



**Modelling musicians'  
understandings of musical  
shaping**

Dr Helen Prior

This paper will use data collected in an interview study with professional musicians (violinists and harpsichordists) to construct a model of musical shaping that is intended to encompass different aspects of performers' musical thoughts, relating to musical levels, triggers, heuristics, technical parameters and the resulting change in musical sound. The model will facilitate an examination of the ways in which shape seemed to be used as a heuristic at multiple musical levels, from that of a whole concert, piece of music, or movement, to that of sections of pieces, phrases, or individual notes. The data will reveal the use of shape to relate to a range of changes in musical sounds at different hierarchical levels, including the programme chosen, instrumentation, timbre, variation in tempo and dynamics, ornamentation, vibrato and articulation. Future applications of the model will then be discussed.



## Shaping Music in Performance

- **Aim:**
  - To understand the ways in which performing musicians use the idea of musical shape or shaping
- **Approaches:**
  - Background documentary evidence
  - Questionnaire study (Prior, 2012a)
  - Interview studies (Prior, 2012b, 2012c)

This work forms part of the Shaping music in performance project based at King's College, London. The aim of this part of the project was to understand the ways in which performing musicians use the idea of musical shape or shaping.

So far, three approaches have been taken. First, I looked at some of the documentary evidence for the use of shape or shaping in relation to music, and found that it seemed to be a normal part of musicians' vocabularies. I looked at writings, broadcasts, and footage of masterclasses, and found some interesting diversity in the meanings that shape seemed to have: sometimes it referred to musical structure, sometimes to expression, and sometimes it was used in relation to movement or gesture.

The second approach was a large-scale questionnaire study, which again seemed to show that this idea of shape or shaping was used flexibly. Individual participants would refer to it in multiple specific ways, but again, it was reported to be used frequently and by the vast majority of respondents.

Today, I'd like to focus on some of the findings from the third approach, which has built on the findings from the first two approaches by looking at the ways in which musicians use musical shape or shaping in more detail, through interviews.

## Interview Studies

- Participants:
  - Professional musicians
  - 5 violinists, 5 harpsichordists
    - N.B. Differences in abilities of instruments to
      - sustain sound
      - vary the dynamic range
      - play chords

The interview studies have focussed on professional classical musicians, and specifically, on violinists and harpsichordists. I started with violinists partly because I do play the instrument, and so my technical understanding of how it works enabled me to know what sort of questions would elicit useful responses in terms of musical shaping.

Following the collection and analysis of the data from the violinists, I realised that some of the freedoms violinists have in terms of the technical capacity of their instrument might be influencing some of their responses. So harpsichordists were chosen as a contrasting group. As musicians, you will all be aware of the technical capabilities of each instrument, but I've put a few on the slide that I thought might stimulate interesting differences between the two groups.

Slide 4

Name		Age group	Years playing	Birthplace	Place of study
Tina*	V	25–34	11–20	UK	Manchester University (UG); RNCM (PG); Sheffield University (PG)
Bridget*	V	25–34	21–30	UK	Trinity (UG)
Elsie*	V	25–34	21–30	Australia	Sydney Conservatorium of Music (UG); RCM (PG)
Victor*	V	35–44	31–40	South America	Privately (UG); RAM (PG)
Darragh Morgan	V	35–44	21–30	Ireland	GSMD (UG); Hong Kong Academy of Performing Arts (PG)
Yoshi*	H	25–34	11–20	Japan	Queensland Conservatorium (UG, PG); RAM (PG), TCM (PG). Current: University of York (PG)
Katharine May	H	45–54	21–30	UK	RCM (UG, PG)
Jane Chapman	H	45–54	31–40	UK	RCM; Sweelinck Conservatory, Amsterdam
Julian Perkins	H	25–34	21–30	UK	University of Cambridge (UG); RAM (PG); Schola Cantorum, Basle (PG)
Nathaniel Mander	H	18–24	≤ 10	UK	RAM

The participants' details are shown here. Those names with an asterisk are pseudonyms; the other participants wished to be named. As you can see, the participants ranged from 18 to 54 years of age, and had between less than 10 and 40 years of experience playing their instrument. They were all resident in the UK, but not all of them were born here: the sample included an Australian, a South American, and participants from Ireland and Japan. Many of them had studied performance at universities and conservatoires, often to postgraduate level. They were all established professional performers earning the majority of their earnings through performance, though some of them also taught, or had research interests.

## Interview Studies

- **Participants:**
  - Professional musicians
  - 5 violinists, 5 harpsichordists
- **Procedure**
  - Demographic questionnaire
  - Unprompted musical task – explain thinking
  - Musical task ‘thinking about musical shaping’ – explain thinking
  - Describe and explain experiences of shaping music

What did participants have to do?

Interview schedule - developed using findings of questionnaire study, but also designed to incorporate practical music making.

Participants asked to bring instrument and music

Consent form, brief demographic questionnaire - name, gender, age group, main instrument, years of experience, musical status, current musical genres played, and other musical interests.

Asked to play brief musical extract selected for its potential for musical shaping and its probable unfamiliarity.

Participants were asked to play this as they would normally approach a new piece of music, and then describe what they were thinking about as they were playing, as they might to a student. After this discussion, they were told that the study was about musical shape or shaping, and they were asked to play the extract again, while thinking about the shape of the music, or how they were shaping the music. They were then asked to describe their thoughts once more. Some participants were also asked to play an extract without musical shaping and to describe their thoughts again.

Following the musical task, participants were asked how this compared to their usual experiences of shaping music, what they meant when they referred to musical shape, and about shaping pieces they had brought with them or knew well. The schedule contents and order were flexible to ensure that the interviews felt natural and comfortable for the participants. At the end of the interview, participants signed the consent form and were compensated for their time.

The interviews were recorded using a Panasonic SD700 HD Camcorder and a Sony ICD-UX200 Digital Voice Recorder.



## Violinists' musical task

- François Devienne's (1759–1803) Sonata for Clarinet in Bb and Pianoforte No. 2, I: Bars 1–12



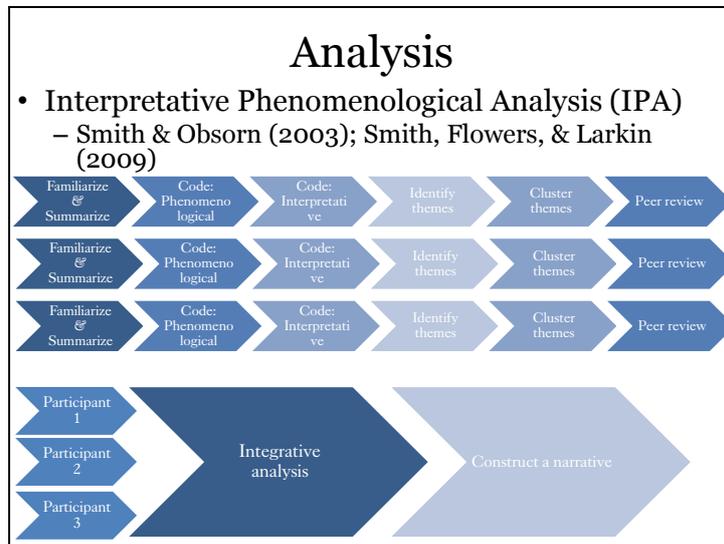
Musical score for Violinists' task, showing three staves of music. The first staff begins with a piano (*p*) dynamic marking. The second staff starts at measure 5. The third staff starts at measure 9 and includes a forte (*f*) dynamic marking. The music is in a single melodic line with various rhythmic patterns and articulations.

## Harpisichordists' musical task

- Thomas Roseingrave's (1690/1–1766) 'Sarabande' from *Complete Keyboard Music LXXXIV* (Musica Britannica), ed. Johnstone and Platt, p. 60



Musical score for Harpsichordists' task, showing five systems of music. Each system consists of a treble and bass clef staff. The music is a sarabande, characterized by a slow tempo and a 3/4 time signature. The score includes various chordal textures and melodic lines.



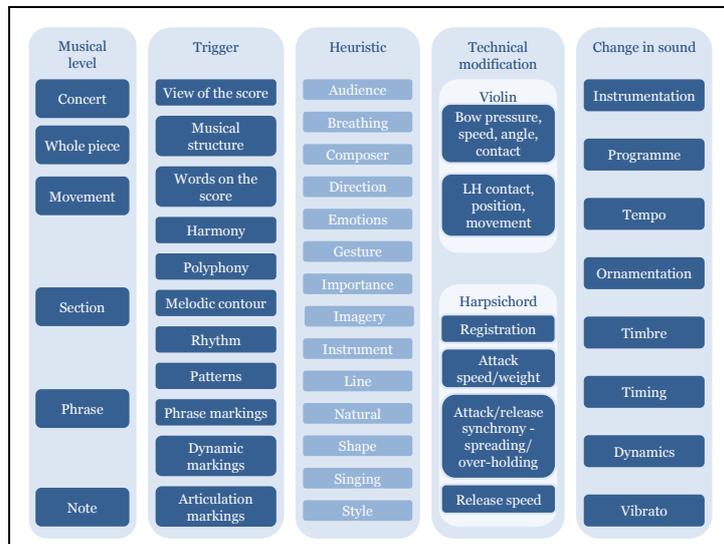
Interpretative Phenomenological Analysis (IPA) was used to analyse the data. This approach allowed participants' thoughts and experiences to be examined idiographically and in detail. Data analysis proceeded according to the guidelines for IPA provided by its pioneers (Smith, Flowers, & Larkin, 2009; Smith & Obsorn, 2003).

IPA differs from 'normal' thematic analysis in a few ways. First, you try to focus on one participant's data at a time. There are also two separate stages of coding, the phenomenological, and the interpretative, and each of those has a specific focus. The aim is to build up an understanding of that participant's experience, and it's only later in the process that you start to compare the participants and which areas are important to them.

Although you are focused on the individual, you can bring out similarities and differences between participants. What I'd like to focus on today is a way of putting together the findings of all ten participants to create a kind of model or overview of the ways in which they seemed to understand and experience musical shaping.

## Results

Slide 10



One way of summarising the results from the interviews is in this model, which moves from left to right from a concept or idea of a musical level that can be controlled (or for some participants, 'shaped') right across to the right hand side, which I hope covers most of the musical sounds that can be produced and controlled by the musicians. In between these, you'll see triggers for musical shaping or expression, a column headed 'heuristics', and a column of technical modifications, which is grouped according to the two instruments. This allows for the fact that each instrument has limitations, and therefore won't be able to control every aspect of the sound covered in the final column.

Each column of this model is affected by some overall situational factors, such as whether the performance decisions are made in private practice, rehearsal, or in performance; or whether the music involves other performers who influence the shaping decisions made.

I'm going to discuss each column individually before examining some of the data in more detail.

## Slide 11

Musical level	T	B	E	V	D	Y	K	Ja	Ju	N
Concert							✓	✓	✓	
Whole piece	✓	✓	✓				✓	✓	✓	✓
Movement	✓	✓	✓	✓		✓		✓	✓	✓
Section	✓	✓	✓	✓		✓		✓	✓	✓
Phrase	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Note	✓		✓	✓		✓	✓	✓	✓	✓

The first column, music level, refers to the fact that for most participants, shaping could occur at a range of scales.

## Slide 12

### Shaping – Multiple levels

- Elsie: Every note should have some kind of shape. And every phrase needs to have a shape. And it all depends on whether the note is important or not, whether the harmony's important or not. [00:13:30]
- Elsie: ... if I can see [...] the entire structure of the music as one, I know how to shape the individual ones in between. [00:06:30]

## Shaping – Multiple levels

- Julian: I suppose if someone said to me [...] what shape does the music have to you, I'd think instinctively they were talking about the structure. [...] So structure and shape ... sort of overlap in that capacity. If you're talking about a phrase, and you said the shape, I'd be thinking about, as a player, the sort of technical way you might play it, in terms of grouping of notes, and the articulations ... you know, what degrees of staccato or legato do we want, you know, in a particular given phrase. But [...] with baroque music, one note can have shape, a *messe di voce*, so you can just, you know, if you were talking to a violinist or particularly a singer ... and you said 'what shape does that note have?' you might immediately think of ... the swelling and diminuendo of one note.' [01:13:30–01:14:00]

Goes on to add that on the harpsichord, a single note has a natural bloom, but he can't do very much to control the shape of that note.

## Shaping – Multiple levels?

- Researcher: Some people sometimes use shape and structure interchangeably; would you agree with that, or do you think shape is different?
- Darragh: I think shape is to do with, again, this thing of tessitura, Of line, of actual line, whereas the structure, yeah of course, you know, a bigger question, a bigger picture [...] Point A to point B, to point C, whatever you want to call it [...] but it's from there, to there, to there, to there. And that's the piece of music.
- Researcher: Ok . So your shaping is on a relatively small scale?
- Darragh: Exactly [...] it's more under a micro- magnifying glass, whereas the other is looking at the big picture, isn't it, probably.
- Researcher: Ok. [...] Are you thinking about shape when you're playing a single note, on its own?
- Darragh: N... no. You're thinking possibly about colour, about quality of sound, about length, because of the bow. [00:16:00–00:16:30]

And Darragh seemed to prefer different terminology to describe the things he thought about on large- and small- scales. For him, 'shape' was appropriate to the phrasing level, but not to the large-scale structure, or to a single note.

Slide 15

Musical level	T	B	E	V	D	Y	K	Ja	Ju	N
Concert							✓	✓	✓	
Whole piece	✓	✓	✓				✓	✓	✓	✓
Movement	✓	✓	✓	✓		✓		✓	✓	✓
Section	✓	✓	✓	✓		✓		✓	✓	✓
Phrase	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Note	✓		✓	✓		✓	✓	✓	✓	✓

For some participants, shaping operates on multiple levels  
For others, shaping operates on specific levels (e.g. phrasing)

Trigger	T	B	E	V	D	Y	K	Ja	Ju	N
View of the score	✓	✓	✓	✓				✓		✓
Musical structure	✓	✓	✓		✓	✓		✓	✓	
Words on the score		✓	✓					✓		
Harmony	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polyphony	✓		✓		✓	✓	✓	✓	✓	✓
Melodic contour	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rhythm	✓		✓	✓		✓	✓	✓	✓	✓
Patterns				✓			✓	✓		
Phrase markings	✓	✓								✓
Dynamic markings	✓	✓		✓	✓					
Articulation markings	✓	✓	✓	✓			✓			✓

The next column looks at the score-based triggers identified by participants as influencing their shape-related decision-making. As you can see, all participants discussed harmony and melodic contour; rhythm, polyphony, and the musical structure were also discussed by most participants. I'll just show you a few examples of these before we move on to the heuristics column.

## View of the score

- Nathaniel: the clue is in the music, I would say [...] you just [...] try not to get in the way of what the composer's written, just use what's there on the page, and what you know about how to [...] really let the harpsichord sing, and speak [00:25:30–00:26:00]

## Harmony

- Julian: I think harmony is the primary [...] engine of the music. [...] If I'm in doubt about a piece, I often simplify it in terms of, as if I'm playing figured bass, and then I might sing bits, and then just try and think of the overall, pacing again, you know, where the skyline is, in the music. But yeah, I think particularly with Bach, you know, he was so schooled in figured bass, that that's often, a good point of departure [01:05:30]

## Melodic contour

- Darragh: I suppose we talk in classical and baroque repertoire, in particular, in terms of tessitura, a lot, so the actual, following the contour, following the shape. And you can literally, in this piece, for example, one can actually put a piece of graph paper in front of it very easily, and just see the contours, a little hill going up and down, and essentially, that tessitura in classical music without these [notated] dynamics, already, that's, kind of, a rough rule, isn't it, for dynamic con-, you know, dynamic rising and falling. [00:04:30]

## Rhythm

- Yoshi: And this time I was trying to keep it more in time, but I was thinking of the beats more as a unit of bars, this time. [...] And so I was thinking 'One, two, three, One ...' rather than, before, it was still one, two, three, but it wasn't a unit of bars yet. [...] I was focussing more on the notes. [...] and this time I felt it more in three. [...] It's a little bit of, sort of, dance-sort of character, as well. Kind of, slow, a slowish three, kind of dance, but there's a down and sort of, an up movement, and I felt that more that time. [00:09:00–00:09:30]

## Polyphony

- Tina: 'in a group of people, how you shape the bit you're playing is vastly influenced by what everyone else is doing, so say you have some kind of accompaniment figure, [...] how you shape the accompaniment, I find one often wants to mould to what the tune is doing, so how you play is influenced by someone else. Or, conversely, if [...] you're playing a tune, but someone else plays an accompaniment in such a way that nudges you in a particular direction, you might choose to shape something in a different way. If, if you're playing something and you're going to play it quietly, whether you're playing the tune or accompaniment, and someone else suddenly increases the dynamic, you probably go with it, and do something, unless ... you consciously think, oh yes, it would be nice to let them through ... But generally, [...] your shape-making [...] is a communal thing, as much as possible, and also, as much as possible, without it being ridiculous, it's not decided too much beforehand, in something like, say, a Haydn minuet [...] It doesn't always work, but the ideal is that at any point, really, one person might help to guide it in a particular way, so that the, the contour of the piece changes ... [00:01:12-01:14:30]

## Musical structure

- Julian: So it's good to have a clear sense of ... you know, even though it's free, if something's too free it's just a sort of, paddle of sound, it's got to have some sense of structure and so [Coughs] having that clear line, um, from that point [plays] right until the end [plays] it sort of informs the listener that, you know, there's a tonality achieved, in which we're gonna be then following on this prelude with a suite [00:55:30]

## Words on the score

- Elsie: Bach writes the music to represent [...] the meaning of the text.
- R: Yeah. And you've written that in, too.
- E: I have to, because I need to remind myself how to play it.
- R: What are the words?
- E: My longing is to embrace the saviour, and soon to be with Christ, though as mortal ash and dust I will be crushed by death, my soul's pure light will nonetheless shine forth equal to the angels. It's this weird concept they had back then of wanting um, to die soon in order to be resurrected by Christ.
- R: Ok
- E: And be with God. It's all to do with dying! [laughs]
- R: But dying as a good thing
- E: But dying as a good thing. It's almost like, release me from the burdens of life, my body is a burden, I don't want it.
- [00:33:00–00:33:30]

## Patterns

- Victor: I suppose the harmonic rhythm, combined with the direction of the notes, and the patterns I see. [00:12:30]

## Phrase markings

- Nathaniel: and I suppose Duphy writes the phrasing marks where he wants diminuendos, and where he wants the phrase to go, like for example the first um, [Plays] To here [Plays] for example, then it feels [Plays] and here [Plays] cos that's a very French device, to, that falling third Yeah To come away, you know, that's a classic [Plays] [00:37:00]

## Dynamic markings

- Bridget: I would use certain things on the score to help me, like the dynamics, and like the bowing, and things like that. [00:55:00]

## Articulation markings

- **Bridget:** the fact that it has some staccato notes here, and here, and here, suggests to me that it's quite lifted, so that's why I went for the lighter style. [...] If it had, like, the *tenuto* marks on it, that would maybe suggest something quite different. [...] into the string [00:59:00]

Trigger	T	B	E	V	D	Y	K	Ja	Ju	N
View of the score	✓	✓	✓	✓				✓		✓
Musical structure	✓	✓	✓		✓	✓		✓	✓	
Words on the score		✓	✓					✓		
Harmony	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polyphony	✓		✓		✓	✓	✓	✓	✓	✓
Melodic contour	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rhythm	✓		✓	✓		✓	✓	✓	✓	✓
Patterns				✓			✓	✓		
Phrase markings	✓	✓								✓
Dynamic markings	✓	✓		✓	✓					
Articulation markings	✓	✓	✓	✓			✓			✓

So I hope that gives you a flavour of what each category refers to. The next column is 'heuristics'

## Heuristics

- 'short-cuts based on experience that solve problems too complex to resolve quickly enough using analytical thought.' (Leech-Wilkinson and Prior, forthcoming)
- Often metaphorical
- Example:
  - Researcher: I noticed as well, here, [...] because you were 'heading for the top', you were moving up towards the heel of the bow, and lengthening your bow stroke. Is that a conscious thing that you're thinking about, or is it more that you're just thinking that you're heading to the top, and that's a shorthand for all the technical things that are going on?
  - Victor: Absolutely. No, I didn't think about that at all. Um, it probably just happened because it's integrated. Now maybe subconsciously. [00:28:30]

Heuristics are 'short cuts based on experience that solve problems too complex to resolve quickly enough using analytical thought. They are often metaphorical, and we see 'shape' as being a tool of this kind, together with words like 'direction', emotions the participants want to convey, and many other ideas. The point about these heuristics or tools, is that participants use them to think about ways of playing the music expressively, without having to think about specific technical aspects of their playing. So if we take the example here, instead of Victor thinking about the ways in which he is moving up the bow to the heel and lengthening his bow stroke, he just thinks about 'heading to the top'. So in the interview, I asked him:  
And he replied:

Slide 30

Heuristic	T	B	E	V	D	Y	K	Ja	Ju	N
Audience	✓	✓	✓	✓	✓	✓	✓		✓	
Breathing		✓	✓		✓		✓	✓	✓	
Composer			✓	✓			✓	✓		✓
Direction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Emotions	✓		✓	✓		✓		✓	✓	✓
Gesture	✓	✓	✓				✓	✓	✓	
Importance	✓	✓	✓			✓	✓	✓	✓	
Imagery		✓	✓			✓		✓		✓
Instrument			✓				✓	✓	✓	✓
Line		✓	✓					✓	✓	✓
Natural	✓		✓	✓	✓		✓		✓	✓
Shape	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Singing	✓		✓				✓		✓	✓
Style	✓	✓	✓	✓	✓		✓	✓		✓

So we saw lots of examples of these short cuts. The most commonly discussed ideas were musical direction, shape, style, the audience, and emotions. I'm not going to give examples of every heuristic used here, because you can read about them in the publication mentioned on the previous slide, but I'll give you a few examples of the most common ideas.

## Audience

- Julian: ... if I'm giving a recital, and you sense that people are ... unsettled, I might not do the second repeat, type-thing. Whereas at other times, you know, you feel there's a real sense of ... the quality of the silence tells you [...] whether they're really involved or not. [00:57:30]

## Direction

- Bridget: I think [shape] means the phrasing and the direction that the music is taking . . . which notes that I'm heading towards that I want to, kind of, make important, and which, for me, is also part of the phrasing. [00:10:00]

## Emotions

- Elsie: Because of what's happening underneath you, as well, this kind of [plays] in the cellos [plays] it's relentless, it's not a pleasant feeling, in a way, but it's not meant to be: it's about the crucifixion of Christ [...] you have to have a feeling of uneasiness, and you know, 'Crap, what's gonna happen next?' [...] it's quite a scary opening actually. Not performance-wise, but feeling-wise[...] There's so much you have to put into that; it's very powerful music [...] You have to think about all these things when you [play]...
- [01:05:00–01:05:30]

## Shape

- Jane: Direction is where you're going; shape is the way you get there.
- R: That's interesting. [...] Can you explain that?
- J: Yeah, so you'd say, when you're teaching possibly, you know, think of the shape of this, which, [...] so it's the contours of something, but um, direction is um ... your overall aim, [...] so shape is [...] it's the means by which you get there. [...] So it's like [...] going [...] from A to B, [...] But you have an interesting landscape along the way [...] and that, the landscape's undulating, and so you have to travel along that landscape, rather than just having a very boring journey along a flat [...] country road, which is completely straight, with no trees either side of it! [laughs] [...] You might get there more quickly, but the interesting bit is the gazing at the countryside as you go! [...] it's poetry, really, the shape is the poetry. [00:19:30–00:21:00]

## Style

- Nathaniel: Especially in baroque music. I mean, there's a whole ... language of eighteenth-century music that you just, you just get to know [...] through playing it all the time. Um, like I was saying about phrasing off and stuff, and where I might put a trill. [...] Because you just get to know it. And it just becomes a part of um, what your fingers know. It's like, it just feels right. [00:27:30]

Heuristic	T	B	E	V	D	Y	K	Ja	Ju	N
Audience	✓	✓	✓	✓	✓	✓	✓		✓	
Breathing		✓	✓		✓		✓	✓	✓	
Composer			✓	✓			✓	✓		✓
Direction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Emotions	✓		✓	✓		✓		✓	✓	✓
Gesture	✓	✓	✓				✓	✓	✓	
Importance	✓	✓	✓			✓	✓	✓	✓	
Imagery		✓	✓			✓		✓		✓
Instrument			✓				✓	✓	✓	✓
Line		✓	✓					✓	✓	✓
Natural	✓		✓	✓	✓		✓		✓	✓
Shape	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Singing	✓		✓				✓		✓	✓
Style	✓	✓	✓	✓	✓		✓	✓		✓

Again, hopefully you have a flavour of the kinds of ideas participants were using.

Slide 37

Technical modification	T	B	E	V	D
Violin					
Bow pressure, speed, angle, contact	✓	✓	✓	✓	✓
LH contact, position, movement	✓	✓	✓	✓	✓
Harpisichord					
Registration		✓		✓	✓
Attack speed/weight	✓	✓	✓	✓	✓
Attack/release synchrony - spreading/over-holding	✓	✓	✓	✓	✓
Release speed	✓		✓		✓

In terms of the technical modifications, most of the participants discussed most of the available means of changing the sound for their instrument. These won't be discussed now, but will become apparent in later examples.

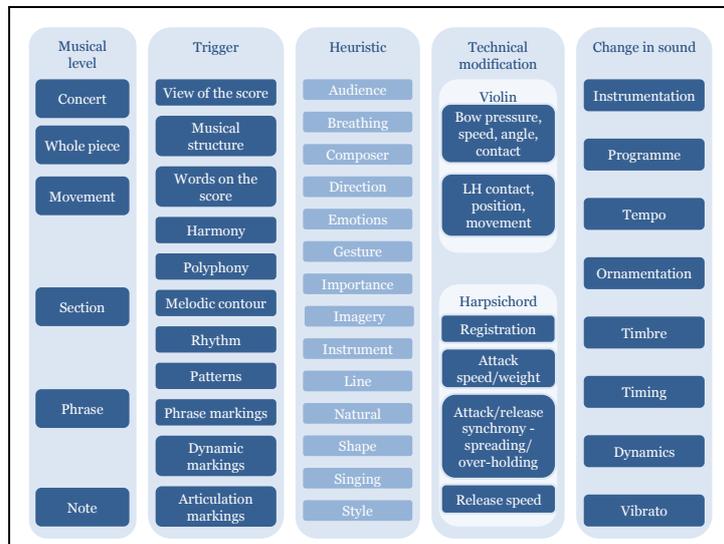
Slide 38

Change in sound
Instrumentation
Programme
Tempo
Ornamentation
Timbre
Timing
Dynamics
Vibrato

Similarly, most participants discussed most of the ways in which their sound could change.

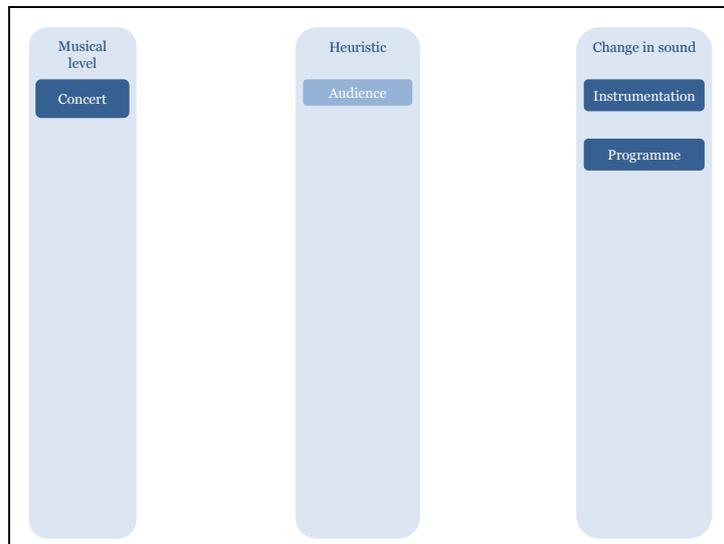
I'd like to look now at some specific examples of quotations that refer to multiple aspects of the model.

Slide 39



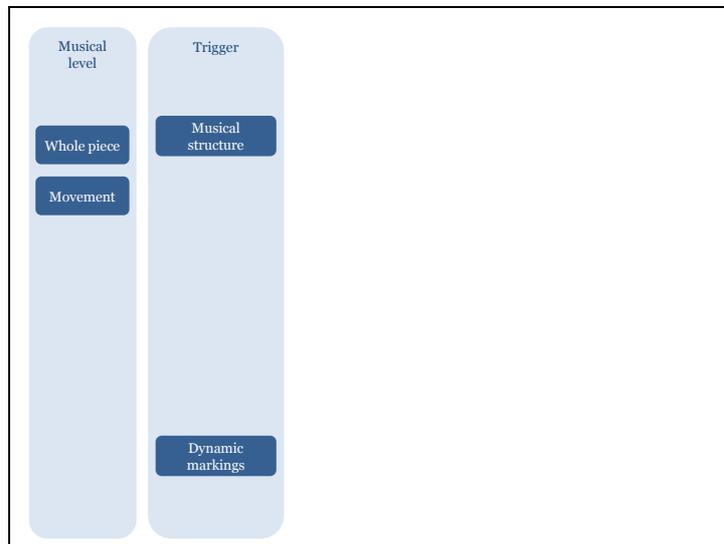
I now want to look at some examples that represent multiple aspects of the model, and therefore could present pathways through the model that can occur in performance preparation.

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Katharine: 'I've just been doing some concerts over the weekend, where I've ... basically accompanying, you know, a small chamber group, but on Sunday I actually played the suite, as a break in the programme from having violin sound or singer. Just so that there's [...] variety within the [...] listening experience, I suppose. You're not listening to string players the whole time, or whatever, a little bit of time for something a bit different'  
[00:53:00]

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Tina: 'I might say 'the shape of a piece' to mean the contour of the whole piece, so, say you've got a movement that's got a really fiery development section in the middle, and then, I dunno, a passage where everyone plays fortissimo for five bars, or something, [...] I would say, um ... that high point would probably be included in what I would call the overall shape of the piece' [00:30:30]

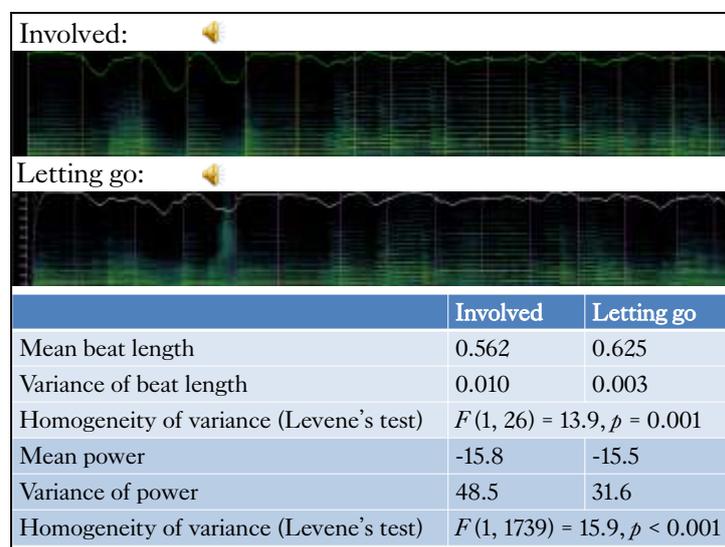
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- Elsie: For example, if this was a slow movement, in between two outer movements, [...] I'd be very, very careful to create a mood in which the music could just sing. And it would also give the audience a chance to relax, in between the two outer ... allegro movements, or presto, or whatever it is. You have to time pieces throughout the whole thing, and you have to know when to back off, and when to really, you know, go for it, I suppose. [00:09:30–00:10:00]
- Elsie: I'll play it in two different ways. If [...] I was playing this, within the context of a larger piece of music, and I played it sort of, um [plays]. That might sound, sort of, ok, but I'm still so involved with it, do you know what I mean? Um, why not just let it go? [sighs] and give the audience a chance to go, 'Oh, that's really nice' you know, in between having been gripped for the first thing, you know, so I could just [plays] and just [plays]. It could give something, just completely different. And it's all to do with where the music lies within the whole thing. [00:11:00]

We continue and discuss this further, and she discusses the idea of 'detaching herself', 'letting go' of the music, and demonstrates two versions, one in which she is closely involved in the music, and one in which she is 'letting go'.

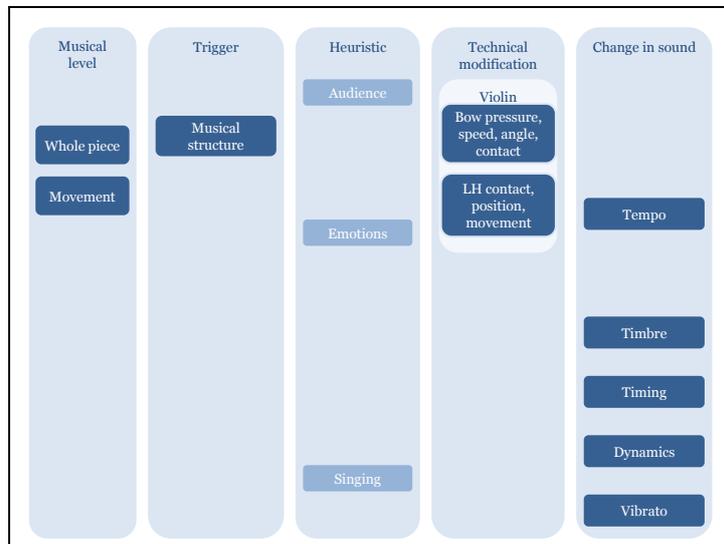
She used less bow pressure.

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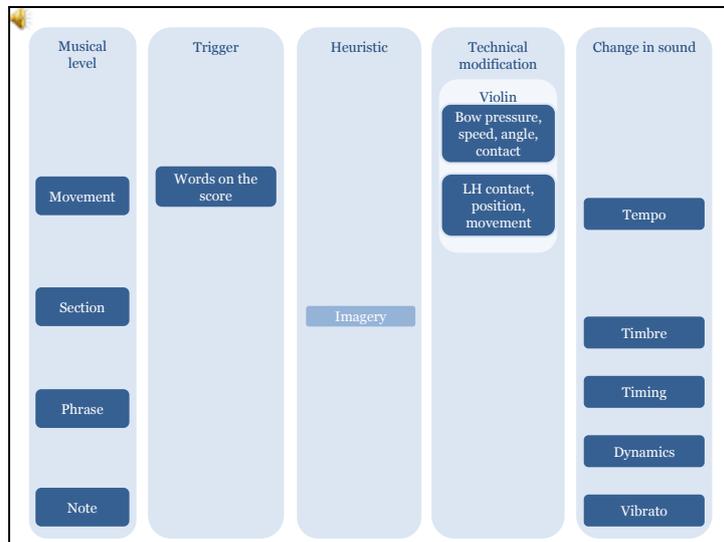


Play versions, discuss. 'Letting go' involves less variation in tempo and dynamics, as well as a change in timbre – things participants referred to as part of shaping at a smaller scale. It's interesting that these things that we consider to be low-level features come into play when this performer is thinking about shaping the piece as a whole.

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When we represent Elsie's comments and playing through the model, this is what it can look like:



Bridget: R: And you talked about images in relation to [...] the written text

B: Mmm. So there's some images that are really really like it says, 'Stamping your feet in the cold', so to try and get the energy, or the voice, or whatever, that I think, sometimes I just think about people stamping their feet in the cold. [...] for me, it helps me to draw the energy that I'm trying to find

R: Yeah. So if you play the bit that's about stamping your feet

B: Yep, which is at C

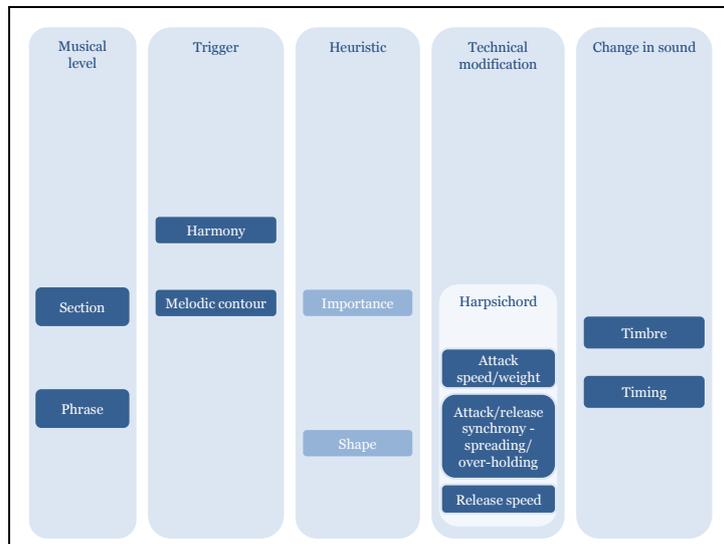
R: So if you played that thinking about something else [...]

B: [...] if it was like, fairies hopping on the snow or something, [...] then it would maybe so [plays] I would just do it daintily, and light, and like a fairy, but because it's like [stamps] [...] stamping your feet, it's kind of [plays] that kind of [plays] and the cellos [sings] are really like [sings] so that's how I would play it differently

R: Ok. [...] What are the other images like; that's one's very much a movement-based one

B: Yeah, so [...] they're quite a lot about movement, actually. Some of them are about the wi-, surroco, Boris, and all the winds at war, [...] The only one that's not really about ... it's kind of like about a journey, I guess: 'To move cautiously, fear of falling, to go fast, to slip and fall, but then to go back onto the ice and run fast until it cracks and breaks open

[00:42:00–00:44:30]



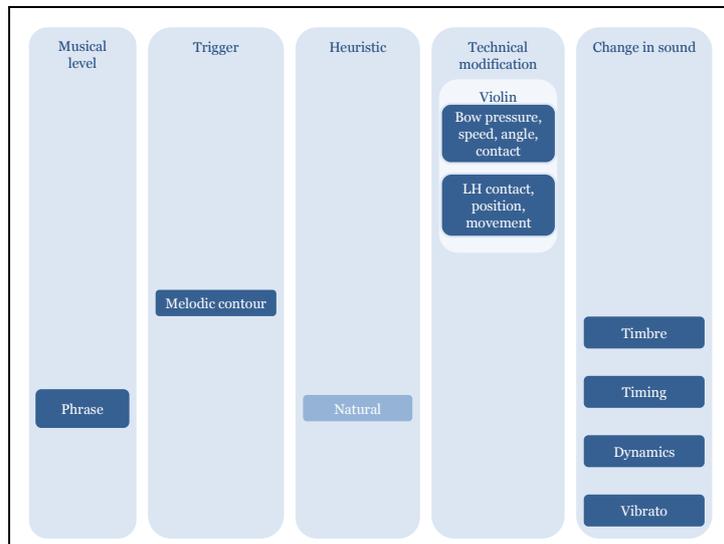
N: It's hard to not feel the shape of the phrases, even the overall feel [...] So the first half is, it's quite hard just to make yourself literally go through that, those four, those bars and the next [...] as if nothing [...] do you see what I mean?

R: Yeah, can you tell me, is it describable? If I asked you to describe the shape of the first phrase, would you be able to do that?

N: Well it sort of [...] comes to a climax with the high F, and then dies away, um, with the, at the end of the bar with the imperfect cadence. It's sort of a, that sort of shape, and goes away to nothing. [...] Well that's how I feel it [...] So when I was doing it musically, I was [creating the shape] through timing, and touch.

[00:18:30–00:19:30]

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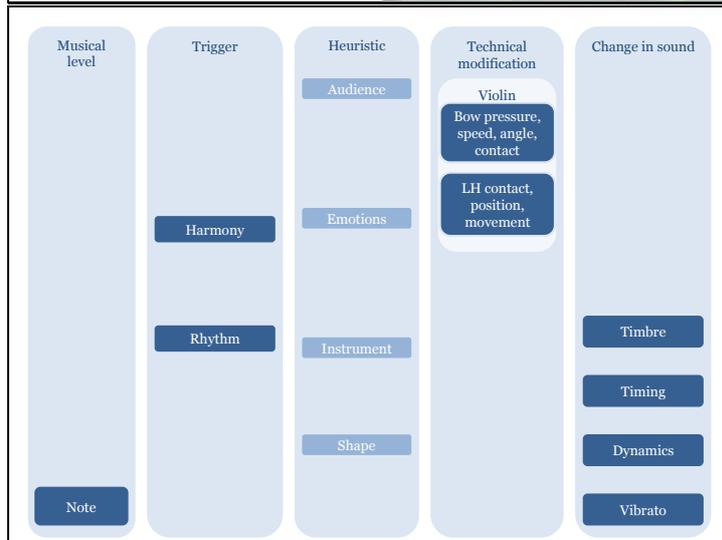
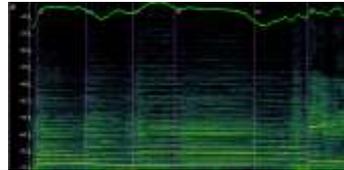
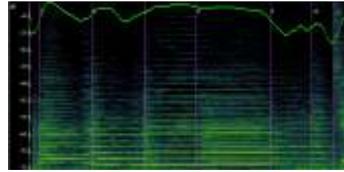
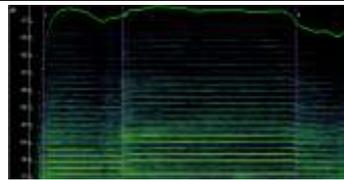
Darragh: [Plays] Think just about natural phrasing, I suppose, and the contour of the line up and down there, the tessitura, maybe was what I was thinking about [00:03:30]

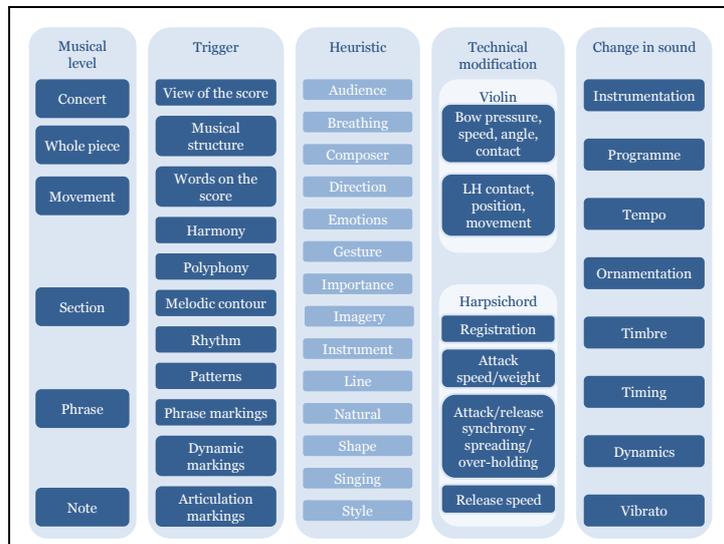
- Elsie: Well what I would say, is, um, look at the shape of the bow, and, and how long you have to do that note, you know [plays] it's about [plays] two seconds worth, I suppose, if we're going to be really analytical about it, and [...] the note needs to have a shape, so where's the [...] middle of that note going to be?

- Elsie: And um, [plays top] 🎵

basically, it's the bar lines, cos you know [plays middle]

to get the maximum emotional impact, I suppose you have to time the middle of that note to coincide with this [plays] the clash [plays bottom]. Then you're really gonna get the audience going, 'Oh wow!', you know? [00:46:30]

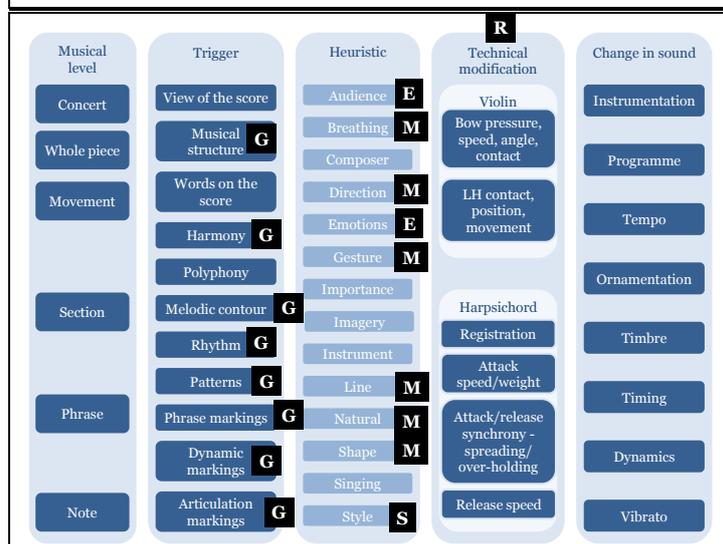




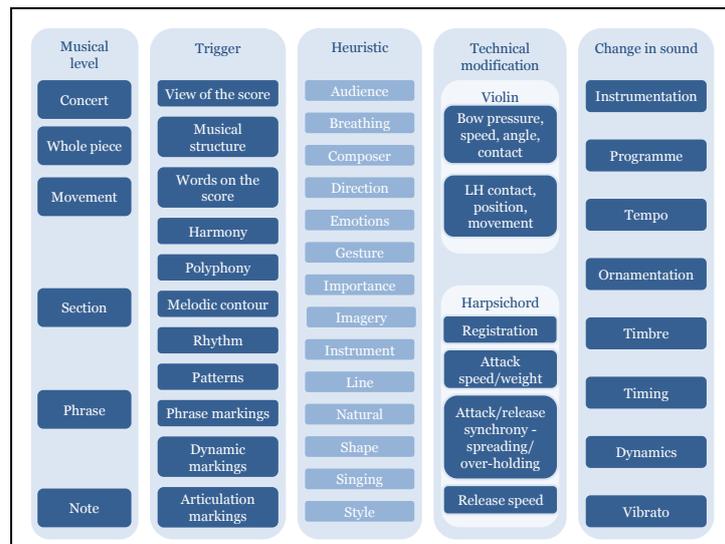
I hope that's given you some idea of the ways in which the model can represent participants' ideas. It is clear from the examples shown that multiple aspects of the model are frequently used by participants at once. Each broad category can be thought about in isolation, or considered in relation to another. Often, technical modifications may not be thought about on a conscious level, with performers thinking instead of heuristics to achieve their desired change in sound. Nor are musical triggers always being thought about consciously. Different participants seemed to favour particular parts of the model, suggesting that, over time, performers may develop their own preferred means of thinking about musical shaping that are represented in different areas of it. It is worth bearing in mind, however, that the model was built from data gathered in one interview with each participant, and is unlikely to represent the full scope of their shaping experience. It does, however, provide a picture of some of the ways in which these performing musicians conceptualize and use the notion of musical shaping.

## GERMS (Juslin, 2003)

- Generative rules
  - Clarification of structural features with timing, dynamics and articulation
- Emotional expression
  - To convey a particular emotional expression using a range of parameters
- Random variations
- Motion principles
  - Representation of intended and non-intended biological motion in sound
- Stylistic unexpectedness
  - Creation of tension through violation of expectations



It may be possible to relate particular components of the model to Juslin's (2003) GERMS model of musical expression. Many of the musical triggers are likely to be generative features, and will therefore be highlighted with some of the changes in sound in the right-hand column. The heuristics of audience and emotions are likely to aid the performer in generating an intended emotional expression. While random variations are not intended by the performer, this component might perhaps be related to technical modifications. Motion principles may be created with the aid of heuristics such as breathing, direction, gesture, line, natural, and shape. Finally, stylistic unexpectedness may be aided with the heuristic of style. Future research could use the research methods commonly employed in performance-preparation studies to ascertain whether or not the above speculations hold true, or whether there may be ways of combining this model of musical shaping with other aspects of performance preparation to create an overarching model.



Although the model represents the findings of the ten interviews discussed, it may have the potential to be applied to other performers, and this would be desirable in the search for an overarching conceptual model of shape or shaping for musicians. When assessing the model's generalising potential, several considerations must be made. The two sample instruments are technically very different in the ways in which they generate sounds, in the techniques required of performers, and in the sounds themselves. There were, however, few (if any) systematic differences between the responses of violinists and harpsichords in terms of the levels at which musical shaping could be applied or discussed, musical triggers for shaping, or the heuristics for performance. Rather, it seemed as though participants had individual preferences for these features of the model. These similarities suggest that another sample of classical musicians would discuss shaping in the ways suggested here. A future study might look at wind or brass players, or singers. Another interesting group might be players of unturned percussion instruments: we could hypothesize that they might be focussed on rhythm, but to what extent do they shape what they play according to the melodic and harmonic features of other parts?

Further studies might also establish whether or not the model has the potential to be generalized to Western performers who are less reliant on a score, such as musicians within the broad popular genre or jazz musicians. In the next paper in this session, Greasley and Prior argue that the performers of popular music share responsibility for the shaping of the final sounds of the songs with others, such as sound engineers, and indeed, classical musicians in recording settings and certain live performance situations may also recognize this idea. The model might therefore need to be extended to encompass the performers' awareness of and interaction with these other contributors; something that necessitates further empirical study.

In its current form, this model offers an understanding of musical shaping from the perspective of classical performing musicians. While the terms 'shape' and 'shaping' are commonly used by performers, their meanings have not previously been defined in relation to music. This model confirms the flexibility of the term, highlighting its ability to be used in relation to all levels of the musical structure; the influence of an array of musical triggers on performers' shaping decisions; the use of shape as one of a number of heuristics for expressive performance; the technical modifications required to shape a note, phrase, section, etc; and the change in sound that results.

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