342.
- Hannigan, S. (2000) The Bodhrán Book, London: Ossian Publications.
- Harte, C. F. (2020). *The Bodhrán: Experimentation, Innovation, and the Traditional Irish Frame Drum,* University of Tennessee Press, Tennessee.
- Hayes, T. (2011) Bodhran, Bones & Spoons, [DVD], Missouri: Mel Bay Records.
- HinnerkRue (n.d.) Videos [YouTube Channel], available: <u>https://www.youtube.com/user/HinnerkRue/videos</u>, [accessed 1 April 2022].
- Keil, C. (1987) 'Participatory Discrepancies and the Power of Music', *Cultural anthropology*, 2(3), 275–283, available: <u>https://www.jstor.org/stable/656427</u>.
- Keil, C. (1995) 'The Theory of Participatory Discrepancies: A Progress Report', Ethnomusicology, 39(1), 1–19, available: <u>https://doi-org.proxy.lib.ul.ie/10.2307/852198</u>.
- Kinney, J. (1979) 'Classifying Heuristics', College Composition and Communication, 30(4), pp.351-356, available: <u>https://doi.org/10.2307/356710</u>.
- Kruspe, A. (2014) The bodhrán primer, Alabama: Published by the author.
- Kruspe, A., and O'Neill, M. (2019) In Session + One, Published by the authors, Alabama.
- Long, C. (1998) Absolute Beginner's Bodhrán Tutor, Dublin: Waltons Music.
- McCaw, D. (2007) 'Taking Clive Seriously for a Moment', *New Theatre Quarterly*, 23(4), 337–351, available: <a href="https://doi.org/10.1017/S0266464X07000267">https://doi.org/10.1017/S0266464X07000267</a>.
- Nelson, R. (2013) *Practice As Research in the Arts: Principles, Protocols, Pedagogies, Resistances,* London: Palgrave Macmillan UK.
- Ó Súilleabháin, M. (1984) *The Bodhran: an easy to learn method for the complete beginner showing the different regional styles and techniques*, Dublin: Waltons.

- Phelan, H., and Nunan, M. (2018) 'To write or not to write? The contested nature and role of writing in arts practice research', *Journal of Research Practice*, 14(2), Article M3, available: <u>http://jrp.icaap.org/index.php/jrp/article/view/592/492</u> [accessed 28/01/2022].
- Pedro Fernández García. (2008) 'Scattery Island slide', available: <u>https://www.youtube.com/watch?v=2VjkR9GNqwo</u> [accessed 18/03/2022].
- van der Schyff, D., Schiavio, A., Walton, A., Velardo, V., Chemero, A. (2018) 'Musical creativity and the embodied mind: Exploring the possibilities of 4E cognition and dynamical systems theory', *Music & Science*, Volume 1, pp.1-18, available: <u>https://doi.org/10.1177/2059204318792319</u>.

Woods, B. (2011) Bodhrán: Beyond the Basics, Missouri: Mel Bay Publications.

# Appendix A: Orthodox Bodhrán Motor Structures

Peadar Mercier (seated on left): <u>https://www.youtube.com/watch?v=5VN-sWGKO3s,</u> <u>https://youtu.be/OQ\_DWMbsgx0?t=32</u>

Johnny "Ringo" McDonagh: https://www.youtube.com/watch?v=gmQmpwrA\_UM

Colm Murphy: https://www.youtube.com/watch?v=9iUNZ5YJVXA

John Joe Kelly: https://www.youtube.com/watch?v=qh3sR1LSLho

Aimée Farrell Courtney: https://www.youtube.com/watch?v=kyteqPrKDg8

# Appendix B: Unorthodox Bodhrán Motor Structures

Tommy Hayes: <u>https://www.youtube.com/watch?v=Xtfl\_2jvfD8&t=95s</u>

Seamus Donoghue: https://www.youtube.com/watch?v=pOLIJUq9Lg0

Éamon De Buitléar: https://www.youtube.com/watch?v=2VjkR9GNqwo

Stevie McNamara: https://youtu.be/EBwTNaGGPBE?t=38

Louis Bingham: <u>https://www.youtube.com/watch?v=6XGVHrvmM-w,</u> <u>https://www.youtube.com/watch?v=DO0vRlFntws</u>

Spotlessshadow: https://www.youtube.com/watch?v=G3BMm3v7V4c

Beaver Randolph: https://www.facebook.com/beaver.randolph/videos/5616123838415820

Miłosz Trzcinski: <u>https://www.facebook.com/100001223451927/videos/413680443632884</u>, <u>https://www.facebook.com/100001223451927/videos/4066448576739217</u>

Gerard Kinsella: https://www.facebook.com/gerard.kinsella.161/videos/429071095183609

Margaret Beckwith: https://www.facebook.com/margaret.beckwith.50/videos/515216519702861

George Duggan: https://www.facebook.com/george.duggan.77/videos/10218755703539202 Nicolas Dupin: https://www.facebook.com/nicolas.dupin.bodhran/videos/10220101824438913 (Facebook links require login)

# Appendix C: Thematic Analysis

# Identify main emergent themes

**Developing nomenclature** ("grip postures" "Colm, Ó Riada, Tommy Hayes, Ringo" "switching" "perpendicular" "oblique" etc)

Rhythmic Nuance - Same but different, Participatory Descrepencies

Switching between grip postures

Wellness and Workload

# Name Code Clusters

Naming Grip Postures

- **Describing Playing Movements**
- Switching Grip Postures
- Descriptions of rhythm
- Musical Context of Practice

Nuance

Somatic Description

Potential for musical expression

Intuition

Novelty

Stress and College Work

### Codes

Naming grip postures Colm Murphy Grip (1) Colm style (13) Colm (13,14,16,17) Ó Riada Grip (1,4,6,7,10,11,12,13,14,15,16,17) Tommy Hayes Tommy meets Colm (2,3) TmC (6) Tommy Grip Ringo (3) Top-end grip (8,9)

### **Musical Context of Practice**

Dan Gurney (7) Andy Martyn (7) Brighde Chaimbeul (8, 12) Johnny Doran Finbarr furey (10) Caitlín Nic Gabhann (11) Mícheál Ó Raghallaigh (12,13) Emma O'Leary (16) Aidan Connolly (17,18) Jim Higgins (18) Without music (4)

### Describing playing movements

No music (15)

Radius/ulna rotation Straight-wristed (1,13) Broken wrist (13 Wrist-hinging (2) Thumb/index grip (1) Balance point for the stick (5) Nearby Ó Riada Grips are related (4) A link to the Ó Riada grip (4) Allow transition ( Two extremes (13) Angle (11,13) Angle (17) Vertical (17) Turned bodhrán (13,14) Drum position (14) Rocking the drum (17) Perpendicular (11,13,14) Oblique (11,13,14) Long muted beater (9,15) Long stick (14) Muted (14) Open drum, sounds (9, 10)

Nuance Micro-rhythmic (9, 10) Micro-rhythm (16) Swing (16) Detail (9) Wavering (16) Nuance (10) Extra little flick (15) Slight (11) Difference is slight (15) Slightly different (16) Seeing how the different grip are related (4) Greater sonic differentiation between the two disciplines (13) Difference between (14) Participatory discrepancies (15) Equivalent articulation (16) Same but different (16) Almost identical continuous roll in the Ó Riada grip (4)

### Somatic description

Feels awkward (1,7) Can't fully control (5, 6) Throws off the left hand (13) Aren't reliable (12) Control (9,10) Controllable (8) Muscle control (11) Connection (11,13) Connected (17) Couldn't connect (7,) Purchase (10,11,13) Lean into (10) Comfortable (3) Naturally happens Natural position (13) Aware of niggles (3) Tightness across my shoulder blades (10) Bothered by my shoulder (12) A bit sore (12)

### Switching Grip Postures

Flipping over to Ó Riada grip (8) Between positions (14) Grip transitions (4,) Different textures created by each [grip posture] (4) Seeing how the different grip are related to each other (4) A continuous downbeat roll in Colm grip transitions easily to an almost identical continuous roll in the Ó Riada grip (4) Sonic differentiation between two disciplines (13) Difference between (14) Participatory discrepancies (15) Equivalent articulation (16) Same but different (16) A link to the Ó Riada grip (4) Switched from (Ringo to Colm 3) Switch between (Colm and Tommy-meets-Colm, 5) Switching between (8, 15,16)

Changes between (16) Switched to charlie byrne (15) Switching from Colm to Ó Riada (16) Different switches (17) Between (13) The switch (9) Mixing (16) Sonic differentiation between two disciplines (13) Orientation (13,14,15) Weight shift of dance (5) I like how this combo feels (16) Boxer's combination punches (15) Combo (16) Experimenting with different switches (17) Between the two disciplines [Colm style, Ó Riada with drum turned more parallel to chest] (13) Between the two extremes of each configuration (13) The crossover (15) Continuum (13)

### Potential for musical expression

Sonic differentiation between two disciplines (13)

Different textures created by each [grip posture] (4)

Difference between (14)

Participatory discrepancies (15)

Equivalent articulation (16)

Same but different (16)

A continuous downbeat roll in Colm grip transitions easily to an almost identical continuous roll in the Ó Riada grip (4)

### Intuition

Seems like something worth putting some time into (6) Seems to be the most fertile territory (14) Dipping my toe (10) Dipping into (17) Useable (3) Doable (9) Possibly (8) Should be possible (13) Seemed like/to (8) Interesting/promising feel (1) Feels like (11) I like how this combo feels (16)

### Novelty

Something I haven't had before (6) Strange (14) Different (14) Different intonation (16) Different grips (15,16) Newish (1) Newer (9) New (14,15) Unique (15) Unique (15) Uniquely intoned (17) Creating (15) Innovation (15) Exploring new movements (4) Exploration (15)

### Descriptions of rhythm

Quaver rhythm (1,4,11, 12) Sur pont, sur tasto (15) 1-bar phrase (15) Motor rhythm (1,12) Ghost notes (6) Triplet

Downbeat rolls (4) Paradiddles (1, 6) Diddles (6) Doubles (6) Cross-rhythmic Accented (9,10) Accents (14) Articulation (9,15,16) Attack (14) Grooves (9) Back-of-tricks (9) Carry a tune (11) Upstroke (1, 11,13) Downstroke (1, 11, 13) Slides (15,16) Pattern that seemed to fit that tune (17) Seemed to fit well (17) Fit very snugly (18) Drop straight back into a more regular rhythm (8) Humpty-dumpty (15,16) Rashers and sausages (15,16) Lurching pattern (17) Pattern (16,17,18) Associating patterns with tunes (18) Varied intonation (16) Intonation pattern (18) Variations and permutations [of patterns] (18) Flowing double-ended textures (9)